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**CITY OF TSHWANE
METROPOLITAN MUNICIPALITY
WASTE MANAGEMENT SECTION**
in association with
USAID

**DRAFT
EDUCATIONAL STRATEGY TO PRODUCE INCREASED
AWARENESS AT THE COMMUNITY LEVEL IN TSHWANE
REGARDING SOLID WASTE MANAGEMENT
Version V2.0**

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Abstract

This '*Draft Educational Strategy to Produce Increased Awareness at the Community Level in Tshwane Regarding Solid Waste Management*' is the outcome of research undertaken in the City of Tshwane to identify the needs in regard to awareness raising and education, with a focus on the historically disadvantaged communities. It formulates a draft strategy developed with the officials of Tshwane to address the identified needs and gaps.

The Draft Strategy has been structured as follows:

- The *Introduction* chapter sets out the background to the Strategy, describes the Strategy development process and outlines the structure of the Strategy.
- The *Context* chapter provides the socio-economic context, the legal and policy framework, the institutional setting and briefly describes current waste management practices in Tshwane.
- The *Needs Analysis* chapter identifies the needs which require addressing in the Strategy, which are based on the outcomes of interviews of a range of stakeholders and target groups..
- The *Strategy Development* chapter sets out: The approach to the Strategy, Strategy principles; the Vision, Goal, Objectives, Outcomes and proposed Activities; Ownership of the Strategy; as well as a number of related Strategy characteristics, i.e. ownership, capacity building, replication, sustainability and phasing of implementation.
- The Strategy Implementation Plan is provided in outline as a basis for further development.

The Draft Strategy forms the basis of an interaction with Stakeholders and Target Groups at a workshop planned for 28 October 2003.

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1 INTRODUCTION

1.1 Background

The City of Tshwane's vision, as set out in its Revised Integrated Development Plan (IDP, 2003), is to be 'The leading international African capital city of excellence that empowers the community to prosper in a safe and healthy environment'. To achieve this vision the following two objectives are being pursued:

- To create a better life for all; and
- To establish the City of Tshwane as a dynamic and globally competitive investment destination.

The vision and mission statements of the Waste Management Section are:

- *Vision:* To collect, transport, treat and dispose waste in an environmentally friendly and economical way for present and future generations of Tshwane.
- *Mission:* To develop, implement and maintain affordable, sustainable and accountable systems in order to ensure effective and efficient holistic integrated waste management.

Sustainable waste management constitutes a critical element in the achievement of The City's objectives, and the Waste Management Section's vision and mission. Municipalities are mandated by the Municipal Services Act, not only for providing general waste collection services and managing waste disposal facilities, but also for raising public awareness about waste management.

Many of the areas in the City of Tshwane that are inhabited by historically disadvantaged communities are faced with environmental health challenges, including inappropriate waste handling, dumping and littering. The City of Tshwane Metropolitan Municipality's (CTMM) Waste Management Section (WMS) seeks to improve both the quality and quantity of its service provision in township areas. The WMS believes that increased attention to solid waste management education and awareness at community level needs to address the following key issues which hinder improved solid waste management, viz. perceptions, poverty, littering, illegal dumping and pollution.

In order to address these critical issues through education and awareness at the community level, the CTMM, supported by USAID, have initiated a 3-phase programme to educate and build capacity with a view to forging partnerships for improved environmental protection and sustainable land use. While the programme is aimed at the whole of Tshwane, the focus of the implementation programme will be on the north-western areas of the City that have had a lower level of service in the past.

The first phase of the programme is the development of an *Educational Strategy* to produce increased awareness at community level regarding solid waste management. This document sets out a first draft Strategy for discussion and workshopping with the relevant role players.

1.2 Strategy Development Process

The following activities were undertaken before the development of the draft Education and Awareness Strategy:

- collection of background information pertaining to waste management in Tshwane;
- meetings and telephone interviews with stakeholders and target groups identified by the WMS and by the project team; and
- a review of relevant literature as well as the application of knowledge and experience of the project team.

This first draft version of the Strategy is to be presented to the Client Team, i.e. CTMM WMS, USAID and MegaTech Inc., for discussion on 24 October 2003. Inputs received will be incorporated into a revised version of the Strategy. This will be workshopped on 28 October 2003 with representatives of stakeholder and target groups.

The desired outcomes of that workshop will be increasing the awareness amongst those present about:

- unsustainable waste management practices;
- sustainable waste management practices;
- the proposed strategy and its implications for the community;
- the need for partnerships between authorities and communities;
- potential social and environmental improvements resulting from strategy implementation;
- potential for individuals to effect positive changes in their own lives and in their communities, and
- the need to convey this information back to their communities and groups thereby initiating the implementation of the strategy itself.

In addition the workshop will inform the further development and refinement of the draft final Strategy, which will incorporate:

- alterations agreed to during consultations with the client team and resulting from a workshop with representatives from target groups and stakeholders, and
- additional sections on work yet to be completed in respect of:
- field testing of communication methods;
- identification of educational materials required
- identification of existing resources and institutions promoting effective waste management;
- Terms of Reference for educational materials development; and
- the identification of potential funding mechanisms and institutions.

1.3 Draft Strategy Structure

The Draft Educational and Awareness Raising Strategy has been structured as follows:

- Context:
 - socio-economic;
 - legal and policy framework;
 - institutional; and
 - Current waste management practices.
- Needs Analysis of Stakeholders and Target Groups.
- Strategy Development:
 - Approach
 - Principles
 - Strategy Goal, Objectives and Initiatives
 - Strategy Ownership
 - Capacity Building
 - Sustainability
- Strategy Implementation Plan

2 CONTEXT

Waste, a by-product of human existence, is an ever-increasing health, financial and environmental burden to society. As populations increase, and become ever more consumptive in their behaviour, so the 'management' of waste becomes an escalating challenge. The traditional global approach, viz. bury, burn, dilute or treat the waste, has proved to be unsustainable, i.e. financially, socially and environmentally, and has resulted in waste dictating to society, rather than society managing waste. If society wishes for a changed outcome in respect of waste management, i.e. a cleaner, healthier environment in which to live, then it needs to fundamentally re-think its attitude and approach.

