Final
Evaluation of Disposal Trends for Environmental Clean-up and Beneficial Use Materials

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ACRONYMS

ADC	Alternate Daily Cover
BUD	Beneficial Use Determination
DEQ	Oregon Department of Environmental Quality
DFA	Designated Facility Agreement
ECM	Environmental Clean-up Material
IWMB	Integrated Waste Management Board
JHD	Jurisdictional Health Department
MDEP	Maine Department of Environmental Protection
MPCA	Minnesota Pollution Control Agency
NJDEP	New Jersey Department of Environmental Protection
PCS	Petroleum Contaminated Soil
RFP	Request For Proposals
UM	Useful Material
URS	URS Corporation

1.0 INTRODUCTION

Metro selected URS Corporation (URS) to evaluate disposal trends associated with environmental clean up and useful (beneficial use) materials (as defined by the Metro Code) that are generated within the Metro region. This evaluation report was completed in response to Metro's Request For Proposals (RFP) dated February 28, 2006.

The purpose of this evaluation is to evaluate issues related to the current management of materials that are generated within the Metro region and disposed at approved landfills with a reduction or elimination of Metro-required fees (referred to collectively as "reduced-fee materials" in the context of this report). These reduced fee materials are comprised of largely environmental cleanup material (ECM) and beneficial use materials and include materials that incur no Metro fees.

This research includes the consideration of Metro and Oregon Department of Environmental Quality (DEQ) regulations and their intended purpose, the actual regional activities related to the disposal of these materials, and the regulatory factors that influence these activities. URS conducted this research, in part, through interviews with Metro solid waste personnel, private disposal company representatives and state agency administrators about the disposal practices and regulations regarding these materials.

URS, as part of this project, evaluated reduced fee material practices to identify policies and trends that may support changes or clarifications to the Metro Code and administrative procedures. This research included a review of other regional and state government solid waste regulatory policies and practices. This was completed to provide a comparative analysis of how reduced fee materials are tracked and regulated in those jurisdictions.

URS prepared this report in nine sections. Section 1 is the introduction. Section 2 provides background information for the report and includes a statement of the problems and issues that URS considered during its research. Sections 3, 4 and 5 provide descriptions, uses and volumes of beneficial materials currently disposed at landfills. Section 6 discusses the DEQ policies relative to these materials, while Section 7 explains current charges assessed for their disposal. Section 8 provides a discussion of how other states approach reduced-fee materials. Section 9 provides conclusions and recommendations for Metro's consideration as the agency examines the region's solid waste future and possible policy changes.

2.0 BACKGROUND

This section describes the general background information relevant to the research conducted by URS as the basis of its assessment of reduced-fee materials.

2.1 Problem Statement

Metro has authority and responsibility for the management and disposal of solid waste that is generated within the Metro region. In fulfilling this role, Metro monitors the flow of solid waste materials, establishes a management rate structure, and defines disposal facilities appropriate to receive solid waste from the Metro region.

This system mandates that all regional solid waste be disposed in a Metro-approved landfill. The generators pay a combined regional system fee and excise tax of $21.92 per ton of material.

The Metro Code includes several exceptions to this per ton charge. Petroleum-contaminated soil (PCS) and other ECM require a reduced rate of $3.50 per ton. Shredded waste tires or tire processing residues are specifically exempt by Metro Code from paying fees and taxes. Other wastes that qualify as useful material, such as auto fluff, and other approved waste material that is designated for beneficial use at landfills, are also exempt from these fees. It should be noted that the Metro fee exemption applies to the pertinent material and not to the generator of that material.

The Metro region continues to grow through expanding business development and population growth. This includes a corresponding increase in the generation of solid waste that is disposed from the region. There has also been an even larger proportional growth in the volume of material reported disposed as ECM or beneficial use material (reduced fee materials).

The region's growth and corresponding increase in waste generation volumes make it important to consider, in this context of policy review, whether the disproportionate growth in reduced-fee material is reasonable. The initial, historical correlation may be reasonable because a portion of the region's growth is through the development of former industrial sites, and these sites often involve the disposal of ECM as part of development. These sites, which were historically marginal development opportunities, are now important infill locations that help Metro meet its regional growth management goals.

Today, some private disposal companies are learning how to work within the existing regulations to reduce government fees to the maximum extent possible and achieve the best competitive position. This too could be contributing to the increase in higher volumes of reduced fee materials.

The context of this growth, however, makes it important to consider whether it is still appropriate for these materials to remain exempt from fees. Do reductions or exemptions for reduced fee material still have a role in the region? Rationale' for these exemptions, while pertinent when the policy was written for this approach, may no longer be applicable. The exemptions may even encourage unwanted disposal behavior, as companies work to lower their costs to the maximum extent possible within the regulations.

The significant change in reported volumes for reduced fee materials in recent years includes information indicating that landfills sometimes receive more reduced fee materials than volumes of full fee solid waste for disposal. This volume of reduced fee material versus typical solid waste appears, in these situations, to be out of proportion. Why would a landfill accept more material for use as daily cover or other beneficial uses than it could possibly use given the volume of solid waste accepted at the site?

This information presents an important issue for consideration by Metro. The issue: to determine what volumes of material are potentially appropriate at landfills for beneficial uses, and if the amount being accepted relative to these uses makes sense. There appears to be no obvious motivation for landfills, operating to meet Metro Code requirements, to accept larger than necessary volumes of beneficial use material. This is due to the fact that beneficial use materials must be accepted at the landfill at no charge.

