



Municipal Solid Waste Management



VICTORIA

Victorian
Auditor-General

Municipal Solid Waste Management

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The Hon. Bruce Atkinson MLC
President
Legislative Council
Parliament House
Melbourne

The Hon. Ken Smith MP
Speaker
Legislative Assembly
Parliament House
Melbourne

Dear Presiding Officers

Under the provisions of section 16AB of the *Audit Act 1994*, I transmit my performance audit report on *Municipal Solid Waste Management*.

Yours faithfully

A handwritten signature in black ink, appearing to be 'Peter Frost', with a long horizontal stroke extending to the right.

Dr Peter Frost
Acting Auditor-General

29 June 2011

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Audit summary

Australia is one of the highest waste generating countries in the world per head of population. Victoria ranks behind New South Wales and Queensland as the third largest contributor of solid waste. Population growth and increasing consumerism have led to increasing solid waste being generated, as our demand for products and services grows.

Traditionally, solid waste has been disposed of as garbage to landfills. Landfills pose risks to community health and safety associated with polluted water—leachate—contaminating ground and surface water; and producing methane—a flammable gas. Methane is also a greenhouse gas with the global warming potency of 21 times that of carbon dioxide, contributing around 3–4 per cent of Australia’s total greenhouse gases. The organic component of solid waste—garden and food waste—is the lead contributor to many of these risks.

Governments and communities are turning their attention to diverting materials from landfills to other uses, thereby reducing greenhouse gases, saving water and energy, cutting air pollution, and conserving resources and landfill space.

The 2005 *Sustainability in Action: Towards Zero Waste Strategy* (TZW) sets statewide objectives and targets to reduce the amount of solid waste generated, increase recovery rates for individual waste streams—thereby decreasing waste disposal to landfills—and to improve littering behaviours.

Conclusions

Sustainability Victoria and the Department of Sustainability and Environment (DSE) have not effectively fulfilled their roles in managing municipal solid waste and implementing TZW.

While Victoria met four out of six mid-term TZW targets, this performance is a result of contributions made by the industrial solid waste sector and littering behaviour. Progress related to the municipal solid waste sector, a significant source of organic waste, and therefore greenhouse gases, has been slow.

Significantly, waste generation continues to rise above expectations and little improvement in reducing this rate of increase is envisaged over the remainder of TZW’s life, putting at risk the achievement of its outcomes. The reasons for underachievement in relation to municipal solid waste encompass a lack of effective planning, leadership, coordination, and oversight. This has had consequences for the effective implementation of TZW, and highlights how important effective application of these core principles and practices are to achieving good program outcomes.

Sustainability Victoria has missed an opportunity to thoroughly review TZW and modify it to improve its effectiveness. It has also missed an opportunity to review its own practices in light of its lead role and the level of underperformance. This has diminished the prospect of TZW outcomes being achieved by 2014 in relation to municipal solid waste.

Findings

Waste management arrangements

Managing multiple stakeholders, to enable the achievement of outcomes, requires effective leadership, coordination, oversight and accountability. For TZW, implementation has been hampered by a lack of these principles and practices.

Sustainability Victoria has not adequately discharged its coordination and leadership responsibilities. This has been compounded by its failure to develop structured and effective processes to coordinate stakeholder involvement and effort. This has caused a range of inefficient and ineffective practices to develop across the municipal waste sector.

In an effort to improve leadership and coordination across the sector, in September 2010 Sustainability Victoria initiated quarterly portfolio meetings across the municipal waste sector, with monthly meetings for issues requiring immediate attention. While this is a good initiative, it excludes municipal councils and regional waste management groups and, without full representation from the whole sector, its effectiveness is likely to be limited.

DSE has not been effective in discharging its oversight and accountability role in relation to municipal waste management. It has had limited involvement in the sector, which has allowed poor leadership, coordination and implementation of TZW, by Sustainability Victoria, to continue since 2005.

Implementation planning

In addition to the need for leadership and coordination, effectively implementing a strategy such as TZW requires sound implementation planning. This should result in the development of a plan that aligns policy objectives with implementation.

Sustainability Victoria has not effectively planned the implementation of TZW. No implementation plan was developed and roles and responsibilities were not made clear. Consequently, there has been underachievement against TZW actions and priorities. For the past six years TZW has been operated without a coherent structure. In consequence, there are disparate approaches to addressing common issues and shared responsibilities across agencies, regions and municipal boundaries.

Lack of clarity has led to confusion by agencies about their responsibilities, poor planning for individual actions, and a lack of coordination of resources across government. This lack of clarity has also resulted in delays in implementation and progressing of actions—something that Sustainability Victoria recognised in its October 2010 mid-term review.

Only in 2011 did Sustainability Victoria commence development of an implementation plan, and consultation to date has been limited. Notably important stakeholders, such as the regional waste management groups and municipal councils, have not been engaged.

Assessing Towards Zero Waste

Effective implementation requires ongoing monitoring and evaluation. This enables implementers to track progress against expectations, as well as assess the impact actions are having on outcome achievement.

Sustainability Victoria does not have a clear understanding of the status of TZW actions, nor does it know whether the contributing actions have been effective, or been implemented efficiently or economically. It also does not routinely monitor progress of implementation. The status of progress against the contributing actions is unclear, despite around 70 per cent of TZW's time frame already having passed.

Sustainability Victoria has not reviewed the effectiveness of actions in contributing to the achievement of targets or TZW outcomes. This is because progress monitoring and evaluation were not adequately considered during implementation planning. Consequently, Sustainability Victoria does not know what impact TZW actions are having on municipal solid waste outcomes.

Towards Zero Waste targets

Establishing performance measures or targets that are practicable is an important first step. If they are not based on sound assumptions, then their achievability is put at risk. There are six targets in TZW, four of which relate to municipal solid waste.

TZW targets apply only at a statewide level. Targets and performance measures that are consistent with and inform TZW progress have not been developed at the regional and local level. Consequently, there are no clear indicators to determine whether metropolitan and regional areas are performing in line with expectations.

Performance against targets

To effectively report on achievement against outcomes and performance against targets, underpinning data needs to be complete, timely and accurate.

Victoria’s waste management arrangements lack a knowledge management system that clearly articulates the purpose of data collection, identifies the data that is required for decision making, and details procedures or guidance to address completeness, validity, consistency, timeliness and accuracy of information.

Data quality deficiencies have reduced the reliability of performance data and projections of performance by 2014. The most recent assessment of performance against the TZW targets was released in 2008–09. Based on the available data, progress to date in relation to municipal solid waste is mixed, with little certainty that future performance will meet targets.

Recommendations

| Number | Recommendation | Page |
|--------|---|------|
| 1. | <p>The Department of Sustainability and Environment should:</p> <ul style="list-style-type: none"> clarify and confirm the roles, responsibilities and accountabilities of public sector entities involved in waste management and the implementation of the Towards Zero Waste Strategy enhance the transparency and accountability of funding arrangements and align funding with current waste management priorities clarify the oversight and accountability arrangements for Sustainability Victoria in relation to the Towards Zero Waste Strategy. | 19 |
| 2. | <p>Sustainability Victoria should:</p> <ul style="list-style-type: none"> assess the status and relevance of the Towards Zero Waste strategy actions complete development of an implementation plan for the Towards Zero Waste Strategy in consultation with stakeholders coordinate the completion of regional and local waste management plans, and periodically review them for adequacy establish a framework for progress monitoring, evaluation, and reporting, and assess the effectiveness of strategy actions, and their cost effectiveness in implementation. | 19 |
| 3. | <p>Sustainability Victoria should:</p> <ul style="list-style-type: none"> meet the intended objectives of the mid-term review by completing outstanding analysis coordinate the development of regional and local performance indicators to enable contributions to the statewide targets to be reliably measured develop a knowledge management system to rationalise data, identify and rectify data quality issues and modelling accuracy. | 29 |

Submissions and comments received

In addition to progressive engagement during the course of the audit, in accordance with section 16(3) of the *Audit Act 1994* a copy of this report was provided to the Department of Sustainability and Environment, Sustainability Victoria, the Environment Protection Authority, the Department of Treasury and Finance, the Metropolitan Waste Management Group, the Highlands Regional Waste Management Group, City of Ballarat, Banyule City Council, Glen Eira City Council and Hume City Council with a request for submissions or comments.

Agency views have been considered in reaching our audit conclusions and are represented to the extent relevant and warranted in preparing this report. Their full section 16(3) submissions and comments however, are included in Appendix A.

1 Background

1.1 Introduction

Australia is one of the highest waste generating countries in the world per head of population. Victoria ranks behind New South Wales and Queensland as the third largest contributor of solid waste.

Population growth and increasing consumerism means that an increasing amount of solid waste is being produced as our demand for products and services grows.

Traditionally, solid waste has been disposed of as garbage to landfills. Landfills pose risks to community health and safety associated with polluted water—leachate—contaminating ground and surface water; and producing methane—a flammable gas. Methane is also a greenhouse gas with the global warming potency of 21 times that of carbon dioxide, contributing around 3–4 per cent of Australia’s total greenhouse gases. The organic component of solid waste—garden and food waste—is the lead contributor to many of these risks.

Governments and communities are turning their attention to diverting materials from landfills to other uses, thereby reducing greenhouse gases, saving water and energy, cutting air pollution, and conserving resources and landfill space.