South Africa, in line with global trends, has recognised this need, as evidenced by the wealth of pertinent South African legislation (see legislative review below). However, it is not sufficient merely to adopt legislation. We need to give effect to the intent. Nothing will change if society does not alter its approach and activities in relation to the increasing burden of waste.

Waste management thus needs to become a significant focus area; in contrast to the traditional approach of seeing it as a low priority activity deserving little attention and minimum budget. The sustainable approach to waste management is characterised by a waste management hierarchical approach, i.e. prevention, minimisation, recycling, re-use, treatment and ultimately disposal.

Effective waste management focuses on the shared responsibility of all sectors of South African society to protect the country's natural resources. This section of the Strategy briefly sets out the context within which waste is managed in South Africa and specifically in the CTMM area, as a basis for the development of an educational strategy to produce increased awareness at the community level in Tshwane, and to bring about the above-described mind-shift and behavioural changes considered essential for sustainable waste management.

2.1 Socio-Economic Context

The focus of the CTMM Integrated Development Plan (IDP, 2003) is on strategic planning, integration and alignment, democratisation, empowerment, sustainability, resource optimisation and implementation. One of its main priorities is upgrading and development of all areas in Tshwane. The following data, reported in the revised IDP (IDP, 2003), provides an insight into the CTMM area's socio-economic situation:

- Tshwane has a population of approximately 2,2 million, with an almost a 50/50 gender split.
- Large parts of Tshwane have a low income level.
- A recent study of 250 households in a typical resource poor Tshwane community reflected a 55% unemployment level between the ages of 18 and 65. Of those persons in the economically active phase, 65% have no marketable skills.
- Literacy levels are high, only 8.7% of inhabitants older than 15 are classified as 'illiterate'.

2.2 Legal and Policy Framework

The Constitution of the Republic of South Africa (Act 108 of 1996) states that the people of South Africa have the right to an environment that is not detrimental to human health. It imposes a duty on the State to promulgate legislation and to implement policies to ensure that this right is upheld. Steps taken to date to ensure the environmental right include: the publication of the Environmental Management Policy for South Africa (1998); the preparation of the White Paper on Integrated Pollution and Waste Management (IPWM) (2000); the National Water Act (1998); as well as the promulgation of the National Environmental Management Act (1998). A further step was the development of the National Waste Management Strategy (NWMS) for South Africa (2000). More recently (2002/3) the Department of Environmental Affairs and Tourism is in the process of developing a Bill on Integrated Waste Management, which encapsulates in legislation the initiatives set out in the IPWM Policy and the NWMS.

The Policy on Integrated Pollution and Waste Management (IPWM) sets the following specific goals in respect of waste and pollution:

- to prevent, reduce and manage pollution of any part of the environment due to all forms of human activity and in particular from radioactive, toxic and other hazardous substances;
- to set targets to minimize waste generation and pollution at source and to promote a hierarchy of waste management practices, namely reduction of waste at source, re-use, recycling and safe disposal as the last resort;
- to regulate and monitor waste production, to enforce waste control measures, and to co-ordinate the administration of integrated pollution and waste management through a single government department; and
- to promote cleaner production and to establish mechanisms to ensure the continuous improvement in all spheres of environmental management.

In September 2001, at Polokwane, Government, Business, Labour and Civil Society workshopped a joint approach to future waste management in South Africa. At the conclusion of this national waste management workshop, the Polokwane Declaration was signed, which committed government, civil society and business, to work together toward achieving the following national goals in respect of waste management:

Target Date	Activity	Increase	Decrease
2012	Waste Generation		50%
	Waste Disposal		25%
	Recycling	30%	
2022	Waste generation / disposal (i.e. zero waste)		100%

During July 2003 a follow-up National Waste Management Workshop was held, co-hosted by the Department of Environment Affairs and Tourism (DEAT) and the Department of Provincial and Local Government in Port Elizabeth (DPLG). 'Capacity building, education and awareness' was one of five themes discussed during this event. Problems/challenges identified within this theme included:

- lack of understanding of mandated functions;
- lack of infrastructure resulting in illegal dumping;
- lack of capacity to implement by-laws;
- poor institutional capacity;
- no system for skills transfer, i.e. no sustainability;
- lack of awareness amongst both designated authorities and communities;
- lack of expertise.

Local Authorities were encouraged in a short period to address capacity needs for:

- efficient and effective waste management;
- financial mobilisation mechanisms; and
- development of skills, abilities and capabilities.

The CTMM has developed a number of draft Solid Waste By-Laws, which reflect a solid waste management 'business-as-usual' approach. For example, *waste minimization* is not defined, nor are there any measures to incentivise waste reduction.

2.3 Institutional

Responsibility for solid waste management within Tshwane resides within the City of Tshwane Metropolitan Municipality Waste Management Section (TCMM WMS), a Section of the Department of Environmental Management. **Other entities** identified by CTMM WMS as having an impact on, and/or being impacted by, waste issues are:

- CTMM Division of Environmental Management;
- CTMM Environmental Health Section;
- Department of Environmental Health (North West **Province**);
- CTMM Division of Local Economic Development (LED);
- CTMM Public Transport Section;
- North West Department of Agriculture and Environment (DACE);
- Department of Education (Gauteng);
- Department of Education (North West); and
- National Department of Water Affairs and Forestry (DWAF).

Additional entities identified by the project team as having an impact on, and/or being impacted by, waste issues are:

- Gauteng Department of Agriculture, Conservation and Land Affairs (GDACEL);
- National Department of Environment and Tourism (DEAT);
- CTMM Parks & Horticulture Section;
- CTMM Roads and Stormwater Section.

