



Background Paper

Landfill Levy

PREPARED BY THE



MUNICIPAL WASTE ADVISORY COUNCIL
"Getting the Environment Right"

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Status of this Background Paper

This Background Paper has been prepared through the Municipal Waste Advisory Council (MWAC) for the Western Australian Local Government Association (WALGA). MWAC is a standing committee of WALGA, with delegated authority to represent the Association in all matters relating to solid waste management. MWAC's membership includes the major Regional Councils (waste management) as well as a number of Local Government representatives. This makes MWAC a unique forum through which all the major Local Government waste management organisations cooperate. This Background Paper therefore represents the consolidated view of Western Australia Local Government. However, individual Local Governments and Regional Councils may have views that differ from the positions taken here.

This Background Paper was endorsed by MWAC on 22 February 2012. Subsequent to the Papers endorsement, the State Waste Strategy was released. A Preface has been added to the Background Paper to identify the key components of the Strategy which relate to the Levy.

The Municipal Waste Advisory Council's member organisations are:

Bunbury Harvey Regional Council
Eastern Metropolitan Regional Council
City of Greater Geraldton
Mid West Regional Council
Mindarie Regional Council
Rivers Regional Council
Southern Metropolitan Regional Council
Western Australian Local Government Association
Western Metropolitan Regional Council

Preface

This Preface has been added to the original Background Paper following the release of the Western Australian Waste Strategy: *“Creating the Right Environment”*. The aim of the Preface is to outline the key elements of the Strategy which relate to the Landfill Levy.

The Strategy aims, ultimate, to “reduce the proportion of waste disposed to landfill” and includes targets to that effect for Municipal, Commercial & Industrial and Construction & Demolition waste.

It is stated that “The implementation of the Strategy will be supported by funding from the Waste Avoidance and Resource Recovery Account” - this account is supplied by the Levy.

The Strategy outlines 5 objectives, in relation to the Landfill Levy:

Objective 2 – Enhance regulatory services to ensure consistent performance is achieved at landfills, transfer stations and processing facilities.

Objective 4 – Use existing economic instruments to support the financial viability of actions that divert waste from landfill and recover it as a resource.

In the Regulatory area, the Strategy notes the need for increased, and specific, compliance work by the Department of Environment and Conservation in the area of the Levy; specifically issues such as acceptance criteria at inert landfill sites.

Strategies to achieve the Objectives include:

2 d. Establish a dedicated inspection and compliance team, funded by the WARR Account, to provide targeted enforcement activity at landfills and waste processing sites over and above that already undertaken for standard licence compliance.

4 a. Undertake economic assessments to determine the relationship between increased landfill costs and reductions in waste to landfill to inform the Waste Authority’s recommendations on landfill levy rates that best support the achievement of the targets in the Strategy.

4 b. Establish a five-year plan for the application of the landfill levies.

4c. Apply funds in the WARR Account to actions that directly contribute to achieving the Strategy targets.

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Purpose of this Background Paper

The purpose of this Paper is to give an overview of issues associated with landfill levies and to provide a background document to inform future discussions regarding the Landfill Levy.

Landfill Levy - Background

Governments have a range of tools available to encourage behaviour change (in companies/individuals). The two main approaches available are:

- Command and Control: direct regulation or legislation to achieve a certain outcome; and/or
- Economic or market based Instrument: such as a putting a financial cost on pollution.

Governments may choose to use a particular economic or market based instrument because it “offer[s] the potential for greater cost efficiency in achieving environmental targets than existing command-and-control methods” (Cowan, 1998).

Landfill Levies are economic instruments that put a specific cost on an activity, such as a cost per tonne on waste to landfill. Levies are generally considered to be a relatively ‘blunt’ type of economic instrument because they are often general taxes per tonne rather than directly related to the type of material landfilled and the harm it causes (Fullerton, 2001). The point of application of the Levy is at the landfill – that means there is frequently a disconnect between the person/organization generating the waste, the entity transporting the waste, then to the final point of disposal. Therefore unless the person/organization generating the waste is also taking the material to landfill and disposing of it there is no direct financial implication. Instead charging is indirect, for example through Local Government rates.

There are critics of the use of a Levies generally, Schollen (2010), identifies the Productivity Commission, Treasury and the OCED have expressed concerns; the major issue identified by these entities is that hypothecation of the Levy constrains Governments ability allocated revenue between competing priorities.

Landfill Levies of some kind are in place around the world. In the European Union the Landfill Directive sets clear targets regarding reducing waste to landfill, however there is flexibility in how this is achieved. One approach by many of the member states has been a landfill tax or levy (Parliament of Australia, undated). For example, in the UK there is a Landfill Tax in place which was introduced with the “twin objectives of raising money and protecting the environment, without imposing new costs on business” (Seely, 2009).

Waste to Landfill and Recycling

In considering Landfill Levies it is worth briefly examining the available data on waste to landfill and recycling/waste diversion rates; given the aim of levies is generally to reduce waste to landfill. The Levy rates for the various states are outlined in the following section of this Paper.

Waste to landfill varies between states. Figure 1 shows waste per capita landfilled in selected capital cities in Australia and total waste to landfill in these areas.

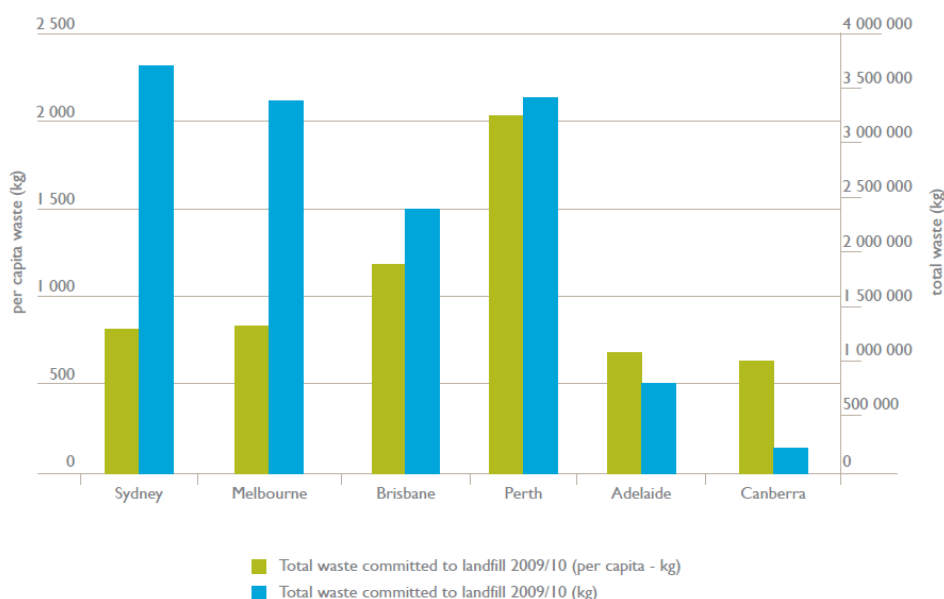


Figure 1: Landfill waste per capita and total waste to landfill by selected capital cities (Department of Infrastructure and Transport, 2011).