1.2 Solid waste

Sustainability Victoria defines solid waste to include non-hazardous wastes from construction, demolition, commerce and industry, as well as waste from municipal and residential activities—municipal solid waste.

1.2.1 Municipal solid waste

This audit examined municipal solid waste, which is generated principally by households. This includes garbage, recyclable materials, organic waste and hard waste. It also includes waste that municipal activities generate through emptying litter bins, sweeping streets and maintaining parks.

Sustainability Victoria excludes from municipal solid waste all waste that commercial operators collect and deliver to municipal disposal sites, such as waste from garden maintenance, house renovation and hired skips. This audit has adopted Sustainability Victoria’s definition.

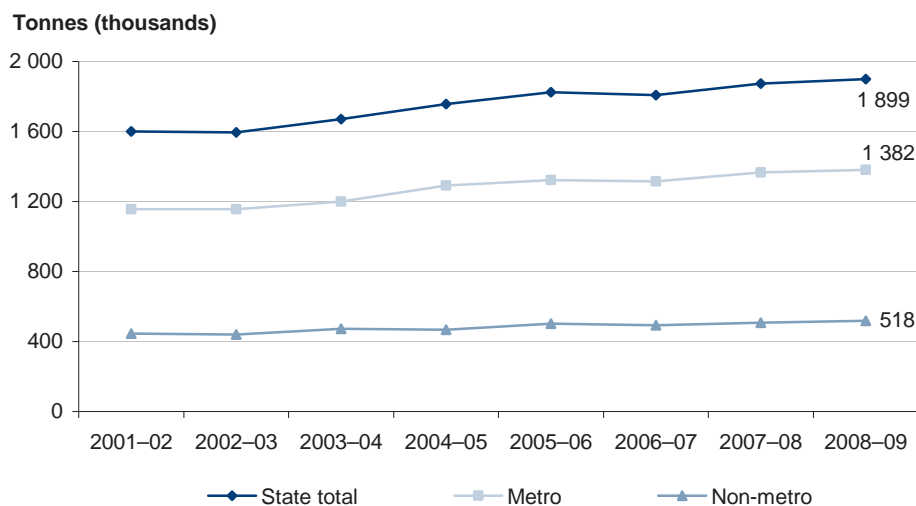
Municipal waste generation

The amount of municipal solid waste generated is measured by proxy, through the amount of waste that municipal councils collect. All 79 municipal councils provided a kerbside collection service for garbage and recycling, and 45 provided collection services for organic waste to their residents in 2008–09, the latest year for which data that informs this measure is available.

As Figure 1A shows:

- between 2001–02 and 2008–09, the amount of municipal waste collected from households through garbage, recycling and organic kerbside collections increased from around 1.6 million tonnes to 1.9 million tonnes (around 0.3 million tonnes, or 19 per cent)
- the majority of this increase (0.2 million tonnes, or 76 per cent) occurred in metropolitan Melbourne
- waste collected in regional Victoria increased by around 0.07 million tonnes, contributing the remaining 24 per cent.

Figure 1A
Municipal solid waste collected from kerbsides, 2001–02 to 2008–09



Source: Victorian Auditor-General's Office from information provided by Sustainability Victoria.

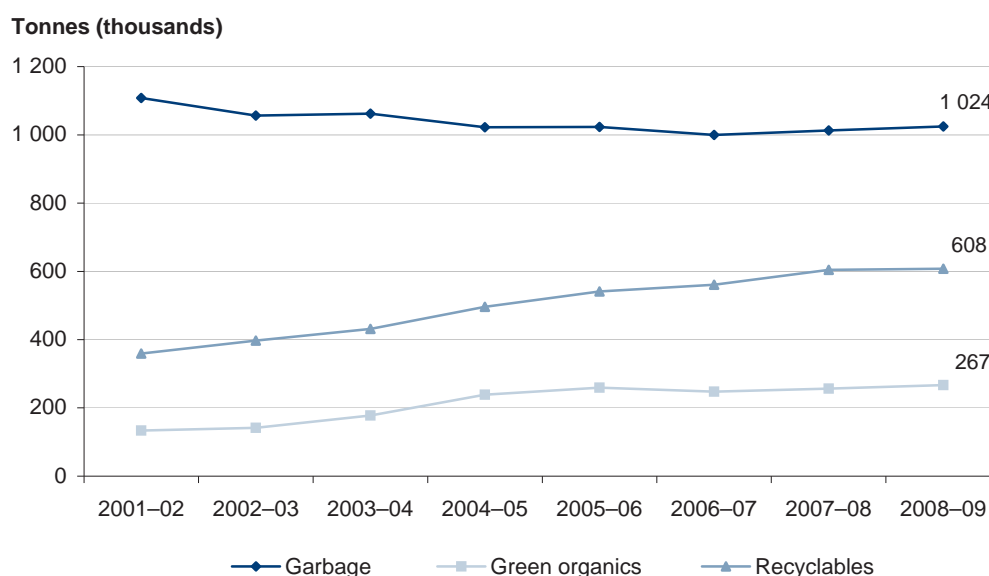
An additional 0.4 million tonnes of municipal solid waste was collected across Victoria from litter bins, litter traps, illegally dumped garbage, roadside litter, hard waste, and materials collected at drop off stations. This data is not included in kerbside collection figures.

Of the 1.9 million tonnes of municipal solid waste collected in 2008–09, around 1 million tonnes (54 per cent) was garbage, followed by recyclables and organics (32 per cent and 14 per cent respectively).

As Figure 1B shows, between 2001–02 and 2008–09:

- the amount of garbage collected decreased from around 1.1 million tonnes to 1 million tonnes (around 0.1 million tonnes, or 10 per cent)
- the amount of recyclables collected has increased from around 0.35 million tonnes to 0.6 million tonnes (around 0.25 million tonnes, or 71 per cent)
- the amount of green organics collected increased from around 0.13 million tonnes to 0.27 million tonnes (around 0.14 million tonnes, or 107 per cent).

Figure 1B
Municipal solid waste collected from kerbsides, by type, 2001–02 to 2008–09



Source: Victorian Auditor-General's Office from information provided by Sustainability Victoria.

Municipal waste disposal

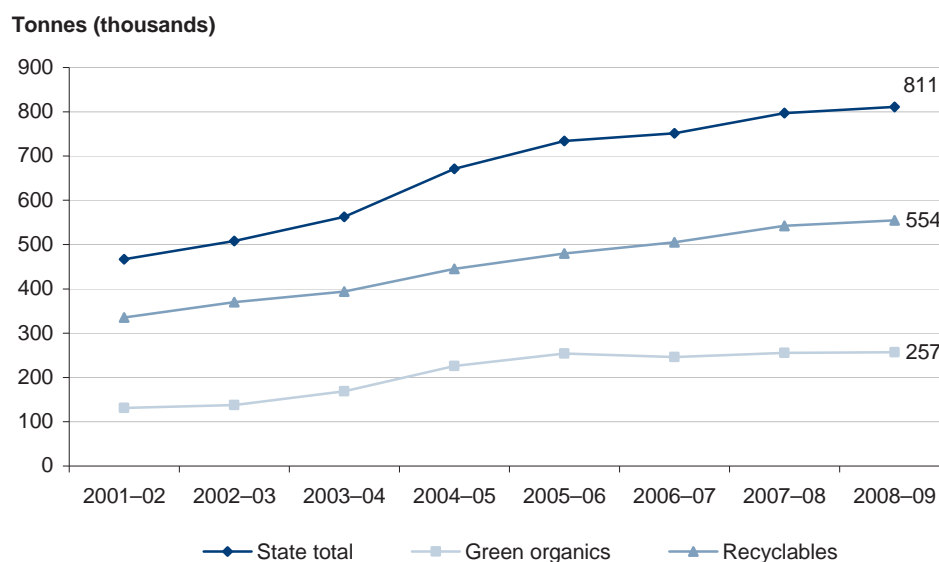
Garbage is sent for disposal to any of the 82 licensed landfill sites located across Victoria, while cardboard, paper, plastics, metal, glass and other recyclables are sorted at material recovery facilities and then sent to reprocessing facilities. Materials highly contaminated with garbage or of low quality are diverted for disposal to landfills.

Where organic waste collection services and processing facilities are available, organic waste is transported directly to these facilities and turned into compost or mulch. This waste is otherwise used for rehabilitation of quarry sites or landfill cover, or burned as a last resort where alternatives are not available.

There have been improvements in the amount of waste diverted from landfill and processed or recycled for other uses. As Figure 1C shows, between 2001–02 and 2008–09:

- the amount of organic waste processed increased from around 0.13 million tonnes to 0.26 million tonnes (around 0.13 million tonnes, or 100 per cent)
- the amount of waste recycled increased from around 0.34 million tonnes to 0.56 million tonnes (around 0.22 million tonnes, or 65 per cent).

Figure 1C
Municipal solid waste processed or recycled, 2001–02 to 2008–09



Source: Victorian Auditor-General's Office from information provided by Sustainability Victoria.

1.3 Managing municipal solid waste

1.3.1 Waste management legislation

The *Environment Protection Act 1970* (the Act) is the primary legislation dealing with waste management and resource recovery. It establishes the waste management hierarchy, the concept of 'shared responsibility across product life cycles', product responsibilities for producers and other principles of environment protection.