None of the Ward inputs to the CTMM IDP (IDP, 2003) (from Wards in the north-western areas) placed waste issues as their first priority, if they were mentioned at all. Health, job creation, skills development, and social needs however featured strongly. From this it is clear that there is need for awareness-raising on the links between waste and health, environment and social issues.

2.4 Current Waste Management Practices

In order to place the waste management activity within the CTMM area in perspective some key statistics relevant to the CTMM WMS are presented below (CTMM Status Quo Report, 2003):

- Total Budget (2003/4): R230 539 248
- Landfills – waste:
 - 2 242 088 tons over 9 landfill sites
 - expenditure: R35 008 316
 - potential income: R33 652 643
- 3 buyback centres established: Kwaggasrand, Hatherley and Soshanguve
- Declining illegal dumping through keeping landfill sites open on Sundays.
- Vacant stands cleansing:
 - Removal of illegal dumping: 177 408 m³ at a total cost of R1 953 779
 - Grass cutting: 16 676 841m³ at a total cost of R2 001 220,
 - Litter/illegal dumping cleanups - 12 775 tons
- R33 214 635 (inner city) plus R43 800 000 (rest of Tshwane), i.e. R77 014 635
- Mechanical street sweeper costs: R972 864
- Total litter/illegal dumping cleanup costs (including from vacant stands): R79 941 278
- Cost per ton = R6 000/ton.
- Waste Collection and Removal:
 - Total collection points, including households serviced by community contractors: 514 000
 - Total income, including from bulk container removals: R114 544 021
 - Total Income and Expenditure (based on above)
 - Income: R148 196 664
 - Expenditure: R116 950 814 + R2 001 220 (grass cutting) = R118 952 034
- Cost Comparison:
 - Litter/illegal dumping: 12 775 tons (+ 177 408m³) @ R79 941 278 = R6 000/ton
 - Waste Collection & Removal: generally about 1/7th of the cost of illegal dumping/litter removal) i.e. R857/ton.

Budgets allocated to the Division of Environmental Management for waste related projects in terms of the CTMM's Revised IDP (IDP, 2003) Prioritised Project List for financial year 2003/4 are largely in respect of 'end-of-pipe' issues, i.e. supply, maintenance and upgrading of equipment and facilities; vector control; clean up campaigns. Relatively small budgets are allocated for projects aimed at waste prevention and awareness creation (R50 000), and Institutional Environmental Audits (R250 000).

The IDP identifies the following key gaps in service delivery:

- not all areas are serviced;
- waste stream management;
- budget constraints;
- non-payment;
- poor billing system;
- no/poor communication between stakeholders;
- no education and training programmes; and
- inadequate Bylaws.

The CTMM WMS has identified the following key issues that hinder improved solid waste management in communities:

- *Perception:* Many community residents believe that refuse collection and waste management are not their responsibility. Residents also have limited understanding of the role of rules and regulations governing waste management in protecting public health.
- *Poverty:* People tend to hold on to waste in the belief that through recycling, it will generate income.
- *Littering:* Littering is a common practice and problem throughout Tshwane.
- *Illegal Dumping:* The dumping of waste on street corners and vacant stands is a common practice in the townships. These practices are a threat to public health and make waste management a costly exercise.
- *Pollution:* The common practice of burning refuse on open spaces exacerbates air pollution, which is already a problem in poor areas that rely on fossil fuels as their source of energy. This situation threatens public health, as well as the environment.

Additional issues raised during interviews/workshops with representatives from stakeholder and target groups include:

- *Lack of/inadequate service delivery:* No service in some areas; insufficient bins and/or insufficient collections in others results in dumping and littering; inadequate cleaning and maintenance of open areas.
- *Poor enforcement by authorities* creating the perception that it makes no difference whether citizens are law-abiding or not.
- *Attitudes:* A lack of concern about others, a sense of lack of control over their own lives.
- *Belief* that littering creates jobs.
- *Lack of Awareness* about the environment and the links between waste, health and environment.

3 NEEDS ANALYSIS

A needs analysis to underpin the Draft Educational and Awareness Raising Strategy was undertaken and is reported in detail in Annexure 1. The key needs that were identified were the following:

- The Terms of Reference for this project required that the following key issues should be addressed:
 - illegal dumping;
 - burning of refuse;
 - littering;
 - law enforcement;
 - environmental consciousness;
 - capacity building; and
 - waste minimisation through the reduce, re-use and recycle (the 3 R's principle).
- Other awareness-raising needs identified during the Stakeholder and Target Group interview and workshop processes were:
 - poor/inadequate service delivery;
 - inappropriate attitudes to waste and their effects upon the community; industries dumping waste near townships;
 - inadequate (but improving) co-operation between Council Departments/Divisions/Sections;
 - lack of law enforcement; and
 - environmental awareness and the links between environment, health and waste.

These needs reflect the necessity to raise awareness on cause and effect in waste management in two important areas:

- Human dependency on the environment, and
- The links between poor waste management, environmental degradation and health impacts.

Individuals who are unaware of society's dependence on the environment to supply it with the means to sustain life will not be able to link inappropriate waste management practices with negative impacts on their own health and survival. Understanding of these facts and links will result in motivation to alter behaviours. Raising awareness on environmental issues is thus seen as fundamental to achieving the necessary behaviour changes to enable sustainable waste management.

4 STRATEGY DEVELOPMENT

4.1 Approach

The overall approach of the development of this Draft Educational and Awareness Raising Strategy has been to assume the need for a comprehensive mindset change and approach towards the management of waste. Behavioural change is difficult and will not be achieved without significant awareness-raising, at all levels and within all sectors, about the benefits of adopting the required new behaviours. Therefore, an integrated approach to awareness raising is required.