In a Paper put together for the NSW Government, Smith (2010) identified that “Currently South Australia has the highest diversion rate – 66%, with Victoria (62%) and NSW (52%) following...In 2006-07 South Australia had the highest municipal diversion rate (54%), compared to NSW at 38%. The lowest was Western Australia at 29%”.

There is some difference in the recycling rates for different waste streams, as Smith (2010) identified “in 2006-07 Victoria had the highest Commercial and Industrial diversion rate (69%). In contrast, NSW had the lowest Commercial and Industrial diversion rate (44%)...The Construction and Demolition waste diversion rate for NSW for 2006-07 was 67%. The highest diversion rate was South Australia (79%), whilst the lowest was Western Australia (17%)”.

Landfill Levies in Australia – Overview

This section outlines the current status of Landfill Levies in Australian states and territories. The issues covered are:

- the legislation that the Levy is constituted under;
- the governance in place (in terms of agencies/boards);
- the stated purpose of the Levy;
- the Levy rate and geographical application;
- how the funding is applied;
- general comments about the Levy;
- the Local Government Association Position on the Levy; and
- the State/Territory recycling rate.

The Northern Territory does not currently have a Levy in place so is not discussed in this section.

The State of Australian Cities 2011 identifies that “While increases in recycling rates across jurisdictions have been partially attributed to levy increases, waste strategies have also contained significant community awareness programs” (Department of Infrastructure and Transport, 2011).

New South Wales – Levy

Legislation and governance

The *Protection of the Environment Operations Act 1997* requires licensed waste facilities to pay a waste and environmental levy on all waste received. The *Waste Avoidance and Resource Recovery Act 2001* requires the development of a NSW waste avoidance and resource recovery strategy. The Act also established a framework for extended producer responsibility schemes for industry (Smith, 2010).

Rate and geographical application

2010/11

Sydney metropolitan area: \$70.30 per tonne

Extended regulated area (Illawarra and Hunter regions): \$65.30 per tonne

Regional regulated area (coastal councils from Port Stephens to Queensland border and Blue Mountains and Wollondilly council areas): \$20.40 per tonne

Levy on trackable liquid waste is \$63.00 per tonne

Levy on coal washery reject is \$15.30 per tonne

Amount raised through the Levy 2010/11: \$368M (NSW Budget 2011/12)

This amount goes into consolidated revenue, so estimates of how much is allocated to waste management are difficult. Approximately one third of the amount raised goes to waste and environment related programs (Pers. comm. 1/2/12).

Comments

Questions have been asked in the past as to how much of the Levy in NSW is actually spent on waste management. In 2008 Shadow NSW Environment Minister Pru Goward stated:

The reality is the [NSW] State Labor Government is spending less than 10% of the levy on waste reduction.

Sydney is recycling only 37% of municipal waste and 35% of its commercial and industrial waste – well below Melbourne where there is a lower levy (Inside Waste).

Victoria – Levy

Legislation and governance

The Landfill Levy is applied under the *Environment Protection (Distribution of Landfill Levy) Regulations 2010*, which distributes the Levy to “key government agencies responsible for waste planning and management: regional waste management groups (RWMGs), Sustainability Victoria and EPA. The Treasurer and the Minister for Environment allocate the remaining levy funds through the sustainability fund” (EPA Victoria, 2011).

Purpose

The Levy's purpose is given as for "environment protection and fostering environmentally sustainable use of resources and best practice in waste management" (EPA Victoria, 2011).

Rate and geographical application

Rural

Municipal: \$22 per tonne

Industrial: \$38.50 per tonne

Metropolitan and Provincial

Municipal: \$44 per tonne

Industrial: \$44 per tonne

Amount raised through the Levy 2011/12: \$132M (VIC Budget 2011/12) – represents a 38.5% increase on previous year due to substantial increase in Levy amount. The amount of the Levy directed to waste management activities is hard to gauge, as funds go to a range of organisations, including those undertaking general environmental activities and to the Sustainability fund.

Comments

There are separate, and significantly higher, Landfill Levy fees for Industrial waste. There is a clearly identified schedule of increase for the Levy until 2014/15. For sites which do not have weighbridge conversion factors are provided by EPA Victoria.

South Australia – Levy

Legislation and governance

The Solid Waste Levy is raised under the *Environment Protection Act 1993*. The levy is collected by the Environment Protection Authority (EPA), 50% is transferred to the Waste to Resources Fund which goes to fund Zero Waste SA (Zero Waste SA, 2011a). The other 50% remains with the EPA, of that

5% is allocated to the Environment Protection Fund which is established under the Environment Protection Act 1993. The Environment Protection Fund is utilised by the EPA and is not waste industry specific. The fund is drawn upon for such expenditure as technical investigations and training, site/spill cleanup, and litigation.

The remaining 45% of the funds is kept by the EPA to fund general activities and functions of the EPA (Local Government Association of South Australia, 2011).

Purpose

To achieve the objectives of Zero Waste SA, which are broadly to "enable people to improve their recycling and waste avoidance practices, whether: at home, at work or in industry" (Zero Waste SA, undated).

Rate and geographical application

Metropolitan Adelaide: \$35 per tonne

Non-metropolitan Adelaide: \$17.50 per tonne.

Further increases after 2011-12 are also foreshadowed up to at least \$50 a tonne in metropolitan Adelaide.

Amount raised through the Levy 2010/11: \$25,232,000 (50% of this, \$12,616,000, was allocated to ZeroWaste SA.

Funding application

Funding is applied in line with Zero Waste SA's business plan and in line with their State Waste Strategy. Figure 3 shows the breakdown of funding expenditure for the 2011/12 financial year.