The Act establishes and defines the powers, duties and functions of statutory authorities involved in municipal waste management and resource recovery, including the Environment Protection Authority (EPA), one metropolitan and 12 regional waste management groups. It requires municipal councils to manage waste consistent with the metropolitan and regional waste management plans. The Act also provides for funding for many of Victoria's waste management initiatives and other environmental sustainability initiatives and entities through the landfill levy.

The *Sustainability Victoria Act 2005* defines the objectives, functions and powers of Sustainability Victoria. Its functions include planning for waste across Victoria, and facilitating the management of waste in accordance with Victorian legislation and government policies.

1.3.2 Victoria's waste management policy

The 2005 *Sustainability in Action: Towards Zero Waste Strategy* (TZW) sets statewide objectives and targets to reduce the amount of solid waste generated, increase recovery rates for individual waste streams—thereby decreasing waste disposal to landfills—and to improve littering behaviours.

In addition to municipal solid waste, TZW also addresses industrial waste including:

- **construction and demolition waste**—generated from large building projects to residential renovations including concrete, rock, sand, metals, timber, asphalt and plasterboard
- **commercial and industrial waste**—generated by large scale manufacturing, service-based businesses, small to medium enterprises and the government sector.

TZW also aims to manage climate change impacts by reducing the amount of greenhouse gas produced from municipal solid waste disposed to landfill. Reducing municipal solid waste is expected to play a leading role in delivering the state's annual greenhouse savings of 5–8.3 million tonnes of carbon dioxide.

1.3.3 Towards Zero Waste mid-term review

TZW highlighted that it would be monitored and updated as part of an ongoing consultation and evaluation process. Stakeholders would continue to be engaged during the TZW's implementation.

TZW scheduled an inclusive progress review to be undertaken in 2009–10 and provided guidance on the objectives of this mid-term progress review, including that it would:

- analyse Victoria's progress towards achieving the targets and actions
- provide opportunity to monitor achievements to date, adjust programs and activities, and review the appropriateness of the targets
- assess the appropriateness of the strategy's targets, including those established for municipal waste recovery
- assess the suitability and performance of the existing mix of regulations, targets, levies and other regulatory instruments, such as potential landfill prohibitions for key waste types and/or streams
- assess the multitude of approaches and technologies and their respective economic, environmental and social costs
- consider the performance and efficiency of emerging technologies, including their impacts on costs to households

- include an analysis of how technologies including alternative waste processing have developed, to confirm ongoing directions for the processing of residual waste streams from households and industry
- be undertaken in consultation with local government and stakeholders
- provide important input into EPA's assessment of the feasibility of potential landfill bans for particular waste types and/or streams.

The review was conducted at the same time as other reviews in the sectors including the Regional Review of Waste Management Groups and reconsiderations of the landfill levy. It was finalised in October 2010.

1.3.4 Roles and responsibilities

The Department of Sustainability and Environment (DSE) is responsible for policy development. Sustainability Victoria is responsible for leading the implementation of the TZW and coordinating TZW related activities of the EPA, metropolitan and regional waste management groups and municipal councils. Together, these agencies form Victoria's waste management institutional framework.

Department of Sustainability and Environment

DSE, through its Environment Policy and Climate Change Branch, is responsible for coordinating portfolio and government strategies for environmental sustainability. In relation to TZW, DSE has an important role in bringing together a wide range of partners to enable its successful implementation.

Sustainability Victoria

Sustainability Victoria is the state agency responsible for environmental sustainability, including planning and facilitating the management of solid waste throughout Victoria. Sustainability Victoria has the lead role in implementing TZW. This involves developing many of the waste programs, assisting partners and measuring and reporting on progress through annual business plans and other reports.

Environment Protection Authority

The EPA administers the *Environment Protection Act 1970* and its instruments, including those relating to the regulation of waste management and resource recovery facilities and services. In relation to TZW, the EPA works in partnerships to reduce waste and facilitate the development of product stewardship programs. The EPA is also responsible for approving regional waste management plans.

Waste management groups

One metropolitan and 12 regional waste management groups carry primary responsibility for planning and management of municipal solid waste. These groups operate as partnerships between Victoria's 79 municipal councils and the Victorian Government.

Municipal councils

Municipal councils provide waste and recycling services to residents and ratepayers. Kerbside collections are the cornerstone program for diverting domestic waste from landfill so that these materials are recycled and/or recovered.

1.4 Audit objective and scope

The audit examined whether waste management and resource recovery actions have been effective and efficient in achieving the TZW objectives and targets for municipal solid waste.

The audit reviewed the activities of DSE, Sustainability Victoria, the EPA, the Metropolitan Waste Management Group, one regional waste management group—Highlands Regional Waste Management Group, and four municipal councils—Banyule, Hume, Glen Eira and Ballarat.

1.4.1 Audit approach

The audit examined whether:

- municipal waste to landfill has reduced and recycling/reuse has increased in line with targets, and is on track to meet final targets
- waste management plans have been developed, are sound, are linked to the TZW objectives and targets and have been effectively implemented at the state, regional and local levels
- relevant, reliable and comprehensive information on municipal waste generation and resource recovery is used to inform planning, evaluate progress, adapt activities and report on outcomes.

The audit was performed in accordance with the Australian Auditing and Assurance Standards. The total cost of this audit was \$360 000.

2 Implementing the Towards Zero Waste Strategy

At a glance

Background

Effective implementation of policies and programs requires sound planning and effective governance arrangements, underpinned by clear leadership and coordination.

Conclusion

Sustainability Victoria and the Department of Sustainability and Environment (DSE) are not effectively fulfilling their roles in managing municipal solid waste. Inadequate coordination of activities and the limited progress against the *Sustainability in Action: Towards Zero Waste Strategy's* actions, provide little assurance that intended outcomes will be achieved as intended.

Findings

- Sustainability Victoria has not adequately led and coordinated waste management activities under the Towards Zero Waste Strategy.
- DSE has not effectively oversighted the strategy's implementation.
- The Towards Zero Waste Strategy has no implementation plan.
- Even though Sustainability Victoria reviewed progress at the strategy's mid-way point in 2009–10, the status and impact of the strategy's actions are unknown.
- There is no framework to assess the effectiveness of the strategy's actions.

Recommendations

- DSE should clarify the roles, responsibilities and accountabilities of entities involved in waste management and implementing the Towards Zero Waste Strategy.
- Sustainability Victoria should complete development of an implementation plan for the Towards Zero Waste Strategy, and establish a framework to assess its ongoing effectiveness, efficiency and economy.

2.1 Introduction

State and regional agencies, together with municipal councils, are responsible for managing waste in Victoria, in line with the *Sustainability in Action: Towards Zero Waste Strategy* (TZW). Arrangements involving multiple agencies have the potential to blur accountability for program delivery and achieving outcomes.

In this context, effective implementation requires sound planning that considers the priorities and actions, how and when to implement these, and who will implement them. It also requires strong governance, with clear leadership, coordination and roles and responsibilities.

2.2 Conclusion

Sustainability Victoria and the Department of Sustainability and Environment (DSE) have not effectively fulfilled their roles in managing municipal solid waste. Ineffective planning, leadership and oversight have resulted in inadequate coordination of implementation and limited progress in implementing the TZW actions. Consequently, there is little assurance that the intended outcomes will be fully achieved.

2.3 Waste management arrangements

Implementing TZW involves 16 public sector entities, 79 municipal councils, and private sector stakeholders. While consistent with the TZW principle of shared responsibility, this level of involvement adds to the complexities of program delivery.

Managing multiple stakeholders to enable the achievement of outcomes requires effective leadership and coordination to drive both progress and collaboration. For TZW, implementation has been hampered by a lack of leadership, coordination, oversight and accountability.

2.3.1 Leadership and coordination

TZW allocates responsibility for leading and coordinating implementation of the strategy to Sustainability Victoria. This includes developing programs, assisting partners and measuring and reporting on progress.

Sustainability Victoria has not discharged its leadership and coordination responsibilities. This has been compounded by its failure to develop processes to coordinate stakeholder involvement and efforts. Consequently, the lack of a structured approach to coordination has resulted in a range of inefficient and ineffective practices developing across the municipal waste sector.

These include:

- inconsistent and unaligned waste management planning cycles between regional waste management groups and Sustainability Victoria
- uncoordinated waste funding decisions being made by public sector entities without regard to potential synergies from focused expenditure aligned with TZW priorities
- the lack of a consolidated, cohesive reporting framework, with Sustainability Victoria, DSE, the Environment Protection Authority (EPA) and waste management groups each reporting on progress and providing advice to the minister separately
- inconsistent approaches to education and behavioural change programs across waste management groups and municipal councils.

In recognising ineffective leadership and coordination across the sector, Sustainability Victoria initiated quarterly portfolio meetings across the municipal waste sector in September 2010, with monthly meetings for issues requiring immediate attention. While a good initiative in principle, it excludes municipal councils and regional waste management groups and, without full representation from the whole sector, its effectiveness is likely to be limited.

In response to the uncoordinated advice being provided, the Minister for Environment initiated a coordination process for ministerial briefings for environmental portfolio agencies in March 2011. This process now means DSE reviews agency briefs and correspondence, and provides advice to the minister. However, this process falls short of addressing the lack of coordination and leadership surrounding waste management. Instead, it is limited to coordinating transmittals, with advice still being developed separately by each agency, rather than through a consolidated reporting framework for TZW.