This strategy is aimed primarily at education and awareness raising of the predominantly historically disadvantaged communities in Tshwane. In this regard it should be noted that:

- This strategy which is aimed at communities within Tshwane to raise awareness about solid waste management must be incorporated as part of the city's greater awareness raising strategy, i.e. targeting the entire population of Tshwane, including commerce and industry, council activities, healthcare providers, etc. Communities cannot be addressed in isolation, as budgets, facilities and manpower need to be allocated across the entire population.
- Similarly, the awareness-raising process forms only a portion of a total Integrated Waste Management Plan (IWMP). The CTMM is encouraged to develop such an Integrated Plan simultaneously with this strategy, to ensure that all activities are linked towards achieving sustainable waste management. Such an integrated approach will also ensure optimal financial expenditure.

This strategy is informed by a number of considerations, which will collectively determine the level of success that can be achieved. These considerations include:

- an understanding of waste related challenges facing the city, including their root causes; these are outlined in the needs assessment section;
- familiarity with waste related plans, priorities, current activities and budgets in Tshwane;
- the institutional framework for waste management in Tshwane;
- the principles underpinning the country's Integrated Waste and Pollution Management Policy; key amongst these being the need to adopt a holistic approach to waste management, which means that efforts should respond to the entire waste cycle, from 'cradle to grave'; and
- issues of ownership, replicability, capacity and sustainability.

The strategy has four main pillars, viz. training and capacity building, community based campaigns and programmes, an effective implementation institutional model and a mechanism for ensuring sustainability.

The proposed approach for capacity building and training is in line with the policy of the current government in regard to education, training and skills development. Participants in training programmes will receive accreditation. This will not only serve as an incentive to participants, but it will also open up possibilities for persons to formally pursue careers in waste management and/or awareness raising. Capacity building initiatives will address all the major spheres within Tshwane, viz.

- the political/policy/strategic sphere through capacity building, targeting councillors;
- the management/administrative sphere through capacity building, targeting council officials; and
- the implementation sphere through capacity building, targeting community waste awareness facilitators (WAFs).

Training and capacity building will build in principles of practical/experiential learning.

It is proposed that the strategy to raise awareness within the community will be driven through an intense and sustained 18-month multi-media education and awareness campaign based on messages relayed through print, electronic and contact mediums. Community programmes (including school based) will constitute a practical element of the strategy and will be used to showcase environmental improvements and innovative ideas. At the heart of this campaign will be the concept of **waste minimisation**.

The strategy takes the view that effective results are only possible where there is informed and genuine participation and ownership of development processes by beneficiaries. The strategy achieves this through, ensuring that the management structure for the strategy reflects full participation by the beneficiaries. The roll out of the strategy is achieved through community WAFs, who will be identified by grassroot structures.

A monitoring, auditing and verification mechanism is proposed with the aim of ensuring that the gains achieved through implementing this strategy are sustained and carried forward.

4.2 Strategy Principles

As mindset and behavioural changes are fundamental, not only to sustainable waste management itself, but to the success of this awareness-raising strategy, several important principles have been utilised in the development of the Strategy (see Table 1 below).

Table 1: Principles Underlying the Proposed Educational and Awareness Raising Strategy

No.	Principle	Explanation	Application
1	<i>Understanding 'Why'</i>	Efforts to achieve behavioural change are unlikely to be successful unless the target population understands the reasons for and potential benefits from such altered behaviours. This is particularly so where poor communities are concerned, when daily focus is on survival.	Appropriate types and levels of messages to communications directed at different target groups. Promote understanding of financial implications of one source of money to fund both sustainable and unsustainable activities. Promote understanding of the link between unsustainable waste related activities, negative environmental impacts and resulting health impacts.
2	<i>Experiential Learning</i>	This principle is embodied in the adage: 'If you give a man a fish he will eat for a day. If you teach a man to fish he will eat for a lifetime.' The Waste Management Hierarchy requires waste prevention to spearhead the approach to waste. Waste minimisation as a theoretical concept is readily understood. Difficulty is however generally experienced in implementing the concept. Mindsets need to be freed from the traditional approach and creativity is required.	At each level and within each sector/group, waste minimization is undertaken practically. Communication is cascaded / transferred from one group to another, thus also developing communication skills and partnerships.
3	<i>Leading by Example ('walking-the-talk')</i>	Required behaviours are unlikely to be achieved when those setting the standards are not practicing those behaviours themselves. CTMM to lead by example to residents; educators/facilitators lead by example to learners/communities; parents to children, etc.	CTMM WMS to be first to 'Walk-the-talk' and incorporate waste minimization in its everyday activities. Methodologies are applicable in all situations. The waste minimisation concept is incorporated from the outset in the strategy drafting process, including the wording of the invitation to the initial workshop which transparently informs invitees of the need to conserve funding.

No.	Principle	Explanation	Application
4	<i>Ownership</i>	<p>Ownership of the strategy must vest in the community at which it is directed to achieve buy-in and to ensure that time, effort, energy and money invested in its creation are not wasted.</p> <p>Consultants' skills should be sought for the initial phases of the strategy only, leaving a legacy of knowledge and skills within communities.</p>	<p>Input from stakeholders and target groups was sought from and incorporated in the drafting of the strategy.</p> <p>Identification of Champions within each grouping, to promote the strategy and its implementation.</p> <p>Train-the-trainer programme for individuals identified by community members allows those individuals to:</p> <ul style="list-style-type: none"> • derive improved living conditions for themselves and their communities • gain much-needed skills and employment • achieve recognition within their communities • learn life-skills.
5	<i>Partnerships</i>	<p>Partnerships optimize time, effort, money, knowledge, skills, administration etc.</p> <p>They also lead to regeneration of a spirit of community, and to individuals recognising that they can have a level of control over their lives.</p>	<p>Partnerships are developed between:</p> <ul style="list-style-type: none"> • municipal divisions, departments and sections • authorities and communities • different communities • NGO's and communities • NGO's and authorities
6	<i>Resource Optimisation</i>	<p>In cash-strapped municipalities, fiscal demands can result in less-than-ideal financial and manpower resources to achieve required outputs.</p>	<p>Co-operative partnerships can alleviate shortages of resources e.g. money, manpower, time and materials.</p> <p>Moneys saved as a result of implementing waste minimisation can be redirected to fund further sustainable waste related activities or benefits to communities.</p>

