



Interim Draft 01.1

REVIEW OF THE INTEGRATED WASTE MANAGEMENT PLAN OF THE UMGUNGUNDLOVU DISTRICT MUNICIPALITY

VOLUME 3

Integrated Waste Management Plan for uMgungundlovu District Municipality (Phase 4)

(IWMP – 2009 UPDATE)

Prepared for:

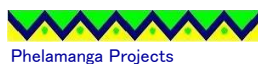
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Abbreviations

COGTA	Department of Cooperative Government and Traditional Affairs
DAEARD	Department of Agriculture and Environmental Affairs & Rural Development
DEAT	Department of Environmental Affairs and Tourism
DM	District Municipality
DoH	Department of Health
DPLG	Department of Provincial and Local Government
DWAF	Department of Water Affairs and Forestry
ECA	Environmental Conservation Act
EIA	Environmental Impact Assessment
HCW	Health Care Waste
HCRW	Health Care Risk Waste
IDP	Integrated Development Plan
IRD	Initial Rate of Deposition
IWMP	Integrated Waste Management Plan
KZN	KwaZulu-Natal Province
LED	Local Economic Development
LGES	Local Government Equitable Share
LM	Local Municipality
MFMA	Municipal Finance Management Act
MIG	Municipal Infrastructure Grant
MR	Minimum Requirements for Waste Disposal by Landfill
MRF	Materials Recovery Facility
MSA	Municipal Systems Act
NEMA	National Environment Management Act
NEMWA	National Environment Management: Waste Act
NER	New England Road Landfill
NGO	Non-governmental organisation
NHA	National Health Act
NRTA	National Road Traffic Act
NWA	National Water Act
PPP	Public Private Partnership
RoD	Record of Decision
SDA	Service Delivery Agreement
SDF	Spatial Development Framework
SMME	Small, Medium and Micro Enterprises
ToR	Terms of Reference
UMDM	uMgungundlovu District Municipality
WIS	Waste Information System
WM	Waste Management

VOLUME 3: INTEGRATED WASTE MANAGEMENT PLAN FOR UMGUNGUNDOLOVU DISTRICT MUNICIPALITY (PHASE 4)

The uMgungundlovu District Municipality (UMDM) in KwaZulu-Natal Province (KZN) developed an Integrated Waste Management Plan (IWMP) in 2002. This plan was updated and the layout reformatted in 2004 according to the requirements of the Department of Agriculture and Environmental Affairs (DAEA), now Department of Agriculture, Environmental Affairs and Rural Development (DAEARD). In terms of the national¹ and provincial² guidelines, IWMPs must be reviewed and updated every five years. The UMDM plan review process has updated the UMDM IWMP and also developed first generation IWMPs for each of the seven respective local municipalities (LMs) within the district municipality (DM). These IWMPs have been developed for the next planning period 2009 – 2015 and the IWMPs for the LMs are available as separate, stand-alone documents.

This document is the third volume in the series of four volumes making up the IWMP for uMgungundlovu District Municipality (DC 22).

Volume 1: Situational Analysis and Gaps and Needs Assessment (Phase 1 and 2)

- Chapter 1: Scope of plan
- Chapter 2: Background information and situational analysis
- Chapter 3: Gaps and needs assessment
- Chapter 4: Summary of present situation

Annexures to Volume 1

- Annexure 1.1 KZ221 Mshwathi
- Annexure 1.2 KZ222 uMngeni
- Annexure 1.3 KZ223 Mpofana
- Annexure 1.4 KZ224 Impendle
- Annexure 1.5 KZ225 Msunduzi
- Annexure 1.6 KZ226 Mkhambathini
- Annexure 1.7 KZ227 Richmond
- Annexure 1.8 Demographic Data
- Annexure 1.9 Waste Data Summaries
- Annexure 1.10 Public Consultation
- Annexure 1.11 Financial Data
- Annexure 1.12 Audit findings and Field Observations
- Annexure 1.13 Gaps and Needs

Volume 2: Development and Evaluation of Alternatives and Scenarios for delivering waste management services within UMDM (Phase 3)

- Chapter 5: Strategic objectives
- Chapter 6: Alternatives and scenarios for WM services
- Chapter 7: Environment, communication and public participation

Annexures to Volume 2

- Annexure 2.1 KZ221 Mshwathi
- Annexure 2.2 KZ222 uMngeni
- Annexure 2.3 KZ223 Mpofana
- Annexure 2.4 KZ224 Impendle
- Annexure 2.5 KZ225 Msunduzi
- Annexure 2.6 KZ226 Mkhambathini
- Annexure 2.7 KZ227 Richmond
- Annexure 2.8 GWFS Excerpts

¹ DEAT Starter Document for the Guidelines for the Compilation of Integrated Waste Management Plans Final Draft, May 2000

² KZN DAEA Guidelines for the Development of Integrated Waste Management Plans for Local Governments 2nd Draft, Jan 2003

Annexure 2.9 Evaluation of scenarios
Annexure 2.10 Waste Management Systems Description

(THIS REPORT) Volume 3: Integrated Waste Management Plans (Phase 4)

Chapter 8: Integrated Waste Management Plan for UMDM

Chapter 9: IWMP Implementation Programme, Monitoring and Review

Chapter 10: Approval process for IWM plan/s

The remaining documents in this series will comprise the following:

Volume 4: Detailed Background Information as Appendices

Appendix A Questionnaire and contacts
Appendix B Public Participation Documentation
Appendix C Detailed Waste Database and Calculations
Appendix D Detailed Financial Calculations

Seven Individual IWMPs for the respective Local Municipalities

There are also seven additional individual IWMPs for the respective seven Local Municipalities that are part of the Umgungundlovu District Municipality which are also products of this review process:

Local Municipalities: KZ221 Mshwathi
KZ222 uMngeni
KZ223 Mporofana
KZ224 Impendle
KZ225 Msunduzi
KZ226 Mkhambathini
KZ227 Richmond

This document, Volume 3 of 4, is the Integrated Waste Management Plan for uMgungundlovu District, based on the recommended scenario (Scenario 4) which incorporates the waste management systems that are most suitable for addressing the identified needs and gaps and for promoting the desired goals of waste minimisation with optimised environmental and social benefits. It is a plan that is designed to meet the requirements of the new NEM: Waste Act and is aligned to the National Waste Management Strategy (2010) currently being drafted by the Department of Environment as well as other related national and provincial legislation.

8 Integrated Waste Management Plan for UMDM

The vision, goals and strategic objectives for the IWMP, as discussed in more detail in Volume 2 of this series of four volumes, are aligned to the national Policy on Integrated Pollution and Waste Management (DEAT, 2000), the National Environmental Management: Waste Act (Act 59 of 2008), the new National Waste Management Strategy (NWMS) (Draft 2010)³, the Waste Sector Plan (Draft 2010)⁴, and the KwaZulu Natal Prevention and Management of Waste Bill (2007) and the Local Government Turnaround Strategy (2009)⁵.

The vision articulated for the broad waste sector is also relevant for UMDM:

“To develop, implement and maintain an integrated waste management system which contributes to sustainable development and a measurable improvement in the quality of life of all people including the poor” (DEA, 2009)⁶.

³ DEA (March 2010) National Waste Management Strategy, First Draft for Public Comments

⁴ DEA (May 2010) Addressing Challenges With Waste Service Provision In South Africa Municipal Waste Sector Plan Draft

⁵ COGTA (November 2009) Local Government Turnaround Strategy.

⁶ Department of Environmental Affairs and Tourism (DEAT) (2009) Addressing Challenges with Waste Service Provision in South Africa: Waste Sector Challenges and Vision Report.