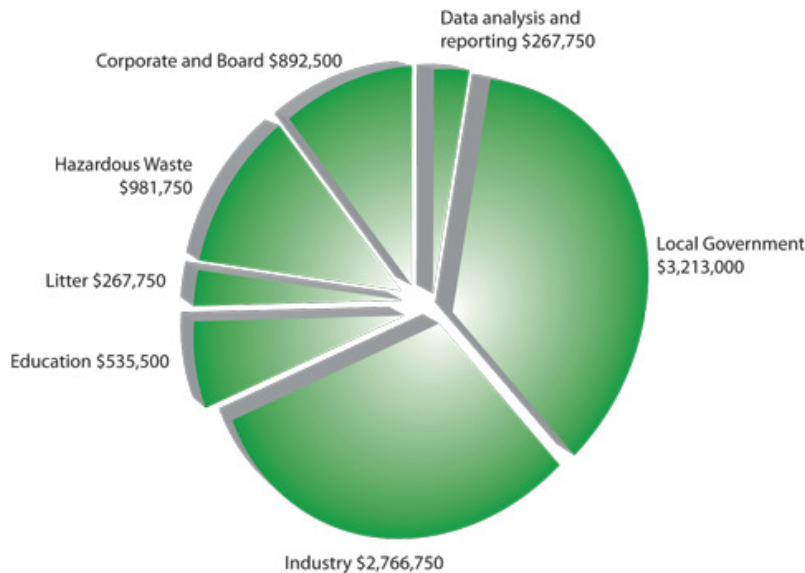


Figure 2: Breakdown of funding expenditure by Zero Waste SA 2011/12 (Zero Waste SA, 2011b).

Comments

The Local Government Association of South Australia identified in a recent discussion paper that Local Government has continuing concerns with the policy and objectives of the State Government Solid Waste Levy. These concerns have been further heightened by the State Government's decision to increase the monetary value of Solid Waste Levy from July 2011. The LGA believes the increased cost burden to Councils will not result in higher waste diversion rates, as Councils are already operating at best practice for municipal solid waste (2011).

Queensland – Levy

Legislation and governance

Waste in Queensland is currently regulated by the *Environmental Protection Act 1994*, the *Environmental Protection Regulation 2008* and the *Environmental Protection (Waste Management) Policy 2000*. A Levy was introduced in Queensland on 1 December 2011, through the *Waste Reduction and Recycling Act (WRR Act)*.

Purpose

To raise funds to “deliver programs that will improve Queensland’s waste and resource management practices, reduce the amount of regulated waste requiring disposal, enhance enforcement and compliance capability under the new legislation, and help secure a sustainable future for Queensland” (DERM, 2011). More specifically under the WRR Act, the waste levy will meet the following policy objectives:

- Creating a price signal to focus waste generators’ practices on waste avoidance and resource recovery and a disincentive to unnecessary landfill disposal.
- Ensuring a level of consistency with waste disposal costs in other states that will be a reasonable deterrent to the unnecessary disposal of interstate waste into Queensland’s waste disposal sites.
- Providing funding for programs help establish better waste avoidance and resource recovery practices and overall waste management initiatives.
- Reducing the impact upon Queensland’s carbon footprint caused by waste disposed to landfill (DERM, 2010).

Rate and geographical application

C&D and C&I: \$35 per tonne

Low hazard waste: \$50 per tonne

High hazard waste: \$159 per tonne

No Levy on MSW

Funding application

The funding will be used, over the next 9 years, to:

- Waste Avoidance and Resource Efficiency (WARE) Fund for waste-related programs and projects with a funding allocation of \$159 million.
- Sustainable Future Fund (SFF) assist in the delivery of local government waste and environmental programs \$120 million.
- Residual funds of some \$100 million will be provided to help support State Government sustainability objectives outlined in *Toward Q2: Tomorrow's Queensland* (DERM, 2011).

Comments

Domestic waste has been made exempt from the Levy because “a levy is an indirect price signal for households. Because waste charges generally appear on council household rates notices as a flat charge, regardless of the amount of recycling achieved, households have little ability to avoid the levy charge. Household recycling systems are in most cases reasonably efficient, with over 95 per cent of Queensland households having access to some form of recycling” (DERM, 2011).

Other waste exempt from the levy (DERM, 2011):

- waste resulting from a declared natural disaster, such as a bushfire or cyclone;
- waste, such as asbestos, that is already required to be disposed of in accordance with a regulation;
- illegally dumped waste and litter collected by a local government or a community group involved in an initiative, such as Clean-Up Australia Day; and
- waste that is managed on the site where it is produced. This includes, for example, fly ash (resulting from power generation), farm waste and red mud (resulting from bauxite processing).

It should be noted that “Queensland is the only Australian jurisdiction to provide a dedicated local government fund from the Levy”. This is in the form of the Sustainable Futures Fund and it includes “\$13.46 million [for the] Local Government Weighbridges and Ancillary Equipment Program” (BEN, 2011)

Tasmania – Voluntary Levy

Legislation and governance

No specific legislation governs this Levy as it is voluntary, it is collected on a dollar per tonne basis by the various landfill sites.

Purpose and applications

Used to support the activities of the Southern Waste Strategy Authority (LGAT, 2006) and the Northern Tasmanian Waste Management Group (Taswaste, undated).

Rate and geographical application

\$2 per tonne for all waste to landfill, applies on to the southern and northern regions. The application points vary in the Southern Region, with some applied at the landfill gate (to all users) and some through the rates. In the northern region, the Levy is applied at the gate.

Amount raised through the Levy:

Southern Region: \$ 328,442

Northern Region: unknown

Cradle Coast: unknown

Comments

In response to a State Government imposed Levy, the Local Government Associations position is that “the introduction of a waste management disposal levy is an unacceptable impost on Councils and communities that is strongly opposed by Local Government” (2006). However, the Tasmanian Government is expected to consider a landfill levy in the near future and one of the Regional waste management groups (Southern Waste Strategy Authority (SWSA)) has expressed some support for a state government imposed Levy – to ensure consistent application of the Levy and dependent on a number of conditions regarding how the Levy is expended (SWSA, 2011).

Conclusion

A high levy does not automatically equal a high recycling/recovery rate, this could be because of longer lead times to invest in infrastructure to reduce waste to landfill or due to more effective programs to reduce waste generation and disposal. Table 1 shows the current Levy per tonne rate for each state and the state recycling rate.