No.	Principle	Explanation	Application
7	<i>Not Re-inventing the Wheel</i>	In implementing a strategy, detailed research work, repeated workshops, production of educational programmes and materials, etc consume not only large amounts of money, but also involve considerable time and effort. The dire situation of waste management cannot afford long delays in strategy delivery.	Wherever possible – obtain, evaluate and, where necessary and possible, adjust existing successful strategies, policies, programmes, projects and materials to fit the waste management awareness raising requirements of Tshwane. Implicit in this is not only adopting and adapting successful aspects, but also gaining from lessons learned about <i>unsuccessful</i> aspects.
8	<i>Replicability</i>	Important to the strategy's success is its replicability – possibly with minor appropriate adjustments to fit specific situations.	Community skills, projects and programmes developed in one area to serve as the 'seeds' for 'sowing' similar 'waste plants' in other community groups.
9	<i>Sustainability</i>	The strategy must achieve its desired objective in order to be sustainable. Measurement and monitoring of strategy outputs and activities are crucial to evaluating its effectiveness, and enable continual improvements to be made.	Waste minimisation itself demonstrates sustainability by the potential for communities to re-invest (financial or material) resources that are saved from disposal or generated as a result of waste reduction activities into job and/or food creation. Authorities can re-direct saved budgets towards further improvements in waste management and/or awareness raising.

4.3 Strategy Vision, Goal, Objectives, Outcomes and Activities

4.3.1 Vision

The *vision* of the waste management education strategy is a Tshwane where the attitude and behaviour of residents has so altered that

- Anyone attempting to litter or dump illegally is confronted and prevented from doing so by community members
- Landfill life has been extended as a result of reduced waste volumes
- Children take recyclable materials from home to school for sorting into separate waste streams by individuals employed for this purpose
- Recycling and buyback centres are in operation, employing community members
- Kitchen and garden waste are composted at central composting facilities, employing members of the community
- Community food gardens, using compost produced at the composting facilities, produce low-cost vegetables, employing community members in the process
- School food gardens provide food for school children, with community members involved in the meal preparation
- Nutrition, health, concentration and productivity levels are improved by the consumption of fresh fruit and vegetables
- Rodents and other pests are limited
- Communities, NGO's and authorities operate co-operatively
- Parks are developed and provide recreational opportunities
- Crime is low
- Residents are proud of themselves and their community and protect their environment.

4.3.2 Goal

The *goal* of the waste management education strategy is the creation of community awareness and consciousness about sustainable waste management in the CTMM with an immediate focus on the historically disadvantaged communities, resulting in visible improvements in the quality of the health and environment.

4.3.3 Objectives

To meet the goal of this strategy, the following *objectives* have been set:

- Develop a waste management awareness programme for the CTMM Councillors, officials and staff.
- Implement a waste management awareness programme for the CTMM Councillors, officials and staff.
- Develop the communications tools for the waste management awareness campaign.

- Secure funding for the waste management campaign and programme implementation and develop sustainability mechanisms.
- Develop the waste management awareness train-the-trainer programme.
- Implement the waste management awareness train-the-trainer programme.
- Launch the waste management awareness campaign.
- Implement the waste management awareness programme with the communities in the Tshwane area, piloting in the historically disadvantaged communities of the north western areas.
- Apply mechanisms for sustaining the waste management awareness programme and monitor the programme.

4.3.4 Outcomes and Activities

For each objective an outcome and associated activities are proposed.

Outcome 1: An accredited waste management-training programme for the CTMM Councillors, officials and staff is produced.

Outline of the activities of Outcome 1:

- Prepare the terms of reference for the training service providers on the waste management training programme for the CTMM Councillors, officials and staff.
- Advertise for tender or call for quotations for the training service providers.
- Appoint the training service providers.
- The training service prepares the draft waste management training manual and presents the manual to the CTMM WMS for approval. The draft manual will cover the following:
 - Roles of local government in waste management.
 - Rights and responsibilities of communities in respect of waste management.
 - Understanding of the concept of waste minimization.
 - Practical implementation of waste minimisation.
 - Understanding government policy and legislation regarding waste management.
 - An understanding of the CTMM by-laws governing waste management.
 - A consciousness about the need to improve service delivery in waste management.
- CTMM gives approval for final version of the manual.

Outcome 2: CTMM Councillors, officials and staff trained on an accredited waste management programme.

Outline of the activities of Outcome 2:

- Prepare for and organize training for the Councillors, officials and staff on waste management.
- Confirm attendance of the participants (Councillors, officials and staff) of the training on waste management.
- The training service providers run the training for the Councillors, officials and staff on waste management.

- The training service providers evaluate the knowledge of the concepts of the training on waste management by also preparing an evaluation report on each Councillor, official and staff member.

Outcome 3: Communication tools for the waste management programme

Outline of the activities of outcome 3:

- Prepare the terms of reference for the identified communication tools necessary for the waste management programme
- Advertise for tender or call for quotations for the service providers
- Appoint the service providers to prepare the communication tools
- The service providers present draft communication tools prepared to the CTMM WMS for approval
- CTMM WMS approves the final version of the communication tools prepared

Amongst the materials or communication tools that may be developed are:

- Competitions with **waste minimization** and management themes.
- Stage dramas with a **waste minimization** or management message.
- Bill boards located at strategic points in target areas, e.g. points of entry and/or exit to the communities.
- Banners for use in mobile messaging on taxis and/or buses.
- **Waste minimization** and management messages on plastic bags used at stores (encouraging the business sector to support the strategy).
- Stickers to be put at public and private places and buildings
- Audio tapes with **waste minimization** and management messages for use in taxis.
- Posters at all government buildings (especially all the CTMM official offices and buildings).
- Radio interviews with the theme on **waste minimization** and management.
- Radio competitions with the theme on **waste minimization** and management.