The IWMP review process seeks ways to integrate and optimise waste management services to achieve efficiency and minimise the financial costs associated with providing these services. Guiding this process is the consideration of the waste management hierarchy which prioritises waste prevention, reduction, recycling, reuse and recovery over waste collection, disposal and treatment.

8.1 IWMP Review of implementation strategy 2004

Also taken into account was the implementation strategy for the updated IWMP (2004) for UMDM and much of what was recommended in that document regarding responsibilities and organisational structures, integration into the IDPs, public participation and awareness programmes, finance and financial programme, integrated waste management bylaws is still very relevant for UMDM and the LMs. The main areas of review between the 2004 plan and this 2009 plan are as follows:

- Alignment of the IWMPs to the new legislative framework:
 - The existence of NEMWA gives more impetus to the drive towards waste minimisation, extension of service coverage and integration into the LM and DM IDPs, with more severe penalties for non compliance
 - The coordinating and enforcement roles of WMOs and EMIs have been strengthened
 - The waste licence regulations under NEMWA and amended EIA regulations under NEMA, now in effect, are intended to streamline and reset the thresholds for waste and other listed activities that trigger EIA processes to reduce the administrative burden on small low impact operations
 - The imminent NEMWA regulations on collection service standards and the waste information system, and other norms and standards currently in the pipeline will clarify and ensure improved delivery on waste services other than just disposal.
- Addressing inadequate capacity of LMs to render sustainable waste services by increasing the responsibility of the DM to manage and administer PPPs and community contracts:
 - Collection service backlogs still need to be addressed but existing collection services are inefficient, rely on ageing vehicle fleets and there are no figures on actual costs of service. The challenge is to extend services into unserved high and medium density settlement areas⁷ and the indications are that this will require the harnessing of the capacity of the private sector to do this. This will require a MSA Section 78 process to confirm the need for an external mechanism for service delivery. The clearing of accumulated litter and illegal dumping hotspots must also form part of the addressing of backlogs.
 - Regulations under NEMWA are imminent that will require municipalities to render a Free Basic Refuse Removal services to indigent households and provide weekly collection of non-recyclables and bi-monthly collection of recyclables in high density settlements, and to provide central collection points for medium density settlements. The COGTA Turnaround Strategy stipulates that the minimum standard 2014 target should be 'all households to have access to at least once-a-week refuse removal services'. It is unlikely that the majority of LMs within the UMDM will have the capacity to do this under current circumstances. Once again alternative service delivery mechanisms involving the private sector and job creation are recommended here.
 - LM management of their own disposal operations as recommended in the UMDM IWMP 2004 proved not to be sustainable to the point where in September 2007 the UMDM took the decision to begin the process whereby it would take over the responsibility of these disposal facilities as well as the integrated strategy and plan for the DM as well as LMs to regulate and provide effective waste disposal services across the district. This requires a Section 78 process to

⁷ DEA Draft Collection Standards (published for comment) 2010

- Low density: less than 10 dwellings per hectare: On site disposal in areas designated by municipality and under supervision of the designated WMO
- Medium density: 10 – 40 dwellings per hectare: Communal collection and formal disposal of household refuse and litter is required
- High density: > 40 dwellings per hectare: frequent and reliable formal collection and disposal of solid waste to a landfill is required

- establish that an external mechanism (i.e. the DM) is the best way forward.
- Wherever alternative service delivery mechanisms are to be driven from the district level, there must be a parallel contractual process that commits the local and district municipalities to a Service Delivery Agreement (in terms of MSA Act 32 of 2000) which prevents abdication of constitutional responsibilities.
- Strengthening the compliance monitoring and enforcement of legal requirements for waste activities
 - The inadequate internal and external environmental monitoring and auditing of waste facilities and activities during the past five odd years have resulted in a significant slipping of operational standards and blatant non compliance with legal requirements. The Provincial and UMDM WMO and EMI functions must address this urgently.
- Review of institutional structures and processes to address the fragmentation in the waste functions and the inability of municipalities to plan and budget for waste management because of a lack of information:
 - Waste Information System set up as a priority and managed from the district level but with ongoing input from LMs
 - Mechanisms to ring-fence the waste management functions to allow full cost accounting within LMs must be investigated and introduced.
 - Financial management including cost recovery, funding and budgeting for waste management services must be adequately addressed
 - Monitoring of key performance indicators relating to implementation of IWMPs must be adhered to, and driven from the district level. Proposed indicators and targets, aligned to the NWMS are provided.
- Greater access to focused training programmes, awareness campaigns and pilot projects for key role players undertaking waste activities, driven from district level.
 - These must be incorporated into annual training plans and ongoing community outreach programmes with appropriate budgets.
 - Key role players include WMOs, EMIs, Waste Management Control Officers at waste facilities, Waste Data Clerks, DM and LM Waste Managers and Supervisors
 - The promotion of capacity for job creation and maximising community benefits must be enhanced
 - Business and industry, and willing NGOs and academic institutions should be mobilised for driving waste prevention and minimisation initiatives
 - The UMDM hotline (0800864911/fax +27 33 3425502) should be extended to deal with waste related issues as well, and be advertised as such.

8.2 IWMP Goals and Strategic Objectives

A set of broad goals and objectives for sustainable development and for each step of the waste hierarchy for the UMDM and LMs, was developed in Volume 2 of this series, as summarised in Table 8.1 below repeated here for ease of reference.

Table 8.1: Broad Goals and Objectives for Waste Management in the UMDM

Goals	Strategic Objectives
1. Securing ecologically sustainable development while promoting justifiable economic and social development	<ul style="list-style-type: none"> • To ensure the protection of the environment through integrated effective waste management measures • To protect the health and well-being of people by providing an affordable waste collection service • To increase number of jobs within waste services, recycling and recovery sectors, promoting the development of SMMEs in waste sector

Goals	Strategic Objectives
2. Avoiding and minimizing the generation of waste	<ul style="list-style-type: none"> • Facilitate cooperation within the business and industry sectors to promote processes that avoid or minimize waste generation • Explore mechanisms to discourage waste generation through cost reflective and volume-based tariffs • Increase consumer awareness of waste minimization issues
3. Reducing, re-using, recycling and recovering waste	<ul style="list-style-type: none"> • Increase reuse and recycling rates of products. • Reduce the quantity of recyclable material going to landfill • Ensure separation at source in all local municipalities • Encourage the establishments of Material Recovery Facilities (MRFs) where appropriate • Investigate waste to energy options
4. Promoting and ensuring the effective delivery of waste collection and transport services	<ul style="list-style-type: none"> • Facilitate the provision of at least a basic level of waste service wherever physically possible • Ensure an efficient and effective solid waste management collection and transport services • Implement free basic refuse removal policy for indigent households • Promote the regionalisation of waste collection and transport services where feasible
5. Treating and safely disposing of waste as a last resort	<ul style="list-style-type: none"> • Promote the regionalisation of waste treatment and disposal facilities where feasible • Stabilise quantity and investigate the reduction of pollution potential of waste disposed to landfill and reduce this volume • Improve landfill management to comply with legislation • Recover waste disposal tariffs to generate revenue so that landfill sites become profitable enterprises that are financially self sustaining • Investigate the conversion of waste to energy and clean development mechanisms.
6. Remediating land where contamination presents a significant risk of harm to health or the environment (This goal is not dealt with in this IWMP)	<ul style="list-style-type: none"> • Quantify the extent of contaminated land • Draw up a plan to implement contaminated land measures in the Waste Act⁸ • Prioritise areas of contaminated land • Clarify extent of state liability for contaminated land

In addition to the above broad goals and objectives, there are a number of process-related goals and objectives relating to the mechanisms required to achieve the overall goals, which reflect intermediate level outputs. These goals and objectives are summarized in Table 8.2 below.