2.3.2 Oversight and accountability

DSE's broad role is to develop policy and coordinate portfolio and government strategies for environmental sustainability. In relation to TZW, DSE's role is to bring together a wide range of stakeholders to make sure it is successfully implemented. In this context, DSE is accountable for the overall success or failure of TZW and for overseeing that Sustainability Victoria performs its leadership role.

DSE has not effectively discharged its oversight and accountability role in relation to municipal waste management. Its limited direct engagement with the sector has allowed the ineffective leadership, implementation and coordination of TZW by Sustainability Victoria to continue since 2005.

DSE's external oversight role and its application for waste management requires further clarification. Sustainability Victoria had responsibilities for developing TZW and continues to have responsibilities for coordinating its implementation, and reviewing and reporting on performance on behalf of all Victorian agencies. There is no formal requirement to report to, or through, DSE. This is despite DSE having portfolio responsibility for Sustainability Victoria. This structure is such that oversight and scrutiny by DSE is limited.

2.4 Implementation planning

Effectively implementing TZW requires sound planning. Typically, this produces an implementation plan that aligns policy objectives with implementation, is routinely reviewed and updated, and which identifies:

- time frames for implementation
- roles and responsibilities of those involved in implementation
- priority issues
- resources required
- management of risks and barriers to implementation
- implementation monitoring.

Sustainability Victoria has not effectively planned the implementation of TZW. No implementation plan was developed, and roles and responsibilities for implementation were not made clear. Consequently, there has been underachievement against TZW actions and priorities.

2.4.1 Roles and responsibilities

Roles and responsibilities should be clear and understood, particularly where multiple stakeholders are involved. This minimises the risk of overlap, duplication of effort, or actions being unaccounted for, and also helps to attribute responsibility for the success or failure of initiatives.

Through its shared responsibility approach, TZW lists the key stakeholders responsible for implementing the 28 TZW actions. However, it is not readily apparent from TZW what actions the nominated agencies are responsible for, individually and collectively.

Responsibilities are generally shared collectively, with five of the actions allocated to the 'Victorian Government'. This has resulted in uncertainty over which agency is responsible for leading these actions.

The four municipal councils examined in this audit remain unclear about their roles and responsibilities under TZW. Consequently, their focus is on local waste management issues, rather than achievement of TZW outcomes.

Unclear roles and responsibilities have contributed to:

- confusion by agencies and municipal councils about their responsibilities
- poor planning for individual actions
- poor cross-government coordination of resources.

The lack of clarity has also resulted in delays in implementation and progress of actions. Sustainability Victoria identified the lack of clarity around roles and responsibilities in 2009–10 and intends to clarify these in 2010–11.

2.4.2 Towards Zero Waste implementation plan

For TZW, where multiple government agencies and private stakeholders are involved in its implementation, and where roles and responsibilities and expected performance are not clear, the need for a sound implementation framework becomes paramount.

Sustainability Victoria is responsible for leading and coordinating implementation of TZW, but it did not develop an overarching implementation plan when TZW was operationalised. Specifically, it did not:

- clarify and allocate responsibilities
- prioritise actions
- allocate resources
- identify and manage implementation risks
- develop performance measures to guide expected performance and determine completion of actions according to time frames
- develop monitoring, evaluation and reporting frameworks.

In the absence of an implementation plan, Sustainability Victoria did not have an adequate understanding of how the strategy would be implemented or measured. For the past six years TZW has been approached without any coherent structure. Consequently, there are disparate approaches to addressing common issues and to shared responsibilities across agencies, regions and municipal boundaries.

Only in 2011 did Sustainability Victoria begin to develop an implementation plan. Consultation to date has also been limited. Notably important stakeholders, such as the regional waste management groups and municipal councils, have not been engaged.

The absence of an implementation plan, seven years into a 10-year strategy, provides little assurance that intended outcomes can be achieved by 2014. It remains to be seen what effect an implementation plan at this late stage will have on the implementation of all the TZW actions.

2.4.3 Waste management plans

Various waste management plans at state, regional and local levels are intended to underpin and support the strategy. The *Environment Protection Act 1970* prescribes requirements for the completion, content and review of many of these plans. They are intended to aid delivery and implementation of the strategy by area and by waste stream, covering elements of the strategy relating to waste generation, recovery, and littering behaviours. These plans are expected to guide the activities of relevant agencies and be reflected in their business plans.

Two types of plans were identified as supporting the strategy. These were:

- a statewide plan for solid industrial waste to set out a clear future direction, objectives and priorities for the management of all solid industrial waste in Victoria
- metropolitan and regional waste management plans to provide a long-term vision and coordinate activities of relevant member municipalities for municipal solid waste. The plan relevant to metropolitan Melbourne also applies to solid industrial waste. These plans are required to be consistent with the strategy.

Municipal councils also prepare plans for managing waste and are required to manage their role in municipal solid waste management in a manner consistent with their relevant metropolitan or regional waste management plan. Municipal council plans should therefore provide for waste management arrangements consistent with the strategy as it relates to municipal solid waste, including waste consumption, waste recovery and litter management.

Status of waste management plans

The allocation of responsibilities for assessing, providing advice on, and approving, waste management plans at the state, regional and local level has been spread between ministers, Sustainability Victoria, DSE, the EPA and municipal councils.

Sustainability Victoria has responsibility for leading implementation of the TZW. As these plans are important for coordinating implementation, Sustainability Victoria should have performed a lead role of coordinating their development so that they are consistent with TZW, and provided advice to EPA in their approval role.

Sustainability Victoria has not coordinated the development and review of these plans so that the documentation is updated and aligns with the strategy, and has not provided guidance on planning at state, regional and local levels.

As a result, planning for TZW's practical implementation by individual agencies has been poor. Their approaches to developing and finalising waste management plans have varied, with plans incomplete, outdated and not aligned with the strategy. In addition, planning at a local level principally reflects local needs rather than being guided by the strategy. Figure 2A provides a summary of the present state of planning progress.

Figure 2A
Status of waste management plans

| Waste management plan | Status | Comment |
|--|----------|--|
| Metropolitan Waste and Resources Recovery Strategic Plan | Complete | The plan was released in 2009. It does not detail clear roles and responsibilities for leadership and delivery. No performance indicators have been developed for metropolitan Melbourne. |
| Regional waste management plans | Variable | Eight out of 12 regional waste management plans exceed the legislated time frame for review, while seven out of the 12 pre-date the strategy's development. The oldest report dates back to 1998, seven years prior to the strategy's release. Annual business plans are being used instead. |
| Municipal councils waste planning documentation | Variable | Two of four councils assessed had completed and endorsed plans, with the remaining two yet to be finalised. Incomplete plans are being used to guide activities. |

Source: Victorian Auditor-General's Office from information provided by the Environment Protection Authority.

2.5 Assessing Towards Zero Waste

Ongoing monitoring and evaluation enable implementers to track progress against expectations, as well as assess the impact actions are having on outcome achievement.

Sustainability Victoria does not have a clear understanding of the status of TZW actions, nor does it know whether contributing actions have been effective, or implemented efficiently and economically.

2.5.1 Status of Towards Zero Waste actions

The TZW vision is for Victoria to be well advanced towards becoming a low waste society by 2014. To achieve this vision and the strategy's outcomes, 28 actions were developed. Of these, 11 are specifically relevant to municipal solid waste, with the rest relating to the business sector.

The status of progress against these actions is unclear, despite around 70 per cent of the strategy's time frame already having passed. This is in part because Sustainability Victoria does not routinely monitor progress of implementation.

In the assessment that Sustainability Victoria undertook in 2010, it identified that progress had been slower than anticipated in some areas, and in some cases was yet to commence. It also identified that actions had not been adequately addressed, and some actions had not been addressed at all. Further assessment in 2011 identified that, of the 11 actions relevant to municipal solid waste:

- one action had commenced planning
- one action had work progressing
- one action had no work started
- associated projects of the remaining eight actions (73 per cent) needed to be reviewed either in their own right or to assess their relevance to delivering on the action.

Sustainability Victoria's assessment highlights a lack of progress for TZW's municipal solid waste actions. When TZW was developed, these actions were considered essential to the achievement of the outcomes. The lack of progress is a symptom of poor planning associated with the actions, lack of an implementation framework, progress monitoring and review. Sustainability Victoria has failed to provide a clear way forward by not adjusting programs and activities for the remainder of the strategy period.

Sustainability Victoria's assessment provides little assurance about the status of the TZW actions. As the assessments were made without any indicators to determine when actions are considered complete, the reliability of the conclusions made by Sustainability Victoria is questionable.

2.5.2 Impact of Towards Zero Waste actions

Progress reporting, evaluation and review provide important information to assess the effectiveness, efficiency and economical use of resources. These activities also enable program implementers to identify potential adjustments and improvements.

While Sustainability Victoria has assessed the contribution to outcomes of some of the programs and activities it is responsible for, it has not coordinated a review of the effectiveness of TZW actions in contributing to the achievement of targets or TZW outcomes. Performance indicators were not developed as part of planning, nor were progress monitoring and evaluation adequately considered then, or undertaken subsequently.

Consequently, Sustainability Victoria does not know what impact TZW actions are having on municipal solid waste targets or outcomes.

Whether the current actions and associated programs reflect current priorities, or whether and what type of specific adjustment or refinements are required, is still unclear, seven years into the 10-year strategy.

Funding and Towards Zero Waste priorities

Successful delivery of programs and TZW actions and outcomes depends, in part, on the appropriateness, adequacy and targeting of funding. While TZW has access to funding through the landfill levy, inadequate processes and controls over how the funds are allocated and prioritised have undermined their potential impact in achieving the TZW outcomes.