Smith (2010) suggests:

Whilst the limitations of the data discussed in section one of this paper must be considered, it could be argued that the most successful state in terms of waste minimization and recovery is South Australia. If this conclusion holds, the obvious question is why? Is it solely due to the work of Zero Waste SA? Or is the awareness of waste issues heightened in South Australia by their container deposit legislation and, more recently, the ban on lightweight plastic bags?

State	Levy in Metropolitan Area per tonne (current)	State Recycling Rate 2006/7
NSW	\$70.30	52%
Victoria	\$44	62%

South Australia	\$35	66%
QLD	\$0 – currently	47%
Northern Territory	\$0	No rate given
Tasmania	\$2	No rate given
Western Australia	\$28	33%

Table 1: Levy per tonne and recycling rate

Despite economic arguments put forward regarding the use of Levies, the widespread use of the Levy as a tool for raising revenue is also apparent from the comparison of the situation in the other States. All States have, or are in the processes of putting in place, a Levy. The various Governments have put in place some flexibility in the use of the Levy, NSW being the exception which has complete and explicit flexibility regarding Levy expenditure.

Case Study: Construction & Demolition Waste

For some material types, it has been suggested that the Levy can work as a direct financial incentive to reduce waste to landfill; one example, is for C&D waste. An economic analysis conducted by ACIL Tasman (2008), on behalf of the Department of Environment and Conservation, provided several examples of how other State Governments had addressed the issue of increased C&D recycling.

New South Wales

The NSW Department of Environment, in their Submission to the Productivity Commission, stated *while aggregate suitable for use in road base applications was generally cheaper than virgin products the: use of recycled materials of this type did not increase significantly prior to the introduction of the waste levy and better landfill controls. In other words, the mere fact that it was cheaper to recycle did not stimulate investment to exploit the opportunity. A policy 'jolt' was required (ACIL Tasman, 2008).*

The ACIL Tasman Report (2008) goes on to note “importantly, the landfill levy was not the only tool used to achieve improvements in NSW. For example, the Local Government Waste Performance Improvement Payment, a payment aimed at helping local governments achieve better management practice and resource recovery outcomes had funding worth \$80M over five years (DECC 2006)”.

South Australia

In a 2001 Report for the South Australian Government Nolan ITU identified a range of barriers to the development of the C&D recycling industry, these included:

- Illegal landfilling of C&D waste;
- Low levels of enforcement by the EPA of landfill sites;
- Failure of local and state governments to specify a preference for recycled material;
- Low commitment and investment from government for product testing and development;
- Low tipping fees at landfill sites;
- Reluctance of industry to engage in on-site separation of materials;
- Public perception that recycled products were inferior to virgin materials (ACIL Tasman, 2008).

So in the NSW example, while the Levy was important in the increase in C&D recycling, it was not the only driver. For South Australia, there were a range of factors which were identified as barriers to increasing the recycling rate for C&D waste. One conclusion that can be drawn from these examples, is that even with C&D waste, for the Levy to work a range of other factors also need to be in place including such as sufficient reprocessing capacity, a market for the material and awareness of the materials' use. If these conditions are met, then the increase in the Levy could be a sufficient policy 'jolt'. In a report on the most recent WA recycling figures for C&D Recycling, the 2009/10 data, indicated that

The impact of the landfill levy on C&D materials recycling is hard to quantify. The increase in C&D recycling can, in part, be seen as a result of the levy. On the other hand, C&D waste to landfill also increased during 2009–10. There therefore seems to have been a reclassification of other sector waste as C&D material or capture of material not previously registered as waste. It is also known that the cost of the landfill charge has not risen in line with the levy, with some operators choosing to absorb part of the levy impact by reducing their margins (Hyder, 2011).

Landfill Levy in Western Australia – Legislation

Environmental Protection (Landfill) Levy Act 1998

The Landfill Levy was first introduced in Western Australian in 1998, through the *Environmental Protection (Landfill) Levy Act 1998*. In the Second Reading Speech of the *Environmental Protection (Landfill) Levy Act 1998*, it was outlined that money raised through the Levy was only to be used to fund programs approved by the Minister relating to

the management, reduction, re-use, recycling, monitoring or measurement of waste and administering the Fund. It was stated the Levy was not to be used to fund “normal ongoing operations of the Department”. Local Government’s support of the Levy was conditional on the understanding that funds generated would only be used within the bounds of these specified restrictions. The Levy was set at \$3 per tonne for putrescible waste and \$1 per cubic metre for inert wastes. As of 1 October 2006, the Levy increased to \$6 per tonne for putrescible waste and \$3 per cubic metre for inert waste.

Waste Avoidance and Resource Recovery Levy Act 2007

In 2007, the relevant legislation changed and the Landfill Levy became the Waste Avoidance and Resource Recovery Levy (enacted through the *Waste Avoidance and Resource Recovery Levy Act 2007*). The essential conditions of the Levy did not change under this Act. The Levy Act itself does not include specific mention of the purpose of the Levy, instead the purpose of the Act is only to “impose a Levy with respect to certain waste”. The purpose for the Levy was identified in the Second Reading Speech of the *Waste Avoidance and Resource Recovery Act 2007* the Minister indicated that “The primary purpose of the establishment of the landfill levy was to provide resources to fund projects for advancing waste reduction and recycling...In many respects, the arrangements for the levy and account continue unchanged. However, they have also been updated....Levy funds are to be used only for purposes provided for in the legislation. Specifically, the funds will be applied to programs relating to the management, reduction, reuse, recycling and monitoring of waste. The funds could be used by DEC only for administration of the account and developing or coordinating the implementation of programs consistent with the purposes of the legislation. The levy is not to be used to fund other normal ongoing operations of DEC”.

The *Waste Avoidance and Resource Recovery Act 2007*, again does not speak specifically to the purpose of the Levy but instead identifies what the funds directed to the Waste Avoidance and Resource Recovery Account (WARR Account) can be spent on. These activities are listed as:

Moneys held in the WARR Account may be applied by the Waste Authority, in a manner that is consistent with the current business plan or is approved by the Minister —

(a) to fund programmes relating to the management, reduction, reuse, recycling, monitoring or measurement of waste; and

(b) to fund the preparation, review and amendment of the waste strategy, waste plans under Part 4 and extended producer responsibility schemes and the implementation of that strategy and those plans and schemes; and

c) in payment of the costs of administering the WARR Account (including the costs of collecting levies and penalties and support and evaluation services).