Table 8.2: Process-related goals and objectives

Goals	Strategic Objectives
7. Sound budgeting and financial management for waste services	<ul style="list-style-type: none"> • Undertake sound financial planning for waste services based on full cost accounting for waste services • Investigate cost reflective and volumetric tariffs • Ensure adequate and sustainable financing of waste services including cost recovery for waste services from user groups that are able to pay

⁸ DEA National Framework for the Management of Contaminated Land May 2010.

Goals	Strategic Objectives
8. Institutional capacity and adequate staffing for waste management	<ul style="list-style-type: none"> • Ensure that organisational arrangements relating to waste management activities function cohesively within the district and local municipalities in cooperation with provincial and national structures. • Appoint a Waste Management Officer for the district and for each respective local municipality • Develop additional technical capacity to deal with norms and standards, industry regulation and remediation • Expand Environmental Management Inspector capacity at district and local level to implement the NEM Waste Act • Harness the capacity of the Private Sector to support waste service delivery e.g. community-based collection models or Public-Private Partnerships for waste treatment and disposal facilities.
9. Effective compliance with and enforcement of waste regulations	<ul style="list-style-type: none"> • Review and update waste bylaws and align IWMPs to IDPs in line with NEMWA and regulations • Conduct systematic monitoring of compliance with regulations and permit/licence conditions • Establish a hotline to report non-compliance • Enforce waste bylaws and regulations and prosecute waste offenders successfully
10. Effective monitoring and reporting on performance with waste functions	<ul style="list-style-type: none"> • Establish and implement Waste Information Systems in all Local Municipalities to gather accurate and reliable waste information • Implement systematic monitoring of key performance indicators at district and local government levels • Report on key performance indicators in line with Waste Act • Conduct regular evaluation of performance on waste functions and Industry WMPs
11. Ensuring that people are aware of the impact of waste on their health, well-being and the environment	<ul style="list-style-type: none"> • Develop local awareness campaigns on the social importance of waste minimisation and management • Promote waste minimization and recycling through education institutions • Encourage Municipalities to enter competitions for waste management

8.3 The preferred scenario

These goals and strategic objectives were considered in the evaluation of alternative scenarios in Volume 2, Chapter 6.8 and Annexures, and are carried through into the implementation plans for UMDM and the respective LMs for the preferred scenarios.

As required, the financial modelling of scenarios was carried out for the short (0-3 years) and medium (5-3 years) term up to 2015. It was assumed that in this period, realistically, the greatest likelihood for LMs Msunduzi, Impendle, uMngeni and Richmond during the next five years, would be that they would continue to use their existing waste disposal facilities. uMshwathi and Mkhambathini LMs' current use of the NER landfill site was evaluated by looking at the costs of this existing option against the cost of developing and operating a communal-sized landfill site within each LM. Mpofana has very little or no remaining capacity at the Bruntville landfill but is about to increase its lifespan by developing an additional cell (for which it has permissions in place already). uMngeni's Curry's Post landfill is also due to be extended and will include a composting area.

Modeling of four scenarios was carried out for each LM to establish the relative costs of operation using a linear programme that solved for the least cost option. The results could be regarded as indicative relative costs only because real costs from the LMs were not available and generic data (from eThekweni Metro) had to be used instead. The capital costs for plant, equipment, vehicles and buildings will depend on the detailed choice of system for implementation and it has been assumed that these could be met by negotiating for external funding.

For this modeling, the following assumptions were made:

- Baseline population and domestic waste quantities were those estimated as for the year 2009.
- Population growth rate was assumed to be 0.089 % per annum
- Waste generation annual growth rate was assumed to be 1.09 % per annum
- The transport distances were estimated by taking the average from the centre of each ward to the landfill
- The vehicle costs were assumed to be those of the dominant vehicle type based on the existing fleet composition and 2009 Durban Solid Waste's vehicle operating costs.

The four scenarios modeled were as follows:

Scenario 1A : Status Quo

- no waste minimisation
- annually applied population and waste quantity growth rates
- all LMs using the same disposal facilities as they currently do
- no extension of collection services

Scenario 1B: Each LM has own landfill

- no waste minimisation
- annually applied population and waste quantity growth rate
- Msunduzi, uMngeni, Richmond, Impendle and Mpofana LMs using the same disposal facilities as they currently do (i.e. the same as Scenario 1A)
- uMshwathi and Mkhambathini LMs developing their own communal sites from beginning of 2013,
- no extension of collection services

Scenario 2: Extension of collection service

- no waste minimisation
- annually applied population and waste growth rate
- all LMs using same disposal facilities as currently
- extension of collection services to selected wards added each consecutive year till LM's desired coverage reached

Scenario 3: Waste reduction

- increasing waste minimisation over the next years measured as the reduction waste quantities deposited in the landfill (2009 as baseline)
 - 0% over baseline in 2010
 - 5% in 2011
 - 10% in 2012
 - 15 % in 2013
 - 20% in 2014
- annually applied pop and waste growth rate
- all LMs using same disposal facilities as currently
- no extension of collection service

Scenario 4: Combined extension and waste reduction

- annually applied population and waste quantity growth rates
- same disposal facilities (Scenario 1a)
- extended collection services (as for Scenario 2)
- increasing waste minimisation as reduction of waste to landfill (as for Scenario 3).

Each scenario was considered for each respective Local Municipality on the basis of relative operating costs, but also in terms of the impacts relating to the natural environment and social aspects. A waste flow diagram was prepared for each scenario per LM and the municipality-specific modeling results summaries and waste flow diagrams for each respective LM were included in Annexures 2.1 to 2.7 of Volume 2. These summaries are also incorporated into the individual LM IWMPs for completeness.

Scenario 3 (Implementing waste minimisation only) was found to be the most suitable scenario for Mshwathi; uMngeni; Mpofana; Mkhambathini and Richmond. This would be expected as a result of less waste being handled, however this option does not achieve the goal of extended service coverage.

Scenario 4 (Implementing waste minimisation as well as extending service coverage) was found to be the most suitable for Impendle and Msunduzi LMs and the second most suitable option for Mshwathi; Mpofana; and Richmond.

Because extension of the collection service is a requirement, Scenario 4 is therefore the preferred scenario for implementation in Impendle; Msunduzi; Mshwathi; Mpofana; and Richmond.

For uMngeni, Scenario 1A (Status quo) was rated second, largely because it required no additional trips or distances to be covered as would have been the case with extending the service to unserved wards 4 and 5. The extension of service coverage is a requirement for waste service delivery and therefore Scenario 1A will not achieve either extended coverage or waste minimisation. Therefore **Scenario 4, which scores very close to Scenario 1A, must also be chosen as the most suitable scenario for uMngeni.**

For Mkhambathini, Scenario 1B (New communal site for LMs with no landfill) scored second highest because without any extension of collection coverage there would be no increase in waste quantities or transport distances. The possibility of establishing a communal site to accommodate the extension of service to more remote areas in Wards 5 and 7 or for Wards 1 and 2 can therefore be considered; however, in the case of Wards 1 & 2 it might also be possible to move the waste through Copesville to the New England Road landfill in Msunduzi. Modeling Scenario 4 for Mkhambathini showed the need to utilise a second vehicle to accommodate the increased waste quantities, which significantly raises the operating costs. In these outlying wards, however, the density of the population and remoteness of specific settlements must be considered in terms of the minimum Standards for Collection. Even if a new communal site is chosen for Mkhambathini, there are still the imperatives to minimise waste and extend coverage, therefore **Scenario 4 must be implemented either alone or in tandem with Scenario 1B for Mkhambathini.**

In summary, therefore **Scenario 4 should be implemented in all LMs throughout UMDM combining both waste minimisation and extension of collection services to unserved areas. In Mkhambathini the feasibility of establishing a communal disposal site for the medium term could be investigated further. Similarly in uMshwathi, this could be an option for remote but densely populated areas like Appelsbosch.**

Table 8.3 summarises the recommended scenario for all LMs and UMDM. Individual summaries that are LM specific are included in the respective IWMP documents.