Figure 2B
Landfill levy

Funding for waste management is largely sourced from the landfill levy. This levy is charged to waste disposers for each tonne of solid waste deposited at landfills. The money collected is intended to be used to foster environmentally sustainable uses of resources and best practices in waste management to advance the social and economic development of Victoria.

A component of the fund is allocated through regulation, as core funding, to Sustainability Victoria, the EPA, and to the metropolitan and regional waste management groups. These funds are allocated internally by each organisation through their annual business planning. The remaining majority of funds are allocated as strategic initiatives or through competitive funding from the Sustainability Fund.

Source: Victorian Auditor-General's Office.

The current funding arrangements are uncoordinated and are not informed by up-to-date priorities. Funding from the landfill levy is allocated to agencies to use as core funding, and not tied to waste-specific activities. Consequently, individual agencies determine funding allocations for waste management, with limited reference to what other agencies are doing or to TZW actions and priorities.

In addition, there is a poor accountability framework in place for the funds. Funding is not tracked in terms of its destination and use. There is no reporting framework in place to inform decision-makers of the effectiveness of the use of funds—including strategic initiative funding and competitive grants—and whether they have been used efficiently and economically to manage waste and work to achieving the TZW outcomes.

The Department of Treasury and Finance has a role in supporting the government in budget and financial management arrangements, and providing strategic leadership across the public sector on economic and financial sector reform. There is a clear role for the department to improve the accountability for the use of landfill levy funds.

2.5.3 Mid-term review

The October 2010 mid-term review required Sustainability Victoria to review the effectiveness of arrangements for implementing the strategy, to monitor progress and make necessary adjustments for the final years of the strategy period. This review was to be conducted in consultation with stakeholders including local government.

TZW listed the objectives of the mid-term review to inform the implementation of TZW up to 2014. These objectives are listed in full in the background section of this report.

Sustainability Victoria developed different terms of reference for the review. These included:

- providing information on the progress made towards reaching the TZW targets
- assessing current activities and reinvestment initiatives
- identifying a set of recommendations on how best to achieve the targets.

Sustainability Victoria's terms of reference did not include the TZW requirement to adjust programs and activities. Instead, it focused on making recommendations for future action, extending the time frame of analysis and further delaying the resolution of factors, resulting in slow progress.

Furthermore, the review was not conducted in consultation with stakeholders such as regional waste management groups and municipal councils, and was narrow in scope. It excluded analysis of progress for implementing planning documents that aid delivery and implementation of TZW. It also excluded analysis of regional waste management groups, the landfill levy, waste recovery technologies for the processing of Melbourne's municipal waste, and performance on litter.

The limited focus of Sustainability Victoria's terms of reference meant that it did not perform this review adequately as intended by TZW. This was a missed opportunity to:

- address issues of leadership and oversight
- address the lack of an implementation plan—a plan has since been drafted in 2011
- resolve the lack of clarity over roles and responsibilities for individual TZW actions—Sustainability Victoria did identify that this had resulted in slow progress
- address the poor progress in waste management planning across the state, and the lack of a framework to coordinate the development and review of these plans
- adequately evaluate programs and activities, analyse the progress made towards achieving the actions, and provide a clear way forward by adjusting programs and activities as necessary
- reassess priorities for funding to achieve the TZW outcomes.

Consequently, Sustainability Victoria has failed to identify the causes of slow progress and to provide a remedy to address them. This provides little assurance that the TZW outcomes will be achieved within the last three years.

Recommendations

1. The Department of Sustainability and Environment should:
 - clarify and confirm the roles, responsibilities and accountabilities of public sector entities involved in waste management and the implementation of the Towards Zero Waste Strategy
 - enhance the transparency and accountability of funding arrangements and align funding with current waste management priorities
 - clarify the oversight and accountability arrangements for Sustainability Victoria in relation to the Towards Zero Waste Strategy.
 2. Sustainability Victoria should:
 - assess the status and relevance of the Towards Zero Waste Strategy actions
 - complete development of an implementation plan for the Towards Zero Waste Strategy in consultation with stakeholders
 - coordinate the completion of regional and local waste management plans, and periodically review them for adequacy
 - establish a framework for progress monitoring, evaluation and reporting, and assess the effectiveness of strategy actions, and their cost effectiveness in implementation.
-

3 Towards Zero Waste targets

At a glance

Background

If they are to be effective, targets need to be acknowledged as relevant and appropriate by those responsible for their implementation. They should be evidence-based and achievable within set time frames. Progress against targets also needs to be measured reliably.

Conclusion

While progress has been made in recovering solid waste generally, projections indicate the municipal waste stream is unlikely to meet its 2014 targets. Rapid and substantial reductions would need to be achieved in the amount of waste generated, and the recovery rates of organic waste would also need to significantly improve.

Findings

- *Sustainability in Action: Towards Zero Waste Strategy* (TZW) targets were not soundly based.
- Targets and performance measures, which are consistent with, and inform TZW progress, have not been developed at the regional and local level.
- Data quality deficiencies have affected the reliability of performance data and projected performance.
- Progress to date in relation to municipal solid waste is mixed, with less certainty that future performance will meet targets.
- The mid-term review required Sustainability Victoria to assess the appropriateness of the targets, assess the costs of approaches and technologies to confirm ongoing directions for managing waste. This did not occur.

Recommendation

Sustainability Victoria should:

- meet the intended objectives of the mid-term review by completing outstanding analysis
- coordinate the development of regional and local performance indicators to enable contributions to the statewide targets to be reliably measured
- develop a knowledge management system to rationalise data, identify and rectify data quality issues and modelling accuracy.

3.1 Introduction

The *Sustainability in Action: Towards Zero Waste Strategy* (TZW) establishes a range of targets relating to the generation of solid waste, resource recovery and litter management. The targets are a guide to expected performance, and reporting progressively on their attainment informs stakeholders on the rate of progress in minimising the amount of waste generated and maximising opportunities for re-using materials.

If they are to be effective, targets need to be acknowledged as relevant and appropriate by those responsible for implementing them. They should be evidence-based and reasonably achievable within the time frames set. Tracking and understanding achievement also requires that progress against the targets can be measured reliably.

3.2 Conclusion

Performance against the TZW targets is inconsistent. While progress has been made in recovering solid waste generally, projections indicate the municipal waste stream is unlikely to meet its 2014 targets. Rapid and substantial reductions would need to be achieved in the amount of waste generated, and the recovery rates of organic waste would also need to significantly improve.

3.3 Towards Zero Waste targets

Establishing performance measures or targets that are practicable is an important first step. If they are not based on sound assumptions, they may not be achievable. In this situation they are less likely to be accepted as valid performance measures, weakening accountability for achievement.

There are six targets in TZW, four of which relate to municipal solid waste. Figure 3A shows these four targets.

Figure 3A
Towards Zero Waste targets—municipal solid waste

| Target | Target explanation |
|--------|---|
| 1. | A 1.5 million tonne reduction in the projected quantity of solid waste generated by 2014. |
| 2. | 75 per cent (by weight) of solid waste recovered for reuse, recycling and/or energy generation by 2014, with an interim 2008–09 target of 60 per cent. |
| 3. | 65 per cent (by weight) of municipal solid waste recovered for reuse, recycling and/or energy generation by 2014 with an interim 2008–09 target of 45 per cent. |
| 4. | A 25 per cent improvement, from 2003 levels, in littering behaviours by 2014. |

Source: Victorian Auditor-General's Office from information provided by Sustainability Victoria.

3.3.1 Developing the Towards Zero Waste targets

Neither Sustainability Victoria nor the Department of Sustainability and Environment, responsible for developing the targets, could demonstrate that the targets were underpinned by robust assessments or were soundly based. Sustainability Victoria advised that the target development was not adequately documented.

While the process to develop the targets was documented, the absence of documentation to explain how each step was carried out means that it is not possible to clearly determine the specific rationale for the targets. This limits the ability to assess whether strategies and actions provide for optimum social, environmental and economic outcomes.

Documentation that is available suggests that there were limitations in the analysis, including assessments of costs and benefits focusing only on the impacts of the strategy being implemented and not on the costs of implementation. These costs included those to business, the state, municipal councils and rate payers for putting the strategy into action and resourcing the strategy's programs and actions.

Furthermore, the available documentation suggests that there were significant assumptions that underpinned the development of TZW targets, including that waste recycling technologies were proven to be commercially viable at the time. Since then, this assumption has been shown to be incorrect, with technologies now requiring further research and testing to demonstrate effectiveness.

Other assumptions used to inform the strategy and its targets have also either not eventuated or need to be adjusted. These include assumptions about preferred approaches for recycling that have changed since the TZW was developed, and assumptions about the quantities of waste types being disposed of to landfill, which have changed since the 2005 waste audit was conducted.

The way target 1 is described in TZW has resulted in varying interpretations. Target 1 has been described in the strategy, in minister's briefings and by Sustainability Victoria staff as:

- a 1.5 million tonne reduction in the projected quantity of solid waste generated, by 2014
- a decrease in solid waste by 1.5 million tonnes per annum by 2014
- a 1.5 million tonne reduction in the rate of increase in waste generation by 2014.

Due to confusion over target 1, Sustainability Victoria uses a different measure when reporting performance. Sustainability Victoria reports on total solid waste generated for Victoria, rather than the reduction in solid waste generated.