Outcome 4: Available budget and funding for the implementation of the waste management programme implementation

Outline of the activities of Outcome 4:

- Draw a resource and implementation programme for the waste management communication strategy.
- Cost the resource and implementation programme for the waste management communication strategy.
- Raise and secure funds for the resource and implementation programme for the waste management communication strategy.
- Plan for the implementation of the waste management communication strategy.
- Design the sustainability mechanisms to be used.
- Approve the sustainability mechanisms.

Outcome 5: An accredited waste management train the trainer-training programme produced

Outline of the activities of Outcome 5:

- Prepare the terms of reference for the accredited training service providers on the waste management training programme for the train the trainer programme.
- Advertise for tender or call for quotations for the accredited training service providers.
- Appoint the accredited training service providers.
- The training service provider conducts a skills audit from amongst the target group WAFs to assess the level at which the training programme should be pitched.
- The accredited training service providers prepare the draft waste management train (train the trainer) manual and present the manual to the CTMM for approval. The draft manual will cover the following:
 - Roles of local government in waste management.
 - Rights and responsibilities of communities in respect of waste management.
 - Understanding of the concept of **waste minimization** in littering, illegal dumping, solid waste and burning of waste. Practical implementation of **waste minimisation**.
 - Understanding government policy and legislation waste management.
 - An understanding of the CTMM by-laws governing waste management.
 - A consciousness about the need to improve service delivery of waste management by the CTMM.
 - The establishment, operationalisation and management of community waste buy-back and recycling centres.
 - Understanding the institutional landscape for waste management.
 - Understanding of enforcement aspects of the strategy.
 - Strategy process assessment methods.
- CTMM gives approval for final version of the manual
- The manual will be developed in line with specifications contained in the terms of reference for education material development including:
 - Alignment with outcomes-based approaches to education and training
 - Reflect an understanding of how target groups learn
 - Focus on the material being used as tools for action
 - A reflection of an understanding of how people move from understanding to changing behaviour and attitudes to waste
 - Adaptability of the material for use with individuals and groups of varying ages
 - Accessibility of the material in terms of layout, illustrations, etc.

Outcome 6: Target group WAFs are trained on the waste management train the trainer programme.

Outline of the activities of Outcome 6:

- Prepare for and organize training for the target group WAFs on waste management.
- Confirm attendance of the WAFs at the training.
- The training service providers run the training for the WAFs.
- The training service providers evaluate the knowledge of the concepts of the training on waste management by also preparing an evaluation report on each WAF.

Outcome 7: A waste management campaign launched

Outline of the activities of Outcome 7:

- Identify the date and venue of the launch of the waste management communication strategy campaign.
- Secure VIP speakers for the campaign of the waste management communication strategy campaign.
- Prepare invitations for the launch of the waste management communication strategy campaign.
- Send out the invitations for the launch of the waste management communication campaign.
- Prepare the CTMM Councillors, officials and staff on their roles to play on the day of the waste management communication campaign.
- Prepare the target group WAFs on their role to play on the day of the waste management communication campaign.
- Confirm attendance of all the people invited for the waste management communications campaign.
- Advertise the date and venue of the waste management communications campaign.
- Gather all the waste management communication tools that have been prepared by the service providers.
- Deliver all the needed waste management communication tools to the venue of the campaign.
- Hold the waste management communication strategy campaign.

Outcome 8: People in the communities of the Tshwane area educated on the waste management

Outline of the activities of Outcome 8:

- Tshwane Councillors, officials and staff improve on their waste management service delivery.
- Target group WAFs draw up their programmes to roll out to the communities.
- The programmes include the criteria to be used for evaluating waste minimization.
- The programmes to identify people to evaluate the waste management campaign (waste management communication campaign impact assessors).

- Target group WAFs gather all the communication tools.
- Target group WAFs set appointment dates and venues with groups within the communities for workshops on waste management.
- Target group WAFs run workshops within the communities.

Outcome 9: Monitoring of the waste management education programme

Outline of the activities of Outcome 9:

- The waste management communication campaign impact assessors visit the areas where the community workshops have been held.
- The waste management communication campaign impact assessors prepare reports on their findings.
- The waste management communication campaign impact assessors submit reports to the CTMM.
- CTMM prepares an evaluation report on the waste management communication campaign.

4.4 OWNERSHIP STRATEGY

For this strategy to succeed, ownership will need to vest with the communities that it is targeting. The establishment of a multi-stakeholder Project Steering Committee, including champions from each grouping that is proposed to oversee the implementation of the Strategy will ensure strategic participation in the process by the beneficiaries. Absolute transparency needs to prevail in discussions at this level. The implementation of the Strategy at grassroots levels will be facilitated by members of the beneficiary communities, who will be selected by grassroots organisations in the target area. It is this level of participation and openness that will secure genuine ownership of the strategy. As the levels of capacity and awareness improve both within council and amongst the community at large, and as the benefits of the strategy become visible (job creation, income production from recycling, a clean environment, health improvements etc) the levels of ownership of the strategy by the broader community will be enhanced.

4.5 CAPACITY BUILDING

Capacity building activities linked to the strategy will target all key role players in waste management in Tshwane, including council officials, councillors and beneficiary communities. Capacity building to council officials, councillors and trainers (Community Waste Awareness Facilitators) will be delivered by an external service provider and will be accredited. The trainers, who will be identified from within the community, will deliver community awareness and capacity building. This approach to capacity building allows for the effective combination of experience (external provider) and local ownership (local trainers). The accreditation aspect of the training that will be delivered to council officials, councillors and community WAFs will serve as an incentive for participation. The acquisition of credits by participants in capacity building programmes will also open up possibilities for careers in waste management and/or training. This strategy is in line with government's thinking behind skilling the nation and in so doing, contributes to the attainment of the vision of the National Skills Development Strategy for 'productive citizenship for all'.