Table 8 .3: Description of the recommended Scenario 4 for UMDM and LMs

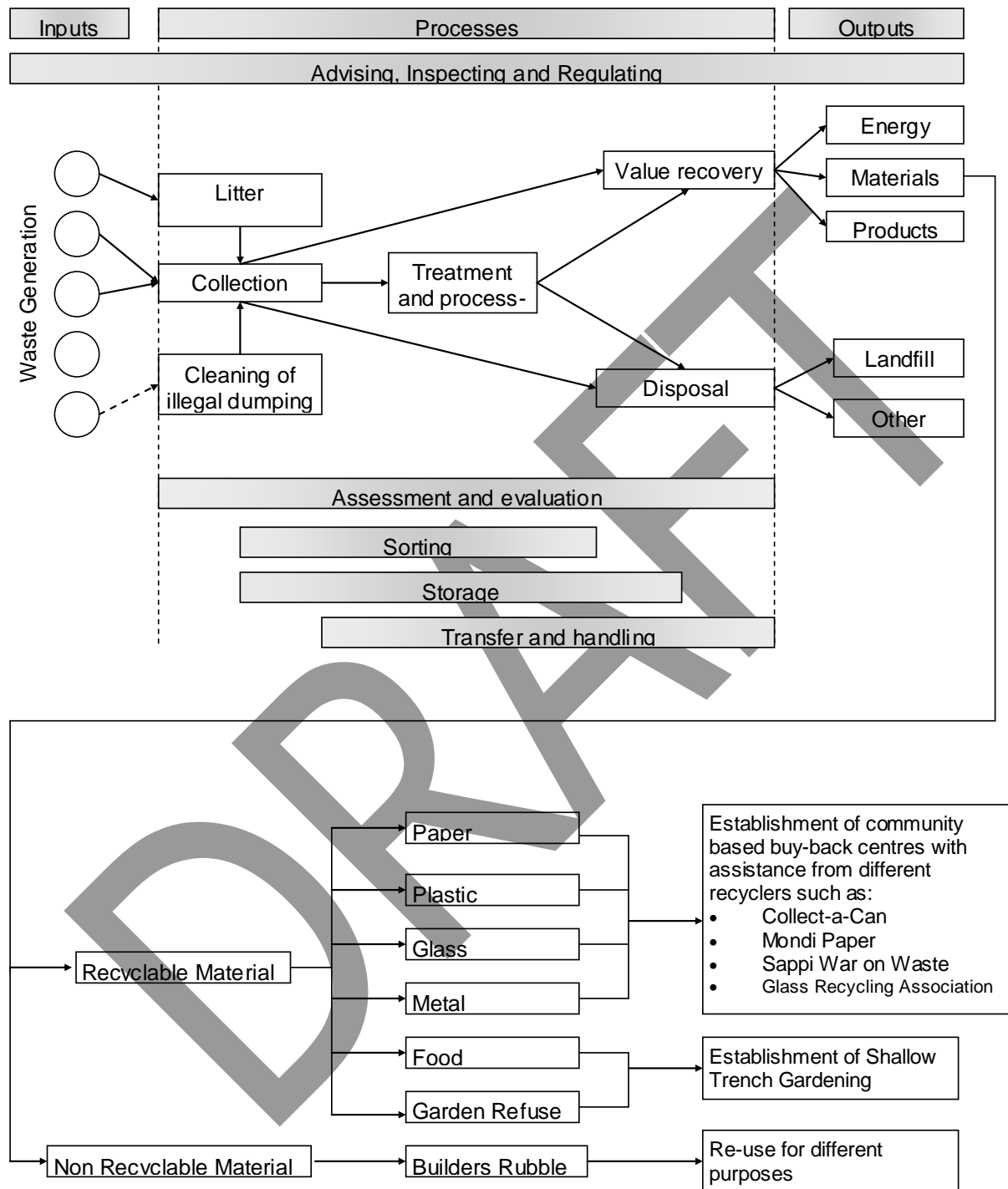
Waste Management Function	Recommended System/s
WIS	
All areas: urban, dense unserved and rural	<ul style="list-style-type: none"> - Electronic, mass based system linked to weighbridge where present, provincial vehicle registration, and billing system, feeding into District Database and SAWIS via internet - Manual, volumetric system feeding into simple computer spreadsheet where no weighbridge, linked to UMDM and Nat SAWIS via internet - Monthly and annual reporting to SAWIS and LM Planning function
WASTE AVOIDANCE & RECYCLING	
Urban	<ul style="list-style-type: none"> - Kerbside separation - 2-bag system run in partnership with recycling company; orange bags supplied by Recycling Co. in higher income areas - Drop off centre – recyclables – for higher income areas - Drop off centres - garden waste bins on paved area - Buy back centres – lower income areas close to commercial or

Waste Management Function	Recommended System/s
	industrial activities MRF- low tech MRF- higher tech
Hi density unserved	- Buy-back centres run by entrepreneur supported by Recycling Company; Recycling Company funds infrastructure and equipment
Rural	Buy back centres at supermarket with co-transport
COLLECTION, TRANSPORT &/TRANSFER	
Urban	Door to door service in formal urban areas by urban-based waste contractor (existing contract); black bags supplied by LM Door to door collection and verge cleaning – Community contractor with own vehicle/s Door to door collection and verge cleaning – One person contractor, labour based Contract Management Consultant to manage and administer community contracts Transfer stations - small, low tech to link with community contractor/s Transfer station - large, no compaction Transfer station - large, compaction Illegal dumping/litter clearing
Hi density unserved	- Extend service with door-to-door small and/or one-person community-based contractor linked to existing urban-based contractor - Black bags supplied by contractor Door to door collection - small scale community contract Door to door collection - one person community contract Transfer station - small, low tech Contract Management Consultant E.g. Munitech, Tedcor
Rural	Individual households on site – no transport
TREATMENT	
Urban	Composting of garden waste - on site, vermiculture (worm farming) Composting facility - low tech Composting facility - high tech MBT regional facility Demonstration Community Garden
Hi density unserved	Composting facility - low tech Demonstration Community Garden
Rural	Demonstration trench gardening using wastes - on site or community garden Treatment- low tech on site composting Demonstration Community Garden
DISPOSAL	
Urban	Maximise use of airspace by upgrading existing landfill operations; extension cell to landfill where necessary GC site/s if required GL regional site – site selection and licensing
Hi density unserved	Use existing facilities as far as possible; plan to link with new sites where relevant

Waste Management Function	Recommended System/s
Rural	On-site pit disposal or communal trench and fill landfill Communal trench and fill landfill in outlying Mkhambathini or Mshwathi?
REHABILITATION OF CONTAMINATED LAND	
All areas	Identify contaminated sites and initiate register

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Figure 8.1
Generic process flow for waste management with recycling option



8.4 Responsibilities and Organisational Structures for implementation

Implementation of the activities, plans, programmes and projects that make up the integrated plans for UMDM and the LMs must be carried out in a well-coordinated way. The IWMP 2004 discussed the roles and responsibilities in Chapter 5.1 comprehensively, concluding that the UMDM would have the 'overall responsibility of assigning each task and organisation structures developed to ensure that the plan is integrated successfully' with these tasks including 'sources of funding the implementation of waste

minimisation and recycling programmes, closing and/or upgrading of existing landfill sites, identification of land for future landfill sites, training of landfill site operators and attending to external audits.’ This is still relevant. It seems necessary, however, that the DM should take over the direct responsibility for managing the local landfill sites (subject to a Section 78 process) and also explore the establishment and administration of Public Private Partnerships wherever these are appropriate, whether for specialised regional facilities or for the use of community waste collection contractors in extending collection services to medium to high density unserved areas. This does not absolve the LMs of their accountability for these functions, however, and so in all of these instances the DM and LM should formalise the arrangements by means of Service Delivery Agreements between municipalities. The LMs should retain direct responsibility for the upgrading of their existing formal waste collection services, and waste collection fleets etc.