Consequently, it is clear that there is a need to review the targets and associated programs and actions, including revisiting their rationale so that they are appropriate and that they deliver optimal social, environmental and economic outcomes for Victoria.

3.3.2 Applying the targets

Under TZW, Sustainability Victoria expected urban areas such as metropolitan Melbourne, Geelong, Bendigo and Ballarat to outperform against the targets set for Victoria. It was assumed that larger and denser populations would provide for economies of scale in terms of the waste generated, transport logistics, making the use of waste technologies more viable. These urban areas generate around 90 per cent of Victoria's solid waste. Conversely, less densely populated areas of rural and regional Victoria were expected to underachieve against the targets.

Despite this, TZW targets apply only at a statewide level. Targets and performance measures, which are consistent with and inform TZW progress, have not been developed at the regional and local level. The two audited regional waste management groups had no specific targets relevant to their geographical areas. Where performance indicators have been developed by municipal councils, they reflect local needs rather than their contribution to statewide objectives.

Consequently, there are no clear indicators to determine whether metropolitan and regional areas are performing in line with expectations.

3.4 Performance against targets

To effectively report on achievement of outcomes and performance against targets, underpinning data needs to be complete, timely and accurate. Future projections of performance also need to use projection tools that are subject to continual review and improvement as new data is made available.

Based on the available data, reported performance to date is consistent with expectations, although future projected performance for municipal solid waste is not expected meet the TZW targets. However, issues with data quality have adversely affected the reliability of both the reported and projected performance estimates.

3.4.1 Data quality

Sustainability Victoria provides four key performance reports relating to waste—the annual *Towards Zero Waste Progress Report*, the *Victorian Local Government Annual Survey Report*, the *Victorian Recycling Industries Annual Survey*, and the *Victorian Litter Report*. Waste data that informs these reports is collected by a range of agencies and from a range of public and private sources. This includes:

- **the tonnage of municipal solid waste collected through litter and street cleaning, kerbside collection, disposal and drop off services**—collected by municipal councils
- **the tonnage of certain types of material recycled each year**—collected by private recycling industries and associations
- **the tonnage of waste disposed of to landfill**—collected by landfill operators
- **attitudes and behaviours to littering**—collected through community surveys
- **the tonnage of certain waste material types imported and exported**—collected by the Australian Bureau of Statistics.

Data from recycling industry businesses and municipal councils is collected through voluntary surveys. There is an additional legislated requirement for municipal councils to report on data related to kerbside recycling. Landfill data is compulsorily collected by the Environment Protection Authority through landfill levy returns, and then provided to Sustainability Victoria.

Data quality issues, particularly with respect to municipal solid waste data, were known when TZW was developed. Action 9 of TZW identifies Sustainability Victoria as being responsible for improving the quality of municipal data collection, management and reporting throughout the life of the strategy.

Sustainability Victoria has taken action to improve the quality of data it reports on behalf of Victoria. It verifies information provided for the purpose of annual reporting by following-up with individual municipal councils and with individual reproprocessors. While Sustainability Victoria has no control over how providers collect and manage their own data quality, limited action has been taken to provide guidance to improve the data quality at its collection point. Known data quality issues remain with the data sets being incomplete and untimely.

This is compounded by the absence of a knowledge management system that clearly articulates the purpose of data collection, identifies the data that is required for decision-making, and details procedures or guidance to address completeness, validity, consistency, timeliness and accuracy of information.

Consequently, there is little assurance about the reliability of the data used to inform TZW progress reports. This low level of assurance, over the accuracy of information that is reported publicly, means that the cost and effort of capturing, aggregating, analysing and reporting this data serves limited real purpose.

Sustainability Victoria has advised that a waste data project is under development to review data needs and use, including sources of data, data that is redundant and newly required data. At the time of the audit, the project terms of reference were not fully developed and consultation with municipal councils had yet to occur.

3.4.2 Achievements to date

Sustainability Victoria monitors and reports on progress against the statewide TZW targets through the annual *Towards Zero Waste Progress Report* and also through the *Victorian Local Government Annual Survey Report*.

The most recent assessment of performance against the TZW targets was based on 2008–09 data.

As Figure 3B shows, progress to date in relation to municipal solid waste is mixed, with little assurance offered that future performance will meet targets:

- Expected mid-term performance for target 1 has not been met, with the expected reduction in solid waste generation for all sectors by 2008–09 falling short by 0.3 million tonnes. Sustainability Victoria has projected the final target to fall short by 0.7 million tonnes.
- Expected mid-term performance for target 2 has been met, with the amount of solid waste recovered by all sectors by 2008–09 exceeding expectations by 4 per cent. Sustainability Victoria has projected the final target to be exceeded by around 6 per cent.
- Expected mid-term performance for target 3 has not been met, with the amount of municipal solid waste recovered by 2008–09 falling short by 2 per cent. Sustainability Victoria has projected the final target to fall short by around 5 per cent.
- Expected mid-term performance for target 4 has been met, with an improvement in littering behaviours by 2008–09 exceeded by 3.6 per cent. Sustainability Victoria has not projected final expected performance for this target.

Figure 3B
Towards Zero Waste municipal solid waste related targets

| Expected midway performance | Actual midway performance | Difference from midway expectations | Projected final performance | Difference from final performance targets |
|--|---------------------------|-------------------------------------|-----------------------------|---|
| Target 1 – 1.5 million tonne reduction in solid waste generated | | | | |
| 0.7 million tonnes | 0.4 million tonnes | –0.3 million tonnes | 0.8 million tonnes | –0.7 million tonnes |
| Target 2 – 75 per cent (by weight) of solid waste recovered | | | | |
| 60 per cent | 64 per cent | 4 per cent | 81 per cent | 6 per cent |
| Target 3 – 65 per cent (by weight) of municipal solid waste recovered | | | | |
| 45 per cent | 43 per cent | –2 per cent | 60 per cent | –5 per cent |
| Target 4 – 25 per cent improvement in behaviours | | | | |
| 13.6 per cent | 17.2 per cent | 3.6 per cent | Unknown | Unknown |

Source: Victorian Auditor-General's Office from information provided by Sustainability Victoria.

Due to absence of an adequate evaluation framework and assessment of the impacts of TZW actions and the landfill levy, the reasons for under or over achievement against targets is not definitive. However, indicative reasons include:

- **target 1**—population growth exceeding assumptions has contributed to increases in waste generation. However, its achievement was also based on the implementation of mandatory bans on certain products being sent to landfills. These bans have not been implemented, as practical alternatives to landfilling are yet to be developed.
- **target 2**—better performance has been driven by the diversion of construction and demolition waste, in response to increases to the landfill levy.
- **target 3**—performance has been hindered by limitations on recovery of organic waste. Capacity to process organic waste has declined since 2009, with five facilities closing down. Organic waste collected from kerbsides and destined for these facilities has instead been redirected to temporary alternatives such as for regeneration of quarry sites, and to landfills where alternative capacity was unavailable.
- **target 4**—performance was due to a variation in the assessment methodology and improvements in other littering measures.

3.4.3 Future performance

Sustainability Victoria projects final waste management performance to fall short for at least two key municipal solid waste targets, and has identified three critical actions that would need to occur to meet this level of performance:

- continuing existing programs
- increasing the landfill levy from 2010 levels
- implementing new waste programs (reinvestment initiatives) announced by the then government in 2010.

Sustainability Victoria's reliance on these actions is problematic. While increasing the landfill levy is likely to have a positive impact, at least for construction and demolition waste, the increase is not likely to have an impact on achievement of municipal waste targets.

Based on past experience, the impact of existing and new programs is less certain. This is because Sustainability Victoria has not assessed the effectiveness of the existing programs, or the contribution that the new programs are likely to make to the TZW targets and outcomes. Without having this information, it is not well placed to predict future impact of these programs. Sustainability Victoria has also not assessed the relevance of the new programs to the TZW actions.

While concerted effort will be required to meet the predicted level of performance, a step change in the quantity of municipal solid waste recovered is required to close any performance gaps by the year 2014.

Future performance in relation to municipal solid waste is likely to be further hindered by the ongoing challenge of establishing sustainable businesses to recycle organic material, and to adequately develop more advanced alternative waste recycling and recovery facilities. Due to the high capital investment requirements for technologies and ongoing uncertainty of future regulatory requirements, considerable coordination at a whole-of-government level is required to address planning, regulation and business facilitation arrangements.

3.4.4 Mid-term review

The October 2010 mid-term review also required Sustainability Victoria to assess the appropriateness of TZW's targets, and analyse technologies and their respective costs to confirm ongoing directions for managing waste.

Sustainability Victoria did not adequately perform this part of the review, which again was a missed opportunity. It failed to:

- assess the appropriateness of the strategy's targets
- assess respective economic, environmental and social costs of the multitude of waste processing approaches and technologies
- analyse how waste processing technologies have developed and confirm ongoing directions.

Consequently, Sustainability Victoria has failed to confirm that the current targets are appropriate and adequate for judging performance, and to clarify the intent of target 1. Sustainability Victoria has also failed to provide information and guidance necessary to inform decisions about priorities for the remaining three years of the 10-year strategy. The absence of information about which waste management approaches and technologies provide optimal outcomes for Victoria provides little assurance that the TZW outcomes will be achieved through efficient and economical means.