Waste Avoidance and Resource Recovery Amendment Act 2009

The consistent position that the Levy should not be used to fund ‘ongoing operations of DEC’ changed in 2009 when the Government introduced the *Waste Avoidance and Resource Recovery Amendment Act 2009*. This saw 75% of the Levy allocated to ‘ongoing operations of DEC’ and an unexpected (and substantial) increase in the Levy rate. Although the increase was announced as part of the 2008/09 budget, the re-allocation of funds from the Levy required a change to the WARR Act. This process took approximately 6 months, therefore the Levy went from \$7 / tonne for putrescible waste to \$8 / tonne (the increase in Levy listed in the Regulations) for 6 months, then increased to \$28 / tonne. The Levy on inert waste went from \$3 / cubic metre to \$12 / cubic metre.

The reasoning for the increase was outlined in the Second Reading speech which stated:

Levies in Western Australia are well below those in other jurisdictions. Currently, the levy for waste to putrescible landfills is \$8 per tonne and \$3 per cubic metre for waste going into inert landfills. In comparison, in New South Wales the levy for the Sydney metropolitan area is currently \$58.80 per tonne. Furthermore, compared to other Australian jurisdictions, Western Australia has one of the lowest rates of recycling, particularly for construction and demolition waste, which makes up almost 50 per cent of the state’s waste by weight. New South Wales, for example, recycles over 65 per cent of its construction and demolition waste. Western Australia recycles less than 20 per cent.

It was not clear from the Second Reading speech why the areas which the Levy funds could be applied to had been “broadened”.

Conclusion

The points of consistency in the Levy application is that it is only applied to waste generated or landfilled in the metropolitan area and the units and material the Levy is applied in have not changed. The Government position has substantially altered on the expenditure of the Levy and the purpose for putting a Levy in place. However, the policy development to substantiate this approach is not readily apparent.

As discussed, Levies are put in place to change behaviour, in this case to reduce waste to landfill. In considering *how* a Levy changes behaviour there are 3 main approaches (or 3 rationales for why a Landfill Levy would assist in reducing waste to landfill). The Waste Management Board (2005) identified these as:

- landfill prices reflect the full environmental cost of landfilling;

- increased landfill pricing acts to reduce our reliance on landfill and encourage resource recovery and waste avoidance; and
- sufficient funds are available to resource the programs required to achieve the State's Zero Waste vision.

To expand on these rationales:

Externalities (full environmental and/or social cost of landfill): To address the issues of environmental and social externalities of landfill, these costs could be calculated and included in the Levy. Social costs could include the loss of amenity for those who live nearby (odour, traffic noise and public health issues). Environmental costs of landfill potentially include the attraction of feral animals to the site, as well as the risks of water and air pollution. The Waste Authority commissioned work on quantification of these externalities for the WA context. The Report *Evaluation of the social optimum for the Landfill Levy in WA* (Schollum, 2010), estimated these externalities as \$32 / tonne (across all waste streams). Just because externalities included, does not mean this will be a sufficient price point to change behaviour – all it means is that a proxy for environmental/social costs have been included in the price of something. There may be other barriers to reducing waste to landfill that are not addressed by the issue of economic externalities. The Productivity Commission, in their 2006 Report on Waste Management, identified that “basing levies on the environmental and social externalities of the landfill would be very difficult to achieve in practice. Externalities vary according to location, the type of waste and how the landfill is constructed and managed”.

Direct disincentive to landfill: based on the idea that at a certain Levy rate the alternatives to landfill, such as alternative waste treatment, become cost competitive; with different waste streams potentially having different tipping points for the alternatives to landfill to become competitive. For example, the cost of AWT can range between \$160 – 200 per tonne (WALGA, 2009), this would mean a sizeable Levy increase. Current landfill rates in WA vary in the metropolitan area, the range is between \$100 - \$150 per tonne (including the Levy). However, using the Levy in this manner may not be the appropriate approach to direct behaviour change. It may be the way to make current AWT options costs competitive with Landfill however.

Raise funds for activity (i.e. strategic waste management activities): the Levy provides a means of generating secure funding for strategic activities in waste management.

These approaches are potentially complementary, however it should be noted that the current MWAC Policy Statement on the Levy supports only the raising funds for activities rationale (although notes the potential for other rationales). Local Governments position on the rationale for the Levy was reviewed in 2010 and a survey of Local Governments identified that over 80% of respondents supported only the rationale of use of the Levy to raise funds for strategic waste management activities.

Landfill Levy in Western Australia – Expenditure

The Waste Authority is currently operating under a Work Plan, rather than Business Plan until such time as the State Waste Strategy is approved. The most recent data available regarding Levy expenditure, therefore, is from the 09/10 Annual Report. The 10/11 Annual Report is due to be released in early November 2011. Appendix 1 includes a breakdown of the categories of expenditure. Figure 5 gives a breakdown based on the categories outlined in Appendix 1.

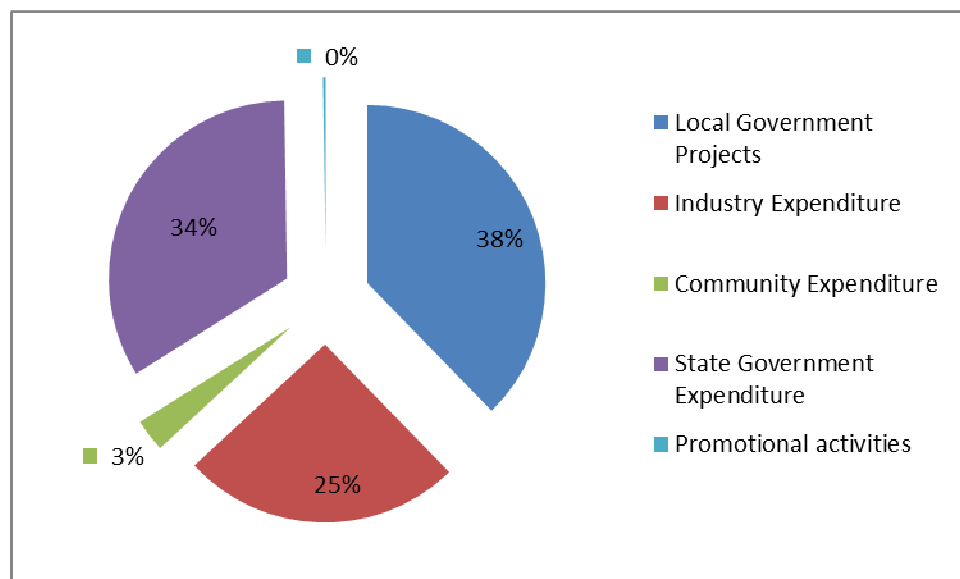


Figure 5: Levy expenditure by type 2009/10

Total Levy Income and Expenditure for 2009/10

Income - \$15,186,763

Expenditure - \$16,816,837

In 2009/10 34% of the expenditure (\$5.6M) is related to State Government activities (Figure 5). For the 2011/12 financial year, the Government has budgeted to raise, through the Levy, approximately \$42M with only \$10.5M going to waste management related activities.