It is important in UMDM LMs that the waste management function become financially ring-fenced in order to manage it effectively. As is generally the case in many municipalities in SA, the expenditure is undertaken by the line waste management department/s responsible for disposal and collection functions while revenue and financial management functions are undertaken by the centralised treasury function.

UMDM local municipalities have historically been under-pricing their waste services through a fixed monthly rate based either on the nature of the service, property values or property sizes rather than by the amount of waste generated. These underpriced services have given a false message to waste generators about the true cost of managing their waste and have not incentivised waste minimisation. An investigation into the introduction of volume-based tariffs should be undertaken. Specific attention needs to revising bylaws relating to tariff levels and subsidy costs in the sector, and the development of policies on the provision of free basic refuse removal services. Linked to all of these financial mechanisms for improving services is the need for accurate baseline data which forms the basis of planning, budgeting and monitoring of performance indicators and achievement of targets.

The designation of Waste Management Officers is key to the coordination of waste functions as they will play a strong integrating and capacitating role across municipalities and with province, together with the monitoring and enforcement role they share with the Environmental Management Inspectors. It is important that the WMOs, fulfilling a regulatory role, function independently of the roles of service provision and policy making. This means that the WMO should be located in a different entity to the staff that undertake waste activities or service provision. Where a municipal service is outsourced to another organisation or entity, this separation of roles can easily be achieved, e.g. outsourcing to the private sector or to another municipality. The roles and responsibilities must be clarified in contractual Service Delivery Agreements (SDAs) or Memoranda of Agreement.

In the UMDM, the respective roles of the district and local municipalities should be clarified to strengthen accountability for outcomes, specifically through such contractual SDAs to guide the provision of services by municipal entities.⁹ The most effective arrangement will be for a single authority to be made responsible for specific waste service delivery. In the case of those waste functions where LMs do not have capacity, UMDM should be made responsible but with Service Delivery Agreements with individual LMs or the private sector in place.

It is recommended that the coordinating mechanism of the Waste Forum, made up of all LMs, the DM and the provincial regulatory authorities, continue to provide a mechanism for communicating and undertaking joint initiatives.

Table 8.4 summarises the recommended roles for the implementation of the IWMPs in UMDM.

⁹ DEA Research Paper: Cooperative Governance, Local Government and the Waste Planning System
David Savage August 2009

Table 8.4 Summary of WM functions and responsibilities for the implementation of the IWMPs in UMDM.

Function	Provincial DAEARD	District UMDM		Local Municipalities		Private Sector service provider
	WMO+EMIs	WM Unit	WMO+EMIs	WM Unit	WMO+EMIs	
IWM Planning and budgeting	Review IWMPs every 5 years, NEMWA return forms annually	Prepare IWMP Link to IDP and budget Full cost accounting	WMO review IWMP implementation	Prepare IWMP Link to IDP and budget Full cost accounting	WMO review IWMP implementation	
WIS	Review WIS annually	Set up and drive WIS from DM with links to LMs Submit to SAWIS	WMO ensures monitoring and recording of quantities takes place	Gather and record data for WIS Submit to DM WIS	WMOs ensure monitoring and recording of quantities takes place	Possibly appoint consultant?
Waste prevention	Review Industry WMPs	Facilitate W Min Clubs in partnership with PCC/Midi Set up Web based Waste Exchange Introduce Green procurement & disseminate guidelines		Introduce Green procurement		Cooperation agreement with business/industry body?
Recovery, recycling	Support household hazwaste collections/drop off – e-waste	Set up Kerbside recycling PPP Facilitate e-waste drop off Set up Buy-back centres with recycling co. PPP Set up MRFs at district controlled facilities	Monitor and enforce licence conditions	Establish Drop-offs	Monitor and enforce licence conditions	Recycling Co. provide entrepreneur contractor Monitor and record quantities and types
Collection - formal	Monitor and enforce transporter requirements		Monitor and enforce transporter requirements	Operate and extend Municipal collection service, FBRR service, Manage contractors where outsourced	Monitor and enforce transporter requirements Ensure monitoring and recording of quantities takes place	Private collection contractor in some cases
Collection – dense, unserviced		Undertake s78 process with LMs Set up Service Delivery Agreements with LMs Set up Community based contracts PPPs via tender process	Monitor and enforce regulations	Undertake s78 process with LMs where required Enter into SDAs with DM	Ensure monitoring and recording of quantities and types takes place	Provide contract management, monitor and administer community contracts Monitor and record quantities and types
Transfer, transport	Issue waste facility licences where relevant	Investigate transfer facilities for regional site	Monitor and enforce regulations		Register transporters in LM	Private collection/transport contractor in some cases

Function	Provincial DAEARD	District UMDM		Local Municipalities		Private Sector service provider
	WMO+EMIs	WM Unit	WMO+EMIs	WM Unit	WMO+EMIs	
	Monitor and enforce licence conditions and waste related regulations, esp i.t.o. hazwastes	Arrange funding for capital expenditure				
Treatment & disposal	Issue waste facility licences Monitor and enforce licence conditions	Undertake s78 process with LMs where required Set up Service Delivery Agreements with LMs Investigate PPPs for regional facilities Obtain or update waste facility licences Investigate MBT options and regional site Extend lifespans of existing sites Investigate new communal site/s		Undertake s78 process with DM where required LMs enter into SDAs with DM to operate local landfills	Undertake s78 process with DM where required Ensure monitoring and recording of quantities and types takes place	Possible PPPs between DM and private sector company/ies for regional facilities Contracted company or concessionaire monitors and records waste quantities and types and reports to DM
Compliance & Enforcement	Provincial WMO liaise with DM and LM WMOs and all EMIs Enforce waste facility licence conditions and waste related regulations		Enforce waste facility licence conditions External audits		Ensure monitoring and recording of quantities and types takes place Internal audits	Where relevant: Ensure monitoring and recording of quantities and types takes place Internal audits
Training & awareness	Support capacity development in WM with guidelines, information, funding where appropriate	Procure accredited training courses (as far as possible) for WM officials, WMOs, waste data clerks, waste picker co-operatives, etc Initiate awareness campaigns		Incorporate WM skills programmes into workplace skills plans and apply to LG SETA where relevant Identify course candidates Participate in awareness campaigns		Private sector training providers can deliver training
Regulatory	Review NEMWA docs annually Enforce KZN Waste Bill, once enacted	Input into bylaws Set tariffs	Revise District Bylaws and administer	Input into bylaws Set tariffs, indigent policies	Revise Local Bylaws and administer	

8.5 Integration into IDP

To ensure the mainstreaming of IWMPs at every level of government, municipalities are obliged to integrate their IWMPs into their Integrated Development Plans and their associated financial plans and roll out programmes. There is therefore a need for the proposed implementation plan for waste management to be discussed by each municipal council to ensure that the appropriate priorities are set and the budgets allocated. A process for aligning the IWMP target dates and budgets on an annual basis has been allowed.

8.6 Public Participation Programme

There is a strong element of public involvement and consultation inherent in the IWMPs that relate to legal processes such as waste licensing and MSA Section 78 processes.