Recommendation

3. Sustainability Victoria should:
 - meet the intended objectives of the mid-term review by completing outstanding analysis
 - coordinate the development of regional and local performance indicators to enable contributions to the statewide targets to be reliably measured
 - develop a knowledge management system to rationalise data, identify and rectify data quality issues and modelling accuracy.
-

Appendix A.

Audit Act 1994 section 16— submissions and comments

Introduction


In accordance with section 16(3) of the *Audit Act 1994* a copy of this report was provided to the Department of Sustainability and Environment, Sustainability Victoria, the Environment Protection Authority, the Department of Treasury and Finance, the Metropolitan Waste Management Group, the Highlands Regional Waste Management Group, City of Ballarat, Banyule City Council, Glen Eira City Council and Hume City Council with a request for submissions or comments.

The submissions and comments provided are not subject to audit nor the evidentiary standards required to reach an audit conclusion. Responsibility for the accuracy, fairness and balance of those comments rests solely with the agency head.

RESPONSE provided by the Secretary, Department of Sustainability and Environment



**Department of
Sustainability and Environment**

Ref: SBR005409
File: EP/10/3275


Mr Pearson
Auditor-General
Victorian Auditor-General's Office
Level 24, 35 Collins Street
MELBOURNE VIC 3000

8 Nicholson Street
PO Box 500 East Melbourne
Victoria 8002 Australia
Telephone: (03) 9637 8000
Facsimile: (03) 9637 8100
ABN 90 719 052 204
DX 210098

Dear Mr Pearson

VICTORIAN AUDITOR-GENERAL OFFICE (VAGO) AUDIT OF MUNICIPAL SOLID WASTE MANAGEMENT

I would like to thank you for undertaking the Municipal Solid Waste Management Audit. This review provides an opportunity to highlight areas for improvement across the portfolio in delivering effective and efficient waste management services.

I accept the recommendations in the report, and commit the Department of Sustainability and Environment (DSE) and portfolio agencies to addressing the report findings. The report also provides support and direction for a number of improvement processes already being undertaken by DSE and portfolio partners.

Over the last six months DSE has been focusing on strengthening portfolio collaboration between the Department and its agencies (Sustainability Victoria, the Environment Protection Authority of Victoria (EPA), the Metropolitan Regional Waste Management Group (MWMG) and Regional Waste Management Groups).

DSE commissioned a Capacity and Capability Review of MWMG in April 2011 to determine the core resources required to deliver its statutory responsibilities. The review provided an opportunity to reflect on the positive relationship that has been formed between the 30 metropolitan Councils and MWMG since its formation in October 2006. An effective and adequately resourced MWMG remains crucial to improving waste management services in metropolitan Melbourne, and DSE will continue to support MWMG's development.

While not explicitly highlighted in the VAGO report, I would like to acknowledge the role of the MWMG and Regional Waste Management Groups in working with local government and industry partners to deliver improved municipal waste management services in Victoria. Regional Waste Management Groups and the MWMG are key

Privacy Statement

Any personal information about you or a third party in your correspondence will be protected under the provisions of the Information Privacy Act 2000. It will only be used or disclosed to appropriate Ministerial, Statutory Authority, or departmental staff in regard to the purpose for which it was provided, unless required or authorised by law. Enquiries about access to information about you held by the Department should be directed to the Manager Privacy, Department of Sustainability & Environment, PO Box 500, East Melbourne, 3002.



RESPONSE provided by the Secretary, Department of Sustainability and Environment – continued

organisations in both the setting and delivery of strategic goals in the area of Waste Management in Victoria.

Following direction from the Minister, a review of Sustainability Victoria commenced on 5 May, with a report due to be completed on 31 August 2011. Your recommendations are a useful input to the review.

The EPA has completed a significant reform process and DSE will continue to support EPA's regulatory functions and continued improvement.

Additionally, DSE is leading a Waste Policy Review to replace the current Towards Zero Waste policy framework. The review will ensure that Victoria has contemporary policy settings that drive economic outcomes for the State while enhancing liveability. Victoria's waste policy framework is a complex policy area including the strategic, regulatory and investment settings that shape the nature and performance of waste generation and waste management operations in Victoria.

Establishing clear roles and responsibilities for portfolio agencies in delivering waste policy is a clear priority for the Department. The recent approval of the Environment Protection (Distribution of Landfill Levy) Amendment Regulations 2011 provides funding certainty for all portfolio agencies for 2011/12. The Department considers that that the report by the Auditor-General into municipal solid waste management provides some timely evidence and recommendations for improving policy implementation.

The Department also works closely with the Department of Treasury & Finance and the Department of Premier & Cabinet, and the roles of these organisations particularly in the management of landfill levy funds (including the reinvestment of these funds) should be noted.

The projects and processes outlined above are being undertaken in collaboration with stakeholders, in order to achieve results that will ultimately strengthen the waste management framework in Victoria.

I would like to reiterate that my Department, and portfolio agencies, are committed to improvement in the delivery of efficient and effective waste management policy, programs and regulation.

Yours sincerely



Greg Wilson
Secretary

RESPONSE provided by the Chair, Sustainability Victoria

Level 28
Urban Workshop
50 Lonsdale Street
Melbourne Victoria
3000 Australia

T +61 3 8626 8700
F +61 3 9663 1007
sustainability.vic.gov.au
ABN 62 019 854 067

21 June 2011

Mr Des Pearson
Auditor-General
Victorian Auditor-General's Office
Level 24, 35 Collins Street
Melbourne VIC 3000



Dear Mr Pearson,

I am writing in response to your audit on Municipal Solid Waste Management.

Sustainability Victoria acknowledges and intends to implement each of your recommendations and has already commenced work in that regard. We thank you for the analysis; the audit findings provide valuable, independent input into the development of our new Strategy and provide insight as we seek to clarify the roles of SV and our partner agencies through our current review process.

At the request of the Minister for Environment and Climate Change, Sustainability Victoria commenced an internal review in May 2011. The internal review and your audit will be key inputs into our new five year Strategy to be defined by late 2011. On the 6th June 2011, the Minister publicly committed to ensuring Sustainability Victoria's role in waste management is a fundamental driver and focus for the organisation in future.

Sustainability Victoria is confident that our new Strategy accompanied by strengthened leadership within SV and across the portfolio, will be a key enabler of an effective response to the recommendations from your audit and will improve our future performance.

Specifically, Sustainability Victoria agrees with the finding that disparate approaches to common issues and unclear shared responsibilities across agencies, regions and municipal boundaries were contributing factors to the failings identified by the audit. A lack of role clarity and coordination across the portfolio has significantly contributed to less than optimal performance.

Waste management and resource recovery is a complex policy area. Since the TZW Strategy was developed in 2004, the consumption behaviours of Victorians and the way in which they reduce, reuse and recover resources have all changed. TZW implementation has proven to be a dynamic challenge and Sustainability Victoria has implemented programs to achieve some useful outcomes over this time.

However, Sustainability Victoria clearly recognises in the light of your audit that better outcomes may have been achieved with an implementation plan and an adequate, over-arching performance management framework, specifically to provide the key aspects of planning, leadership, coordination and oversight. We will work with the other key parties involved in TZW implementation (DSE, EPA, RWMGs and LGAs) to address this key requirement as a high priority.

Yours sincerely,

A handwritten signature in black ink, appearing to read "Gillian Sparkes".

Dr Gillian Sparkes
Chair

RESPONSE provided by the Chief Executive Officer, Metropolitan Waste Management Group



21 June 2011

Mr. D Pearson
Auditor General
Victorian Auditor-General's Office
Level 24
35 Collins Street
MELBOURNE 3000

Dear Mr Pearson,

Thank you for the opportunity to comment on the Proposed Audit Report *Municipal Solid Waste Management*. We welcome this review of the Municipal Solid Waste (MSW) sector and concur with the findings and recommendations of the Report.

The Metropolitan Waste Management Group (MWMG) provides an important interface with the 30 local government councils in metropolitan Melbourne and the role they play in the management of municipal waste.

Current issues of focus for the management of MSW in the metropolitan area include management of organics, and better integrating waste management planning with other aspects of municipal and land-use planning.

We look forward to working with our portfolio partners and stakeholders with respect to MSW as they take on board the findings of the audit and utilise them to improve waste management in the municipal sector.

Regards

A handwritten signature in black ink, appearing to read 'Rob Millard', with a long horizontal line extending to the right.

Rob Millard
Chief Executive Officer

Metropolitan Waste Management Group • ABN 64 480 279 309
Level 4 • 28 Clarendon Street • Southbank 3006 • PO Box 1326 South Melbourne • Victoria 3205
t 03.8698.9800 • f 03.9699.3840 • e metro.waste@mwmg.vic.gov.au • www.mwmg.vic.gov.au

RESPONSE provided by the Chief Executive Officer, City of Ballarat



City of Ballarat

PO Box 655
Ballarat Vic 3353
AUSTRALIA

Telephone: 03 5320 5500
Facsimile: 03 5333 4061



Date: 20th June 2011
Our Ref:
Your Ref: 27345/01
Enquiries: 5320 5527
Writer's email: anthonyshinck@ballarat.vic.gov.au

Mr Des Pearson
Auditor General
Victorian Auditor General's Office
Level 24, 35 Collins Street
Melbourne VIC 3000.