Experiential learning will be used as a tool to assist recipients of capacity building to internalise learning. For example by using the following methodologies:

- The Natural Step (TNS) methodology, to raise awareness on sustainability issues;
- Wilderness trails to improve environmental awareness;
- Basic financial skills, especially at community level;
- Implementation of **waste minimisation** activities within CTMM WMS, to:
 - Demonstrate commitment to waste minimisation
 - Set the example for the community, and
 - Learn the principles of waste minimisation.
- Study tours by councillors, council officials and WAFs, to give them first hand experience of the outcomes of raising levels of awareness about waste. This experience will not only emphasise positive aspects of other awareness raising initiatives, but also negative lessons learned, and will serve as a strong motivator for action.

4.6 STRATEGY REPLICATION

Although the strategy targets the north-western parts of Tshwane, it will be important that the lessons learned be used to educate communities in other parts of the City. One way of ensuring that the strategy can be replicated would be through involving all councillors, not only those from the north-western areas, in capacity building activities. The results of implementing the strategy will also be communicated widely throughout the City.

Positive achievements from the strategy will be used as basis for raising funds to take the community awareness/education strategy to other parts of the city.

4.7 STRATEGY SUSTAINABILITY

The success of the strategy will be determined by the extent to which the gains that it generates can be maintained into the future. The measure of the sustainability of this programme will depend on the extent to which the desirable end situation as set out in the immediate objective is sustained beyond the time limits of this strategy. The desirable end result being that *'there are high levels of community awareness about **waste minimisation**, re-use, recycling and management in the historically disadvantaged north-western parts of Tshwane, resulting in visible improvements in the quality of the environment'*.

Achieving and sustaining this end situation will require fundamental behavioural changes by all involved in waste management in Tshwane. Such transformation takes time and requires persistent effort. This 18-month campaign will significantly contribute towards such transformation but will require a (permanent) locally owned and driven mechanism to safeguard it. To this end, two approaches are proposed:

- Utilisation of funds saved through the implementation of **waste minimisation** to drive further waste minimisation initiatives. For example by reducing the volume of littering in parks by 50% the funds previously used could be re-directed to further park development. Furthermore, identify unsustainable activities, such as clean-up days, and re-direct to sustainable activities such as community capacity building in waste minimisation techniques.

- A specific mechanism for waste management and awareness raising will be established for Tshwane, referred to as a Special Purpose Vehicle (SPV). The actual form that this will take (which may be a community trust fund or other form) will be determined by the outcomes of discussions that will take place during the course of implementing the Strategy. On the board of this institution will be community and council representatives. The purpose of this mechanism will be to mobilise funding to support innovative and entrepreneurial community waste management and awareness programmes. A fund will be created under this mechanism for the following purposes:
 - Grant funding – to support awareness campaigns, training (including entrepreneurial) and capacity building efforts. Community organisations will be encouraged to submit proposals for grant funding.
 - Low interest loans – these will be directed towards supporting entrepreneurs who are looking to start waste related enterprises, e.g. recycling, buy-back centre etc. The fund will take up equity in the enterprises that it helps, with loans for a period equal to the time it takes the entrepreneur to repay the loan. After which full-ownership will revert to the entrepreneur. This approach will ensure that firstly, the fund is not depleted and is therefore able to continue its support into the future. Secondly, by co-owning enterprises for a period, the fund will take an active interest in the success of the enterprises it supports and limit the risk of failure.

This mechanism will also facilitate the attraction of waste related investments into the disadvantaged areas of Tshwane. For instance, some of the recycling companies will be incentivised to establish joint ventures with local entrepreneurs (e.g. recycling centres) within the target areas of Tshwane. This mechanism will effectively sustain the current strategy, support social development efforts, contribute towards skills development and stimulate black economic empowerment and employment creation.

4.8 PHASING STRATEGY

The implementation of the strategy will occur over a 24-month period, after the completion of the current phase (**Phase 1** – the development of the Strategy), which will be complete by the end of 2003.

Phase 2, which will last for 6-months, will follow immediately after the adoption of this Strategy by Council. It will primarily entail the appointment of all service providers, viz. technical advisor, the training provider and a communications company and the development/pilot trials/in-house application of capacity building/training programmes and material. The development/in-house application of these resources will take place concurrently, with the aim to have completed them when Phase 3 (implementation) starts. This Phase 2 will essentially be a preparatory phase for phase 3.

Phase 3 will last for 18 months and will kick off with a launch that will be attended by the Executive Mayor of Tshwane and the MECs for Agriculture, Conservation, Environment and Land Affairs in Gauteng and the North-West. The launch will be followed by training and capacity building efforts targeting both councillors and community WAFs. These workshops will be ongoing throughout the 18 months duration of phase 3. Focusing on training before initiating the campaign itself will ensure the achievement of a reasonable state of readiness. It will also allow key groups in the implementation of the strategy, viz. councillors, council officials and WAFs to be familiarised with planned activities and their roles and responsibilities. The campaign proper will be initiated soon after the first training workshops, and will be ongoing throughout the 18 month-

period. The investigation of a possible mechanism for the area will be initiated at the start of the second year of implementation, i.e. 13th months and will be completed by the end of the two year period.

5 STRATEGY IMPLEMENTATION PLAN

Based on the input and guidance received from the Project Management Committee at the meeting planned for 24 October 2003, as well as the inputs from the stakeholders and target groups at a workshop planned for 28 October 2003, the key elements of the strategy will have been agreed and will form the basis for an Implementation Plan.