Over and above these, high priority should be given to the creating of awareness around IWM initiatives, opportunities for job creation, and information dissemination on the benefits of good waste management practice. The importance of waste minimization and ways in which industry, households and consumers can contribute to this must be included within an overarching public awareness campaign for waste to be coordinated by UMDM.

The collaboration of all LMs with the DM will be necessary here and a strong element should be the engagement of the business and industry sector.

Partnering and links to environmental NGOs such as groundWork, WESSA, DUCT, MIDI should be considered to extend municipal capacity. The programmes from DEA at a national level should also be supported e.g. Clean and Green competitions and 'Make Mzantsi Beautiful' /Indalo Yethu.

The existing UMDM website 'hotline' should be extended to allow reporting of waste issues. The website should also be used for dissemination of information on waste initiatives.

A public campaign for waste minimisation and recycling disseminating a user friendly booklet similar to eThekweni's EduSelf booklet on recycling could be considered. The EduSelf booklet contains with practical information in 3 languages on how to minimise and separate wastes, who to contact with enquiries and where to drop off recyclables was developed and printed in bulk for distribution free of charge to metro households.

In the same way a number of initiatives can be undertaken, including:

- The waste management planning process can be used as a tool to raise awareness and support for these decisions
- Publishing all ordinances and/or by-laws;
- Offering special conferences, seminar, training courses and exhibitions;
- Initiating pilot projects;
- Reporting on successes.
- Target schools and Ecoclubs.

Because sound waste management has to be practised by all those who generate and handle waste, i.e. everybody, public awareness and communication throughout the LMs of the UMDM is essential: without these it will not be possible to achieve the objectives of this plan effectively.

8.7 Financing and Financial Programme

A number of financing mechanisms have already been discussed in Volume 2 of this series, the most sustainable of which is to recover costs of services from the user. Depending on the projects that are prioritised for implementation and their timing, each project will require a more detailed level of financial

planning, approval and budgeting. The steps remain the same as given in the KZN IWMP guidelines:

1. Define the project to identify which components require financing.
2. Identify practical models for ownership and operation of the project or parts of it.
3. Conduct a financial risk analysis to identify the primary risks, which lenders and investors will face.
4. Identify the domestic and international sources of financing, considering lending, insurance and equity involvement.
5. Investigate revenue generation from the project.
6. Evaluate the financing potential of the project.
7. Analyse the financial performance of the project and its components.
8. Analyse the financial impacts to the ratepayer.

8.8 Integrated Waste Management By-laws

There is a need for the current LM by-laws to be updated in line with the new legislation that has been promulgated in the interim, and to formulate by-laws where they do not yet exist. By laws should cover aspects such as tariffs, free basic refuse removal, and waste removal services and standards. There is a model by-law available to assist LMs in this task.¹⁰

9 IWMP Implementation Programme, Monitoring and Review

9.1 District Municipality IWMP Implementation Programme

The waste management systems suitable for the LMs in UMDM form part of the district plan and should be integrated into a cohesive whole. As far as possible the technologies and systems for both urban and rural areas should be standardised so that there can be interchangeability in the LM functions managed from District Level.

A detailed IWMP implementation programme is proposed for UMDM, and includes actions for LMs as well. Key activities and proposed timing is included in the schedule below (Table 9.1).

Modular capital and operating costs (2009) for the different types of facilities are provided in Volume 4 of 4. More detailed costings can be undertaken once the proposed programme has been through a consultation process with the relevant stakeholders.

¹⁰ DPLG ...

Table 9.1: IWMP IMPLEMENTATION PLAN FOR UMGUNGUNDLOVU DISTRICT MUNICIPALITY 2009-2015

Item #	Task	Responsible	Quarters																											
			2009				2010				2011				2012				2013				2014				2015			
			1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
SHORT TERM IMPLEMENTATION PLAN (2009/10 - 2011)																														
1	SHORT TERM PLAN (0 - 2 years) 2009-2011 Waste Information System																													
2	UMDM develop and maintain a Waste Information System specific to the individual Local Municipalities																													
3	Appoint IT specialist to set up WIS to link to the LMs of UMDM and align to National SAWIS and WIS regulations	DM, LM																												
4	Link Msunduzi LM (KZ225) and uMngeni LM (KZ222) weighbridge data to a billing system that facilitates cost recovery for waste disposal	LM																												
5	UMDM centralise all existing waste related information in electronic format and feed into UMDM WIS	DM, LM																												
6	Continuously update all information associated with waste generation, minimisation, recycling and disposal	LM,DM																												
7	Compliance with NEMWA, SAWIS for HCWM registrations and confirm safe disposal of all medical waste from all medical facilities within individual Local Municipalities	LM,DM																												
8	SHORT TERM PLAN (0 - 2 years) Waste prevention and minimisation																													
9	DM and LM commit to green procurement policy																													
10	Set policy committing DM and LMs to green procurement procedures e.g. recycled paper use in govt offices; procuring items from suppliers with a take-back policy	DM,LM																												
11	Develop guidelines for green procurement within the DM	DM																												
12	Facilitate cooperation in business and industry sector to form waste minimisation clubs and prepare Industry WMPs																													
13	Initiate formation of waste minimisation club programme with active organisations in the district e.g. NCPC SA/dt, through Msunduzi Innovation & Development Institute	DM,LM																												
14	Update existing list of industries mainly within the KZ222 and KZ225 LMs by name, discipline & waste types and add waste quantities	DM,LM																												
15	Prepare presentation documentation (waste hierarchy), "need for waste minimisation" and include cost/benefit examples.	DM																												
16	Approach industries and request co-operation in waste minimisation/recycling, and recruit W Min Club members	DM,LM																												
17	Agree key monitoring areas and target by participating industries	DM,LM																												
18	Support implementation and monitoring of w min initiatives	DM,LM																												
19	- Discuss and implement where possible waste treatment initiatives	DM,LM																												
20	- Support implementation of industrial pilot project on 10 industrial factories in KZ225 and 3 industrial factories in KZ222	DM,LM																												
21	- Review industrial pilot project and make necessary amendments (see Medium term)	DM,LM																												
22	Advise on preparation of industrial waste management plans (see Medium term)	DM,LM																												
23	Investigate establishment of a web-based waste exchange programme	LM																												
24	Establish a central internet web site for recyclable material applicable to the individual LMs	DM																												
25	Notify industry and the public re the waste Internet Web Site use and protocols	DM,LM																												
26	Identify on behalf of industry and potential recycling initiatives medium to long term secure markets for recyclable material	DM																												
27	Encourage artificial markets for high profile waste streams, in turn creating job opportunities e.g. all government departments use recycled paper and commit to green procurement measures	DM,LM																												
28	SHORT TERM PLAN (0 - 2 years) Waste recycling, recovery, re-use																													
29	Support LMs KZ221,222, 223, 225, 227 to implement source separation kerbside recycling in urban serviced areas																													
30	Negotiate with recycling company to extend urban 2-bag kerbside recycling (Msunduzi/uMngeni pilots) to new areas in KZ221, KZ222, KZ223, KZ225, KZ227	LM, DM, PPP																												
31	Conduct awareness raising and set targets relating to kerbside recycling with participating residential communities and municipal collection staff	LM, DM, PPP																												
32	Establish baseline waste quantities in new areas and implement extended kerbside recycling scheme	LM, DM, PPP																												
33	Monitor recycling rates with recycling company	LM, DM, PPP																												
34	Establish Materials Recovery Facilities																													
35	Encourage the development of Buy-back Centres in commercial nodes of small towns and lower income areas																													
36	Facilitate negotiations with recycling companies to support establishment of buy-back centres with local entrepreneurs	DM,LM,PPP																												

9.2 Local Municipalities IWMP Implementation Programmes

The IWMP implementation programmes for the seven respective LMs that integrate with the above schedule are provided in the respective LM IWMPs provided as separate documents.