Dear Mr Pearson

Re: Submission in Relation to Municipal Solid Waste Management Draft Confidential Report

Thank you for providing a copy of the Confidential Draft VAGO Municipal Solid Waste Management Audit Report to Council's Mayor and Chief Executive Officer for information and comment.

As the City of Ballarat has been one of four Local Government Authorities involved in the VAGO review of the implementation of the Towards Zero Waste targets, I provide the following comments as a submission in relation to the Draft Municipal Solid Waste Management Report:

Report Section 1 Background

With reference to page 3 Municipal Waste Disposal, the City of Ballarat has been working with Highlands Regional Waste Management Group for the last 2 years trying to identify a site and a processing solution for disposal of organic wastes. The current Victorian Planning Provisions and buffer distances required under EPA guidelines for such facilities determine there is no available site within the municipality, or within proximity in neighbouring municipalities, for the establishment of a processing solution for the region's organic wastes unless a planning scheme amendment is undertaken. This will be a costly and time consuming process. For this reason the introduction of a kerbside green waste collection for residential properties has been delayed until it can be determined whether the future solution is the processing of all binned residential wastes by an advanced waste facility within neighbouring regions, or the establishment of an organic waste processing facility within this region. This has delayed Council from significantly improving its diversion of wastes from landfill in the last 2 years.

The recent announcement by the Victorian Government to fund the investigation of a green waste to energy solution for the region is appreciated and it is likely that any such large scale facility will require seed funding either for capital establishment costs or as an operating subsidy to enable a regional facility to be economically viable. This is seen by Council as a priority use of funds raised by the Landfill Levy.



RESPONSE provided by the Chief Executive Officer, City of Ballarat – continued

Report Section 2 Implementing the TZW Strategy

Council concurs with the recommendation that Department of Sustainability and Environment should clarify the roles, responsibilities and accountabilities of entities involved in waste management and implementing the TZW strategy. It is apparent in the Central Highlands Region that the emphasis of engagement over recent years by DSE with the Regional Waste Management Group and its member councils has been in relation to restructuring Victoria's regions, rather than a focus on the TZW strategy.

Council concurs with the recommendation that Sustainability Victoria (SV) should develop and coordinate an implementation plan for the TZW Strategy and establish a framework for its effectiveness efficiency and economy.

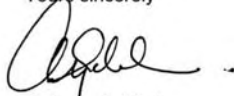
Report Section 3 Towards Zero Waste Targets

Council concurs with the recommendations that SV should:

- Meet the intended objectives of the mid term review by completing outstanding analysis.
- Coordinate the development of regional and local performance indicators to enable contributions to the state-wide targets to be reliably measured.
- Develop a knowledge management system to rationalise data, identify and rectify data quality issues and modelling accuracy.

I thank you for the opportunity to provide the above information in support of the Draft VAGO Municipal Solid Waste Management Audit Report.

Yours sincerely



Anthony Schinck
Chief Executive Officer

RESPONSE provided by the Chief Executive Officer, Banyule City Council

Our Ref: SM:rd File:BS12/005/001
Doc ID: 634802
Your Ref: 27345/01

Contact Officer
Russell Darling
Tel 9490 4502



21 June 2011

Mr D D R Pearson
Auditor-General
Victorian Auditor General's Office
Level 24, 35 Collins Street
MELBOURNE VIC 3000

Re: Proposed Audit Report – Municipal Solid Waste Management

Dear Mr Pearson

Thank you for the opportunity to comment on the proposed audit report following Banyule City Council's recent involvement in the VAGO audit into Municipal Solid Waste Management.

The feedback received from your office through the proposed audit report and the earlier briefing following the preliminary findings of the conduct phase of the audit is that local government is working reasonably effectively at a local level. Banyule City Council generally concurs with the findings of the audit and agree that further clarity of the roles and responsibilities of the different agencies involved in managing municipal waste is needed if there is to be a necessary improvement in sustainable waste practices.

Whilst there are no specific recommendations in the report that relate to local government, there are obvious flow-on effects which will be the result of changes to, or improvements in the implementation of the 'Towards Zero Waste Strategy' by State agencies. We agree these changes are necessary if Victoria is to improve its waste management behaviour however, given the fact that original targets were based on erroneous assumptions and there has been limited consultation with local government in implementing the strategy, it is imperative that local government be included in the development of future changes to the strategy. This is particularly important since we are the key sector that works directly with the community and provides the collection services.

Banyule is also concerned that many of the changes required to make significant inroads into the implementation of the strategy are likely to create more stringent recording and reporting requirements or will require a change of the collection and/or processing arrangements which will be at a significant cost to councils. It is therefore critical that the cost implications of any proposed changes to the 'Towards Zero Waste Strategy' or its implementation be determined and that suitable funding from the revenue derived from the landfill levy be allocated to the relevant agency(s) as required so as to effectively deliver the required improvements.

Finally, it is clear from the audit findings that State and local governments need to work collaboratively with good communication if an effective and consistent change in waste management behaviour by Victorians is to be achieved.

Yours sincerely

SIMON McMILLAN
Chief Executive Officer

All correspondence to
PO Box 51 Ivanhoe 3079
enquiries@banyule.vic.gov.au
www.banyule.vic.gov.au

Telephone 03) 9490 4222
Facsimile 03) 9499 9475
DX 97904 Ivanhoe
ABN 16 456 814 549

Service Centres
Greensborough 9-13 Flintoff Street
Ivanhoe 275 Upper Heidelberg Road
Rosanna 44 Turnham Avenue

RESPONSE provided by the Mayor, Hume City Council

Our File: HCC04/942 (IN2011/17572)
Enquiries: Steve Crawley
Telephone: 9205 2400



1079 PASCOE VALE ROAD
BROADMEADOWS
VICTORIA 3047

Postal Address:
PO BOX 119
DALLAS 3047

Telephone: 03 9205 2200
Facsimile: 03 9309 0109
www.hume.vic.gov.au

Tuesday 21 June 2011

Mr Chris Sheard
Director
Victorian Auditor-General's Office
Level 24, 35 Collins Street
MELBOURNE VIC 3000

Dear Mr Sheard

**RE: PROPOSED AUDIT REPORT – MUNICIPAL SOLID WASTE
MANAGEMENT**

This response is in reference to correspondence received from your Office dated 7 June 2011.

Thank you for providing the draft copy of the proposed Audit Report on Municipal Solid Waste Management it is most welcomed.

Council provides the following comments to the audit report:

In principle, Council supports the findings of the audit undertaken. Council considers that the recommendations should emphasis that Local Government must be consulted with the review and development of current and future waste minimisation Key Performance Targets for Victoria by the Department of Sustainability and Environment, Sustainability Victoria and the Environment Protection Authority.

It is only under the above scenario that meaningful targets can be set for Victoria based on sound reasoning and with funding support to ensure that the goals are achievable for each sector across the State.

Furthermore, at its meeting held on 14 June 2011 Council resolved a number of matters related to the collection of the landfill levy on behalf of the Victorian Government. Council's resolution is attached to this letter for your information.

Council is of the view that in order to achieve Toward Zero Waste targets and to improve recycling across Victoria that the funds collected should be provided to Local Government for operating or Capital Works projects related to waste minimisation and factored into future funding models.

Based on the amount collected to date for the EPA it is estimated that Council will collect approximately \$1.5m for the 2010/11 financial year and approximately \$14m for the period 2010/11 to 2014/15.

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RESPONSE provided by the Mayor, Hume City Council – continued

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The investment of these funds in waste minimisation projects and programs in Hume City would go a long way in achieving future targets whatever they may be.

Should you require any further information, please do not hesitate to contact Steve Crawley, Director City Infrastructure on 9205 2400.

Yours sincerely



**CR HELEN PATSIKATHEODOROU
MAYOR**

Encl

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ATTACHMENT

COUNCIL RESOLUTION FROM THE COUNCIL MEETING HELD ON 14 JUNE 2011

- That Council advise the Victorian Government that it is supportive of any recycling opportunities that protects the environment and contributes to the objectives of Sustainability Action: Towards Zero Waste.
- That Council is opposed to the Victorian Government's requirement for Hume City Council to collect on its behalf the estimated revenue of \$13.92m from the proposed landfill levy for the period 2010/11 to ~~2014/15~~.
- That Council reiterates its objection to being used as a collection agency for the Victorian Government and to the increase in the levy that the community have been forced to pay.
- Further to Council's resolution of 12 April 2010 and Council's letter to the former Premier of Victoria on 27 April 2010, a further request be made to produce a Regulatory Impact Statement on the landfill levy to provide transparency as to how the funds will be used in general and specifically the annual expenditure for projects and operations in Hume City related to increased recycling opportunities.
- That Council write to the Premier of Victoria Mr Ted Baillieu advising him of Council's position as detailed in this recommendation.
- That Council makes an application to the Victorian Government for funding for projects and operational programs as detailed in this report that contribute to the objectives of Sustainability Action: Towards Zero Waste.

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| Environmental Management of Marine Protected Areas (2010–11:23) | March 2011 |
| Managing Drug and Alcohol Prevention and Treatment Services (2010–11:24) | March 2011 |

| Report title | Date tabled |
|--|-------------|
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| Management of Major Road Projects (2010–11:34) | June 2011 |
| Victorian Life Sciences Computation Initiative (2010–11:35) | June 2011 |
| Allocation of Electronic Gaming Machine Entitlements (2010–11:36) | June 2011 |
| Municipal Solid Waste Management (2010–11:37) | June 2011 |

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