Local Government Policy Statement on the Landfill Levy

Local Government has been consistent in its opposition to the use of the Levy to fund activities of the Department of Environment and Conservation (aside from those specifically related to the administration of the Levy). In a 2006 MWAC Submission, it was requested that the prohibition on funding 'normal ongoing operations of the Department' through the Levy be formalised. This Submission highlighted that 'the desire for safeguards against the misallocation of Levy funds is not born of distrust of the Waste Management Board or the Department of Environment and Conservation. Rather this desire is attributable to the expectation that as the available funds grow, so will the pressure to distribute them across other Government priorities'.

The Policy Statement identifies that:

Continuing Local Government support for the Levy is subject to the provision (on an ongoing basis) of robust evidence, made available to the public, demonstrating the Levy is achieving its broad objectives, and on a number of conditions regarding the Levy's operation and the application of Levy funds:

- a. Support for a Levy that is hypothecated to strategic waste management activities
Local Government strongly opposes the application of the Levy to non-waste management related activities, such as funding State Government core activities. Local Government supports funds from the Levy being applied to strategic waste management activities.
- b. There is no support for the Levy to be applied to waste received at licensed premises whose primary purpose is resource recovery
Local Government strongly opposes the application of the Levy to waste delivered to licensed premises which have, as a primary purpose, resource recovery (such as materials recovery facilities (MRFs), green waste processing facilities and alternative waste treatment (AWTs) facilities). Local Government will consider the appropriateness of the Levy being applied to waste delivered to other types of licensed premises (for example mine dumps) on a case-by-case basis.

Effect of the Landfill Levy in Western Australia

Limited evidence has been presented that the Landfill Levy is directly effective as a disincentive for landfill or as a way to take account of the full environment and/or social costs for landfill. As a consequence, Local Governments' position is that the primary rationale is to raise funds for strategic waste management related activities.

The effect of the Levy increase, without the accompanying investment in waste management, has had a negative impact in relation to waste diversion activities. In order to minimise the impact on the community many Local Governments have cut expenditure in research and development areas, have not invested in new recycling infrastructure, and have reduced waste education programmes. These areas, which would have assisted in diverting waste from landfill to beneficial uses, have been impaired by the increase in the Levy.

In its communications with the State Government, the Association has identified that there could be unintentional outcomes of increasing the Levy without reinvesting the funds in waste management activities. For the Levy to work as a disincentive to landfill, there needs to be higher level strategic planning in place.

Currently, Local Governments are providing a range of waste and recycling services (including kerbside, vergeside and drop off facilities and Alternative Waste Treatment). It would be difficult for Local Government to further increase diversion of waste to landfill without substantial additional cost, or the implementation and use of additional policy instruments such as a Container Deposit System.

When the Landfill Levy was increased previously, Local Governments absorbed some of the increases in the Levy in order to limit the rate increase for the community; this led to reduced spending on activities to prevent waste to landfill. The following examples were provided to the Environment Minister to illustrate the issue:

City of Stirling

The City of Stirling has made a conscious decision about the need to recycle more in order to divert waste from landfill. In 2009/10 the City recycled over 24,846 tonnes of material including batteries, CFLs, green waste, metal, plastic, cardboard, glass and electronic waste, saving the City \$696,000 in WARR Levy contributions. This diversion from landfill has substantial costs for the City in terms of staffing and recycling costs. During the same time period, the City sent 108,282 tonnes of waste to landfill and paid indirectly \$3 million in WARR Levy contributions.

In 2009/10 the City of Stirling created an extensive e-waste collection program as well as starting a mattress recycling program. However, the lack of Levy funds returned to Local Government has placed restrictions on the expansion of such programs. The City of Stirling has not pursued other recycling programs (such as for plastic, polystyrene, timber and industrial cardboard) due to the lack of funding for research and development and operational support.

Southern Metropolitan Regional Council (SMRC)

The SMRC generates approximately 40,000 tonnes of residual waste per year. This material is sent to landfill and therefore attracts the Levy. The full impact of the \$20 per tonne Landfill Levy increase affected the SMRC 2010/2011 budget, resulting in additional costs of \$800,000 per year.

To minimise the costs to Member Councils and the community of this increase, the SMRC had to cease its research and waste auditing program. As a result, the SMRC is now dependent on grants for future research and development projects.

Western Metropolitan Regional Council (WMRC)

The increase in the Levy has affected the WMRC DiCOM Alternative Waste Treatment facility. The WMRC contract for DiCOM has a starting price that is indexed to the cost of disposal at the commencement date (and CPI for every year thereafter), the Landfill Levy increase has led to the starting price being higher, thus leading to higher annual increases (i.e. CPI of a larger number). The upshot is higher waste management fees for Local Governments and consequently the community.

The increase in fees has created a great deal of difficulty for member Councils agreeing to supply waste for the project. To reach an agreement, the WMRC have reduced the term of the agreement in which members supply the WMRC from the initial 20 years (matching the WMRC obligation to DiCOM) down to 5 years. The pressure on pricing has also meant that the WMRC is under pressure from its members to reduce costs and there have been suggestions of removing successful community education programs, such as Earth Carers.

The solutions to reducing the residual waste are also costly, and attempts by the WMRC to access funding through the Strategic Waste Initiatives Scheme has been declined.

If the intent of Levy is in fact to decrease waste to landfill the increase in the Levy has not achieved this aim. Hon. Sally Talbot (Hansard, 7/12/11) identified that the Government had actually received \$8 million more revenue than expected through the Levy – indicating waste to landfill had not decreased.

Waste Generation – Metropolitan Area

For 09/10 financial year, municipal waste landfilled or generated in the metropolitan area was 825,338 tonnes (approximately 24% of the total waste to landfill). This generated \$23.1M Levy.