9.3 Monitoring and Review

9.3.1 NEMWA requirements for IWMP review

Section 11 of the Waste Act requires all municipalities must prepare IWMPs in a consultative manner according to the prescriptions of section 29 of the Municipal Systems Act. National and provincial level IWMPs are approved by the national Minister. At municipal level the provincial MEC gives approval to municipal IWMPs once he/she is satisfied that it is aligned with other relevant plans. The MEC may also request amendments to an IWMP and enforce adherence to the planning procedures set out in the Waste Act.

IWMPs are the initial strategic planning step in the overall planning and accountability cycle for government. At any given moment within a financial year, government will be busy with a number of such planning and accountability cycles - preparing strategic planning and budgeting for the coming year, implementing the plans previously formulated for the current year, and reporting on performance for the previous financial year. The table below shows how the IWMP process links with the planning and accountability cycle for all tiers of government.

Table 9.1: Linkage between IWMPs and accountability cycle of government¹¹

Accountability cycle	Accountability documents	Performance information
Strategic planning	<ul style="list-style-type: none"> • Strategic plans • IDP's • IWMP's 	<ul style="list-style-type: none"> • Indicate outputs • Specify performance Indicators
Operational planning and budgeting	<ul style="list-style-type: none"> • Operational plans budgets and performance agreements • Municipal budgets • Service delivery and budget implementation plan and performance agreements 	<ul style="list-style-type: none"> • Set performance targets • Indicate available resources • Allocate responsibility
Implementation and in year reporting	<ul style="list-style-type: none"> • Monthly budget reports and quarterly performance reports • Monthly budget statements • Mid-year budget and performance assessments 	<ul style="list-style-type: none"> • Report progress with implementation of plans and budgets
End year reporting	<ul style="list-style-type: none"> • Annual reports • IWMP Annual performance reports 	<ul style="list-style-type: none"> • Report on performance against plans and budgets

The sequencing of IWMPs within the annual calendar for planning and reporting for each sphere of government is important. The primary building blocks of the waste planning system are municipal IWMPs, and it is at the municipal level that the concrete plans for extending waste services and implementing the waste hierarchy will be set out. The municipal IWMPs must be aligned with the overall IDP as legislated by the Municipal Systems Act. In terms of Section 25 of the MSA Act, each municipal council must, within a prescribed period after the start of its elected term, adopt a single, inclusive and strategic plan for the development of the municipality. This period has been set as one year after the commencement of its elected term in terms of subsequent regulations. Since local government elections happen on a five yearly basis, it logically follows that an IWMPs should cover a five year planning horizon, and should be comprehensively reviewed and readopted in terms of this planning cycle. The next local government

¹¹ DEA Draft NWMS (March 2010) p 109

elections will take place in 2011, which means that the next round of IDPs need to have been drawn up and adopted by 2012. In order for IWMPs to be incorporated timeously into IDPs and substantively influence the next planning cycle, it is important that municipal IWMPs are completed in all municipalities by June 2011 i.e. the end of the 2010/11 financial year for local government.

In order for provincial and national IWMPs to provide sufficient direction for municipal IWMPs, it is important that these are completed by March 2011 i.e. the end of the 2010/11 financial year for national and provincial government. DEA has developed an action plan for the integrated waste management planning system, and in terms of this action plan DEA will promulgate and enforce regulations for integrated waste management planning, prepare guidelines for the development of the plans, and initiate awareness campaigns regarding the need for and approach to integrated waste management planning (Table 9.1). The Department has prepared a National Framework Guideline for the Development of Integrated Waste Management Planning (January 2009), primarily directed at provincial departments and municipalities.

9.3.2 Monitoring indicators and targets

IWMPs need to be outcomes focused, and must include priorities, objectives, targets, and implementation and financing arrangements to facilitate monitoring of progress in implementing the plans. On an annual basis UMDM will collate and publish information on a prioritised list of indicators, which reflect progress in the priority areas as set out in the LM and UMDM IWMPs and IDPs.

Appropriate waste services indicators and targets at municipal level must focus on the reporting system on solid waste management. A specific set of indicators and targets are required in order to monitor the sustainable provision of waste management services. A minimum set of targets for use by municipalities in provision of waste services would include the following:

- The number of households receiving a waste management service (% over time).
- Budget allocations to ensure financial support (% increase in budget over time).
- Equipment and infrastructure provision.
- Number of staff trained or capacitated to improve service.
- Percentage of community being aware of the waste management services.
- Reduction of waste to landfill
- Improvement of cost recovery measures.

Table 9.2 provides an array of possible indicators and targets for 2015 as a guide but the actual setting of relevant targets will be the responsibility of each municipality. It is advisable to start off with the basics and phase in the more complex indicators and targets over time.

Table 9.2: Goals, objectives, suggested indicators and targets¹²

Goal 1: Securing ecologically sustainable development while promoting justifiable economic and social development	Proposed indicators	Targets (2015)
Objectives <ul style="list-style-type: none"> • To ensure the protection of the environment through effective waste management measures • To protect the health and well being of people by providing an affordable waste collection service • Increase number of jobs within waste services, recycling and recovery sectors promoting the 	% of waste management activities above required threshold which have been licensed	All new waste management activities above listed activity threshold licensed
	% of households that receive basic waste collection services	All households receiving at least a basic waste management service
	% increase in jobs within waste services, recycling and recovery sectors	10% increase in employment within waste services, recycling and recovery sectors

¹² Modified from Draft NWMS (March 2010) p 22 and links to Table 8.1 of this document

development of SMMEs in waste sector	Number of SMMEs operating sustainably in waste sector	Establish at least 4 viable SMMEs within the waste sector in district
Goal 2: Avoiding and minimizing the generation of waste	Proposed indicators	Targets (2015)
Objective <ul style="list-style-type: none"> Explore mechanisms to discourage waste generation through cost reflective and volume-based tariffs Increase consumer awareness of waste minimization issues 	Industrial WMPs exist Waste minimisation club/s Web-based waste exchange exists UMDM and other government offices implement a policy to use recycled paper only	Major industries in the district reporting on IndWMPs indicating uptake of cleaner production methods Have one waste minimisation club operating sustainably Web-based waste exchange established and functioning Govt departments in UMDM use only recycled paper
Goal 3: Reducing, re-using, recycling and recovering waste	Proposed indicators	Targets (2015)
Objective: <ul style="list-style-type: none"> Increase reuse and recycling rates of products Reduce % of recyclable material to landfill Implement separation at source in all local municipalities Establish MRFs at waste disposal sites where appropriate 	The % of metal beverage cans, glass, paper and plastic recycled	Achievement of recycling targets
	Percentage of recyclable material going to landfill	% of recyclable material to landfill reduced by 20% by volume
	The % of residents receiving bags implementing separation at source	Separation at source implemented in relevant municipalities
	The selected municipalities with MRFs established	An MRF established in selected municipalities
Goal 4: Promoting and ensuring the effective delivery of waste collection and transport services	Proposed indicators	Targets (2015)
Objective: <ul style="list-style-type: none"> Facilitate provision of at least a basic level of waste service wherever physically possible Ensure solid waste management to be performed efficiently and effectively Implement free basic refuse removal policy for indigent households Promote the regionalisation of waste collection and transport services where feasible 	% of households that receive at least a basic level of waste services over time	Universal provision of at least basic level of waste service
	Cost per household of waste collection services	Cost of waste service below R50 per household per month (2010 prices)
	Number of municipalities implementing full cost accounting for waste services	All seven LM and DM municipalities implementing full cost accounting
	% of municipalities implementing FBRR policy effectively	All municipalities implementing FBRR policy
Goal 5: Treating and safely disposing of waste as a last resort	Proposed indicators	Targets (2015)
Objective: <ul style="list-style-type: none"> Stabilise quantity of waste disposed to landfill, and then reduce. Promote regionalisation of waste treatment and disposal facilities where feasible Improve landfills management to comply with legislation Investigate waste to energy options and clean development mechanisms. 	Total volume of waste disposed to landfill	0% increase in volume of waste to landfill
	District municipality operating a regional landfill site	Closest municipalities have access to regional landfill site
	The number of (1) permitted and (2) compliant landfill sites as percentage of total in district (3) Equipment and infrastructure provision	All landfills licensed, audited annually and compliant Budget allocated to equipment and infrastructure provision