Each objective will be unpacked to specific deliverable or output, and associated activities, inputs (technical support, workshops, materials development, study tours, launch campaign, etc.) resources and scheduling will be defined. In addition the plan will give guidance regarding organisational, management and administrative aspects associated with the implementation of the Strategy. It will also address the monitoring, reporting, review and progress evaluation of the implementation of the Strategy.

ANNEXURE 1: NEEDS ANALYSIS

The following questions were put to target groups and stakeholders. Most frequent responses are recorded.

No.	Question	Responses	
		Stakeholders	Target Groups
1	<p>Which, of these issues do you see as the greatest problem?</p> <p>(Littering, dumping, burning, storing for recycling).</p> <p>Stakeholders were also given the following on which to comment:</p> <ul style="list-style-type: none"> • The belief that refuse collection and waste management are not residents' responsibility, • Limited understanding of waste management & public health link, • Lack of environmental consciousness, • Capacity problems. 	<ol style="list-style-type: none"> 1. Lack of service delivery/illegal dumping (linked). 2. Littering 3. Attitudes – don't care about the neighbour, litter creates jobs, low self-esteem, perceived lack of control over life. 5. Poor enforcement 6. Storing for recycling, 7. Industrial waste being taken to community areas 8. Insufficient environmental consciousness. 	<p>The participants are of the opinion that all of the four listed waste problems are those that they experience in both their residential areas and areas of work (taxi ranks & hawkers).</p>
2	<p>In your view, why is waste mgt a problem within Tshwane?</p>	<ol style="list-style-type: none"> 1. Poor/inadequate service delivery, lack of capacity 2. Lack of education/awareness 3. Attitude – don't care 4. Poor environmental consciousness 5. Poor enforcement 	<p>Most problems arise from people having concluded that</p> <ul style="list-style-type: none"> • council is not doing enough to ensure that refuse is regularly collected, or that there are refuse bins for all the households, or that people who are contracted to collect refuse are committed to doing the work, • people are irresponsible and negligent by

		Responses	
		6. No/inadequate co-operation between Sections/Divisions/Departments.	<ul style="list-style-type: none"> not keeping their areas clean, there are as yet no penalties for waste implemented by the Council.
3	<p>What would be the best approach for raising the levels of awareness about waste management in Tshwane? E.g.</p> <p>a) awareness workshops b) training and capacity building c) radio campaigns d) schools projects e) plays put on by actors f) pamphlets/posters g) other</p> <p>Give reasons for your answer/s.</p>	<p>1. Workshops, esp. at council/councillor level 2. Drama 3. All mentioned means 4. Radio campaigns/talk shows, 4. Schools – learner projects or schools used as a vehicle, 4. Combine entertainment & serious message</p> <p>1 vote each for:</p> <ul style="list-style-type: none"> presentations at school assembly, give big picture message; not detail, use actions; not words, puppet shows, NO cleanups, YES cleanups, TV, slogan on un-damageable billboards. 	<p>All of these plus:</p> <ul style="list-style-type: none"> using taxis to advertise the strategy debates and competitions at schools with themes of waste management, using audio tapes in taxis, donating T-shirts with a waste management theme, exposing the penalties for not managing waste, using stickers of waste management at all public places councillors making waste management part of their agenda at meetings working with churches to promote waste management
4	<p>Which language/s should be used to raise awareness about waste management? And why?</p>	<p>1. English 2. Mother tongue 3. Sesotho 4. Zulu 5. Setswana/Afrikaans</p>	<p>All the languages (that is, Tswana, Venda, Tsonga, Zulu and English)</p>

		Responses	
5	Which are the most important groups/sectors to which the strategy should be directed? And why?	1. Whole community/Especially the poor 2. Youth and elderly	Question not asked.
6	What should a strategy aimed at raising levels of awareness seek to achieve?	1. Cleaner healthier environment 2. Educated community iro waste and generally improved respect for themselves, the community, the law and the environment.	To help people change their mindset and start being responsible on waste management.
7	What aspects of waste management should an awareness raising strategy emphasise? E.g. reduction / re-use / recycling, health risks, waste management rules & regulations, environmental issues)	1. Improved health 2. Enviro awareness 3. Practical waste management, waste minimisation 4. Rules & regulations, job opportunities	All of the listed.
8	Who should be involved in delivering efforts aimed at raising levels of awareness within Tshwane? E.g. council, education institutions/specialists, your organization, NGO's, waste specialists, etc. And why?	1. Specialists in 1 st instance, council/ward communications via councillors to community, NGO/Community leaders, environmental health 2. Teachers/Education department	Ward councillors, ward representatives, CBO staff & officials, community leaders, church representatives, CBO's involved with the waste management, school representatives, clinic and hospital officials, youth organizations, waste collectors contractors, taxi associations, hawkers, traditional healers, civic organizations, bus drivers.
9	Does whoever you recommend have the capacity to do this? Explain.	Environmental Health – well accepted/established Teachers, health dept, social workers, Councillors and ward committees, & WM Dept all need capacity building/awareness raising.	Yes, mostly are doing work on voluntary basis, meaning that there is not much people available, but will have to identify potential and people for the purpose.

		Responses	
10	What role should be played in the implementation of an awareness raising strategy, by each of the institutions that you recommend should be involved.	Environmental health – train trainers Metro police – law enforce Council supply venues/materials & market strategy Consultants deliver message Councillors v imp – route to community All must have specific objectives.	Be trained to train others and make others aware and conscious of the waste management.

LIST OF ACRONYMS

CTMM	City of Tshwane Metropolitan Municipality
DACE	North West Department of Agriculture, Conservation and Environment
DEAT	Department of Environment Affairs and Tourism
DWAF	Department of Water Affairs and Forestry
GDACEL	Gauteng Department of Agriculture, Conservation, Environment and Land Affairs
IDP	Integrated Development Plan
IPWM	Integrated Pollution and Waste management
LED	Local Economic Development
NWMS	National Waste Management Strategy
WAF	Waste Awareness Facilitator
WMS	Waste Management Section