Waste Generation – Non-metropolitan area

Based on very broad calculations the amount of waste generated by households in the non-metropolitan area of Western Australia is approximately 290,000 tonnes per annum. This is based on an estimated figure of 1.3t/household/year (taken from an average Local Government in the metropolitan area, including both kerb and verge collection). If a reduced Levy rate was applied to this waste (as is the case in other states) at a rate of half of the metro Levy (\$14 per tonne), the non-metropolitan area of WA would generate approximately \$4.1M per annum of which, under the current regime, only \$1.25M would be used for waste management activities.

There is a lack of support for the Landfill Levy as a mechanism for reducing waste to landfill. Local Government is not satisfied with the current application of the Levy, therefore the rationale for the Local Government sector to support the expansion of a currently inefficient mechanism into the non-metropolitan area is limited.

Considerations for the Non-Metropolitan area

Waste management issues

The non-metropolitan area has a range of issues with regard to waste management. These include:

- Low population density: meaning economies of scale applicable to the metropolitan area are not present and greater distance has to be travelled to service residents, which increases costs;
- Distance from market: markets for recyclables are usually Perth/interstate/international;
- Low rate base: fewer people, mean less rateable land, some Local Governments have large areas which are not rateable because they are Crown Land or pastoral leases;
- Data: Limited data on the amount of waste collected / landfilled;
- Illegal dumping: with greater area, comes more opportunity to dispose of material illegally; and

- Greater cost of service provision: aside from economies of scale, costs to provide services can be more for a range of reasons, including issues with staff attraction and retention.
- Commercial activities: a range of large scale commercial activities and projects may take place in the non-metropolitan area (for example mining) the Local Government may be expected to take waste from these facilities.

Potential issues and considerations for Levy implementation

The current Levy is only applied to waste generated or landfilled in the metropolitan area. The Associations current position is that the Levy should not be applied to the non-metropolitan area. The definitive nature of this position is a new addition to the Policy Statement, as previously the position was that a Levy in the non-metropolitan area may be considered if a range of stringent conditions were met.

The State Government position on the application of the Levy to non-metropolitan areas is not clear, however there has been some indication previously that it *may* be considered. The Waste Authority, at its May 2008 meeting, made the decision to consult on the potential for incorporation of major Regional Centres into the Levy determinations, and if so under what conditions.

In response to this, the Association noted that Local Governments in non-metropolitan areas are currently unequipped to apply and administer the Levy. To apply the levy Regional Centres would need:

- Infrastructure upgrades (i.e.: weighbridges);
- Increased resources (e.g. administrative capacity); and
- Appropriate data retrieval software.

This response was based on the use of weighbridges in regional centres to implement the Levy and no application of the Levy to surrounding areas. Based on this assumption, there are further considerations:

- Inhibit regionalisation: introduction of the Levy to the non-metropolitan area could become a disincentive for Local Governments to form working partnerships. Some Regional Centres operate (or are investigating) landfill sites which are used by the surrounding Local Governments. This has facilitated the move away from numerous small unmanned landfill sites. In many areas, Local Governments are exploring the use of transfer stations to move waste back into larger centres. Cost increases could potentially lead to the reversal of this process, where it is cheaper for Local Governments to have small local landfill sites for refuse disposal. State Government policy, including Draft I and II of the State Waste Strategy, has also encouraged regionalization of facilities.
- Illegal dumping: there is far greater potential for illegal dumping to occur in the non-metropolitan area, therefore increases in the cost of landfill may lead to increase in illegal dumping.

There are several different approaches used to apply Levies in non-metropolitan areas, these include moves towards regional landfills, extensive use of weighbridges, volumetric surveys and a per capita application approach. Each of these approaches has potential implications. A combination of approaches could be used to apply and collect the Levy.

There are some general overriding issues which apply, however the Levy is applied the non-metropolitan area:

- Capacity to pay: The capacity to pay increased costs may not be present in the non-metropolitan area, where many communities have very limited capacity to pay additional costs.
- Volume of waste collected: The amount of waste collected in the non-metropolitan area is substantially less than in the metropolitan area. There will be a significant cost to collect the Levy likely without a large revenue stream resulting.

Conclusions

• **High Levy does not equal high recycling rate**

Looking at the comparison of Levy rates to recycling rates, there does is not a particularly clear linkage between high Levies and high recycling rates. South Australia, which only recently increased its Levy has the highest published recycling rate. New South Wales, with the nation's highest levy does not have a correspondingly high recycling rate. In the Western Australian context, as discussed in the preceding section, a higher Levy has actually been counter productive in relation to resource recovery.

• **A variety of factors influence resource recovery**

As has been identified for C&D waste, a range of factors effect resource recovery; these include enforcement activities by government agencies, lack of local/state/federal government leadership and direction, limited market development, collection systems, recycling infrastructure, education and landfill prices (including levy). The Levy is just one factor amongst a number which affect the level of resource recovery.

- **The Levy alone is not a sufficient economic driver to reduce MSW to landfill**

Increasing the Levy alone is not a sufficient economic driver to improve municipal solid waste recovery. In WA, through the investment of Regional Councils and Local Government MSW is the only waste stream to landfill that has reduced over time despite increasing population (Cardno, 2008). That decrease occurred in the absence of a large Levy and without significant state government involvement. As the analysis from the recent QLD Levy implementation indicated MSW “a levy is an indirect price signal for households...[who] have little ability to avoid the levy charge” (DERM, 2011).

References

ACIL Tasman, 2008, *Civil Works and Recycled Content: Economic assessment of options for increasing the use of recycled content in WA*. Available online

http://www.zerowastewa.com.au/documents/civil_works_recycled_content_june08.pdf

BEN, 2011, *DERM: levy will create a low waste QLD*, Available online

http://www.ben-global.com/Waste/News/DERM_levy_will_create_a_low_waste_Qld_9337.aspx

Cardno, 2008, *Assessment of waste disposal and material recovery infrastructure for Perth: Data Summary Report*.