	Report on waste to energy conversion projects	Decision made on implementing waste to energy projects
Goal 6: Remediating land where contamination presents a significant risk of harm to health or the environment	Proposed indicators	Targets (2015)
Objectives: <ul style="list-style-type: none"> Quantify the extent of contaminated land Draw up plan to implement contaminated land measures in the Waste Act Prioritise areas of contaminated land for remediation Clarify extent of state liability for contaminated land 	Assessment of extent of contaminated land	Assessment of extent of contaminated lands completed
	The establishment of a contaminated land register at district level	Contaminated land register established
	The number of notices of contaminated land	The terms of urgent land remediation notices issued by December 2011 to be fulfilled
	The number of declarations of contaminated land by owners	The terms of urgent land remediation notices issued by December 2011 to be fulfilled
	Clarification of state liability in respect of notices of contaminated land	State liability for remediation identified prior to 2012 to be resolved by 2015
Goal 7: Sound budgeting and financial management for waste services	Proposed indicators	Targets (2015)
Objectives: <ul style="list-style-type: none"> Undertake sound financial planning for waste services based on full cost accounting for waste services Investigate cost reflective and volumetric tariffs implemented Ensure adequate and sustainable financing of waste services including cost recovery from user groups able to pay. 	% of municipalities which have developed a medium term capital and operating plan for waste services	All municipalities have developed a medium term capital and operating plan for waste services
	% of municipalities which have implemented full cost accounting for waste services	All municipalities have implemented full cost accounting for waste services
	Improved cost recovery for waste services	% increase in cost recovery for waste services
	Budget allocations to ensure financial support	% increase in budget over time per municipality
Goal 8: Institutional capacity and adequate staffing for waste management	Proposed indicators	Targets (2015)
<ul style="list-style-type: none"> Develop additional technical capacity to deal with norms and standards, industry regulation and remediation 	Number of municipal staff trained and capacitated	All cadres of key municipal WM staff trained and capacitated
Goal 11: Ensuring that people are aware of the impact of waste on their health, well-being and the environment	Proposed indicators	Targets (2015)
<ul style="list-style-type: none"> Develop local awareness campaigns on the social importance of waste minimisation and management Promote waste minimization and recycling through education institutions Encourage Municipalities to enter competitions for waste 	% of community being aware of the waste management services	Increase in % of community over baseline survey

management		
Goal 12: Achieving integrated waste management planning (combining other goals)	Proposed indicators	Targets (2015)
Objectives	Public availability of reliable information on waste balance from SAWIS	Publicly accessible information from SAWIS provides accurate waste balance
	<ul style="list-style-type: none"> Reliable information on waste flows and an accurate district waste balance Establish an effective system of performance based IWMPs at district and local levels of government 	<ul style="list-style-type: none"> The % of municipalities who have prepared IWMPs and integrated them with IDPs All municipalities have prepared IWMPs and integrated them with IDPs

9.3.3 Monitoring and review processes

Indicators and targets will be used as the basis for reviewing progress with implementation of the IWMPs on an annual basis, and a comprehensive review of progress against each indicator will be undertaken at end of the five year period.

Compliance monitoring and enforcement

Regular environmental monitoring and auditing of landfills and other waste facilities must be undertaken by independent, external agents in conjunction with the regulatory authorities

DAEARD Annual Returns

Municipalities must submit an annual form on NEMWA compliance and WIS data to DAEARD in August each year

Review of progress on IWMP and budget implementation

District and local municipalities must undertake internal monitoring and evaluation of progress and performance on IWMP implementation using the agreed key performance indicators. This includes continuous monitoring of waste acceptance tonnages/volumes by landfill or other waste management facilities or initiatives, a quarterly review of progress on implementation of the District IWMP and budget review, an annual update report on key performance indicators in line with Waste Act.

The IWMP updates are fed into the District and Municipal IDPs and reviewed prior to implementation of Medium Term Plans

A 5-yearly review of the IWMPs is due in August 2014/5 at the end of the current planning period.

A further form of review which incentivised the collection of data is the participation by the LMs in DEA Clean and Green Town competitions by DEA.

These monitoring processes and parameters are discussed fully Chapter 7 of the IWMP 2004 and will not be repeated here.

10 Approval process for IWM Plan/s Goals and Strategic Objectives

Riaz also advise please.

10.1 Further consultation

The draft UMDM and LM IWMPs will be circulated for public comment in the following manner:-

1. Local Municipalities

A letter to the Municipal Manager and/or Speaker of each of the local municipalities has been drafted, requesting an opportunity to present the IWMP. This has been prepared for signature by the uMgungundlovu Municipal Manager and will be sent as soon as the Draft IWMPs are ready to be reviewed by the Municipalities. The letter of request will be sent letter from the office of uMgungundlovu Municipal Manager, but will be followed up by the Phelamanga Joint Venture Public Participation team.

A short, specific presentation will be made to each Local Municipality, and the District Municipality, hopefully at Council or Portfolio Committee level. Any amendments or improvements will then be incorporated in the final IWMP.

2. Civil Society

Once the dates for the municipal consultations are set, it is proposed that another meeting is arranged for a broad-based consultation with organised business, civil society organisations and the public. A letter of invitation to such a presentation will be prepared for signature by uMgungundlovu Mayor and sent to business and civil society and an advertisement will be placed in the local press. Final comments will be solicited at this meeting.

3. Finalisation of Draft IWMPs

Following the presentation to municipalities and business and civil society, the IWMPs will be finalised and handed over to the uMgungundlovu and local municipalities for adoption. It is hoped that the municipalities will adopt their specific IWMP and incorporate it as a sector plan in its IDP and use it to satisfy the requirements of the national IWMS.

Communication between the LM with the public must continue once the plan is in place through awareness campaigns about specific waste problems, and regular ongoing dissemination of information to keep them informed. The following approaches in conjunction with the UMDM can be used:

- Inform stakeholders about waste management, particularly waste prevention, minimisation, recycling, treatment and disposal;
- Promote cooperation with local academic institutions and research groups to develop and implement effective waste management, specifically waste minimisation, recycling and treatment technologies e.g. MIDI
- Undertake waste minimisation and recycling demonstration projects and include local NGOs and Action Groups.

Formalised, organised feedback from the public on the IWM plan is essential to explain the necessity for implementing waste management plans.

10.2 Approval process

The approval process for IWMP would need to follow the municipal protocols as follows – approval sequence:

1. Senior Executive Management level
2. Municipal Manager and relevant Portfolio Committee/s
3. Full Council
4. Provincial MEC gives approval to municipal IWMP once he/she is satisfied that it is aligned with other

relevant plans. The MEC may also request amendments to an IWMP and enforce adherence to the planning procedures set out in the Waste Act.

5. Other? IDP Consultative Forum?

DRAFT