Cowan, S., 1998, *Water Pollution and abstraction and economic instruments*, Available online

<http://oxrep.oxfordjournals.org/content/14/4/40.short>

Department of Infrastructure and Transport, 2011, *State of Australian Cities 2011*. Available online

www.majorcities.gov.au

DERM, 2011, *What Does an Industry Waste Levy Mean for Queensland?* Available online www.derm.qld.gov.au

DERM, 2010, *Regulatory Assessment Statement and Cost Benefit Analysis for a waste disposal levy proposal Proposed new legislation: Waste Reduction and Recycling Bill 2011*. Available online

http://www.derm.qld.gov.au/environmental_management/waste/pdf/ras.pdf

EPA Victoria, 2011, *Landfill Levies*. Available online http://www.epa.vic.gov.au/waste/landfill_levies.asp

Fullerton, D., Hong, I. and Metcalf, G., 2001, *Behavioral and Distributional Effects of Environmental Policy – Chapter 1: A Tax on Output of the Polluting Industry Is Not a Tax on Pollution: The Importance of Hitting the Target*. National Bureau of Economic Research. Available online <http://www.nber.org/chapters/c10604.pdf>

Hyder, 2011, *Recycling Activity in Western Australia 2009/10*, Available online

http://www.zerowastewa.com.au/documents/external_docs/WA_Recycling_Activity_09_10.pdf

John Curtis, Sean Lyons & Abigail O'Callaghan-Platt, 2011, *Managing household waste in Ireland: behavioural parameters and policy options*, *Journal of Environmental Planning and Management*, 54:2, 245-266

Local Government Association of South Australia, 2011, *Discussion Paper: Solid Waste Levy*.

http://www.lga.sa.gov.au/webdata/resources/files/Discussion_Paper_-_Solid_Waste_Levy.pdf

Local Government Association of Tasmania, 2006, *A Producer Pays Approach to Funding Waste Management in Tasmania Local Government Response*. Available online

http://www.lgat.tas.gov.au/webdata/resources/files/Local_Gov_response_on_Waste_Levy.pdf

Parliament of Australia, undated, *Domestic jurisdictional comparison of waste levies*. Available online

http://www.aph.gov.au/senate/committee/eca_ctte/aust_waste_streams/qon/qon_envnsw.pdf

Pers. comm. 1/2/12 Danielle Carter, NSW Department of Environment and Climate Change.

Productivity Commission, 2006, *Productivity Commission Inquiry Report Waste Management*, Available online

http://www.pc.gov.au/data/assets/pdf_file/0014/21614/waste.pdf

Schollun, P., 2010, *Evaluation of the social optimum for the Landfill Levy in WA*, Available online

http://www.zerowastewa.com.au/documents/external_docs/Social_Optimum_for_Landfill_Levy_in_WA.pdf

Seeley, A., 2009, *Landfill tax: introduction & early history*. Available online www.parliament.uk/briefing-papers/SN00237.pdf

Smith, S., 2010, *Waste: Comparative Data and Management Frameworks*, Available online <http://www.parliament.nsw.gov.au/prod/parlment/publications.nsf/V3L1stRPSubject>

Southern Waste Strategy Authority, 2011, *Waste Management 2020 and beyond*, Available online http://www.taswaste.com.au/sites/all/files/taswaste/documents/p140_swsa_review_-_final.pdf

Taswaste, undated, *Northern Tasmanian Waste Management*. Available online <http://www.taswaste.com.au/about-taswaste/northern-tasmania-waste-management>

Zero Waste SA, 2011a, *Waste Levy*, Available online, <http://www.zerowaste.sa.gov.au/About-Us/waste-levy>

Zero Waste SA, 2011b, *Business Plan 2011-12*, Available online <http://www.zerowaste.sa.gov.au/About-Us/business-plan>

Zero Waste SA, undated, *About Zero Waste SA*, available online <http://www.zerowaste.sa.gov.au/about-us>

WALGA, 2009, *Alternative Waste Treatment Position Paper*, Available online <http://www.wastenet.net.au>

Waste Management Board, 2005, *Resourcing the Zero Waste Vision: A discussion paper on the Landfill Levy and the Programs it funds*.

Appendix 1: Report – Waste Avoidance and Resource Recovery Levy Expenditure 09/10

1 Background

The information in this document has been taken from the Waste Authorities 2009/10 Report and correspondence from the Chair of the Waste Authority which provided additional clarification on expenditure.

It should be noted that this expenditure pertains to the 25% allocated to waste management activities in the WARRL Act.

2 Total Levy Income and Expenditure for 2009/10

Income - \$15,186,763

Expenditure - \$16,816,837

3 Local Government Projects

This section outlines funding provided directly to Local Government. Funding for Local Government projects included:

- Strategic Waste Initiatives Scheme – \$522,222
- WALGA Strategic Partnership Funding - \$100,000
- Zero Waste Plan Development Scheme - \$639,527
- Regional Funding Program - \$1,769,292
- Household Hazardous Waste Program - \$3,252,883
- Used Oil Program - \$37,687
- E-waste - \$17,125

Total - \$6,338,736

3.1 Metropolitan / Non-Metropolitan Local Government Levy Expenditure

This section relates to Levy allocation to the metropolitan and non-metropolitan area.

This does not include all the expenditure from Section 3, it only includes SWIS, Zero Waste Plan Development Scheme*, Regional Funding Program*, Used Oil and HHW** the breakdown of expenditure is as follows:

- Metropolitan - \$4,493,808 (79%)
- Non-Metropolitan - \$1,213,577 (21%)

Total - \$5,707,384

*there is a variation between the detailed breakdown of funds allocated and the overall total given in the Waste Authorities Annual Report, this is due to the payment schedule.

**these figures only include material disposal costs.

4 Industry Expenditure

Funding for industry projects included:

- Strategic Waste Initiatives Scheme - \$706,646
- Strategic Partnership Funding (Curtin, WMAA, Compost WA, Greenstamp) - \$450,772

- Major infrastructure – \$2,731,051
- Compost demonstration project - \$47,561
- National Packaging Covenant - \$330,097

Total - \$4,266,127

5 Community Expenditure

Funding for industry projects included:

- Community Grants – \$222,704
- Strategic Partnership Funding (Conservation Council) – \$100,000
- Waste Wise Schools Grants - \$175,000

Total - \$497,074

6 State Government Expenditure

This section relates to where funds are used to employ or directly service State Government entities or obligations.

- Staffing Waste Branch (overheads and Salary) – \$3,846,165*
- Waste Wise Schools - \$400,000
- Litter Prevention through Keep Australia Beautiful - \$732,000
- Waste Strategy and Work Plan - \$261,004
- Website, Operations of OWA, Policy advice - \$8,882
- SWIS / CGS Advertising - \$25,778
- Governance, Operations and Exec Support - \$202,443
- Data Collection - \$73,019
- Staffing OWA - \$38,455
- EPHC - \$40,975
- Levy Collection and compliance - \$35,502
- WARR Act Implementation - \$485

Total - \$5,664,708

*includes 08/09 and 09/10 overheads.

7 Promotional activities

Sponsorship and Waste Awards – \$40,564