However, discussions with industry representatives have indicated that even without the collection of a disposal fee, landfills may still collect higher than normal transportation and management fees. As a result, beneficial use material acquired in accordance with Metro code without a disposal fee can still generate a revenue stream for a disposal company under current rules.

Some industry personnel also described a process to stockpile beneficial use materials to create a backlog of this material during times when less of it is available. Sites may store these materials because they are often generated as part of one-time projects that do not offer landfills a steady stream of this material.

The motivation for landfill companies to accept larger than necessary volumes of ECM is clear. The collection of a disposal fee, permitted by Metro Code, generates a volume-based revenue source similar to the full fee applied to solid waste.

URS, through its review of Metro data, based its research on the possible trends regarding reduced fee volumes. The purpose of this research and report is to assess these trends, discover the reasons for them, and overlay that information with current Metro policy and code.

This research may:

- Assist Metro as it develops code or policy changes to resolve discrepancies in these trends.
- Recommend changes to policy or code that will correct or motivate corrections to ongoing inconsistencies.
- Assist Metro to determine that the agency's regulations allow equitable opportunities in the marketplace for reduced fee materials.
- Assure that required Metro fees are appropriate.

- Assure that beneficial use and useful material volumes are appropriate and sustainable.

2.2 Specific Issues to Address

Metro identified the following specific issues as components of the scope of work for this report:

- URS reviewed Metro data concerning the tonnage and types of Metro-region materials claimed as reduced fee from regional landfills. URS also completed additional research to supplement this existing Metro information. This data analysis included a quantification of how the volume of these materials, relative to the total solid waste volumes delivered for landfill disposal, changes over time.

- URS conducted research that included interviewing regional landfill company personnel to determine the value and use of reduced fee materials at specific disposal sites.

- URS completed research to identify current standards that define beneficial uses and what existing documentation indicates various material use and placement. This research evaluated other costs assessed for beneficial use materials. It also supported the ability to determine what specific qualities or properties are important for the appropriate or inappropriate use of beneficial materials.

- URS met with DEQ representatives to determine if the agency reduces or waives its fees for beneficial use materials delivered to landfills. As part of the DEQ research, URS also considered the agency's approval and documentation for this process.

- URS conducted research on these issues as the basis for the consideration of alternatives by Metro that will be appropriate as policy changes and enforcement options.

- URS made recommendations regarding possible alternative approaches to fee structures and reporting requirements for reduced fee materials. These recommendations include a consideration to limit the quantities of material that may be disposed for beneficial use.

- URS reviewed what pertinent issues regarding Metro's goals for environmental sustainability should be considered as part of the policy recommendations on the beneficial use of waste materials at landfills.

2.3 Summary of Research Report Activities

URS used multiple resources to research Metro's concerns regarding current trends in landfill tracking and reporting of reduced fee materials. In an effort to gather information

on how individual landfill operators track, report, and utilize reduced fee materials, URS met with representatives of the three large solid waste disposal companies that serve the region. These companies are: Allied Waste Services, Waste Connections of Washington, Inc., and Waste Management.

URS also interviewed waste generators of reduced fee materials to learn more about the private sector perspective on how current Metro policy affects the operational costs associated with the disposal of material that is a by-product of their recycling operations. These research interviews included discussions with the operators and generators about: 1) Metro's role as a solid waste regulator and 2) if the current policies relative to reduced fee materials warranted revision. The interviews were with representatives of Tire Disposal & Recycling, Inc., Schnitzer Steel Industries, and Allied Waste Services.

URS also completed a series of meetings with representatives from the DEQ's Northwest Region, Eastern Region, and Headquarters offices. These discussions included a review of DEQ regulations and guidelines concerning solid waste management. The review allowed URS to compare the differences between Metro and DEQ perspectives about materials destined for landfills that may be available for alternative uses in disposal operations.

Metro solid waste staff were interviewed to collect information regarding current issues and trends about reduced fee materials. A series of meetings were held with Metro staff to discuss existing data, compliance issues, regulations, waste volumes and apparent trends and discrepancies in reporting and use of reduced fee materials.

URS, in addition to meeting with industry representatives and regulators, reviewed an extensive Metro database that the agency uses to track reduced fee materials disposed of from the region. The team evaluated the data for indicators of material handling trends. URS reviewed the data for inconsistencies and evaluated the database structure to identify changes that would facilitate more effective and accurate tracking of future information.

URS conducted research about how other states define, manage and establish fees for materials Metro considers reduced fee materials. The team completed this process by reviewing state rules and regulations, and through telephone interviews with regulators in these states.

3.0 BACKGROUND OF REDUCED FEE MATERIALS

This section provides a discussion of Metro's code and policy relative to reduced fee materials. In addition, it includes some historical background relative to the development of current policies.

3.1 The Metro Code

An evaluation of Metro's reduced fee program includes understanding the impact of definitions for the terms "Environmental Cleanup Materials" and "Beneficial Use Materials." URS uses the term "Reduced Fee Materials" in this report as a category that includes all these items as well as other materials that are exempt from Metro fees or have reduced Metro fees.

This section provides a discussion of some relevant terms and their significance, often as defined in the Metro Code. However, the phrase "beneficial use materials" is only defined on the reporting form submitted to Metro to report quantities of regional material accepted at landfills. This definition, which is significant in how private industry interprets reduced fee regulations, is on the form included in Appendix A in this report.

The terms used relative to reduced fee materials have associated fee implications. Metro charges a user fee on the disposal of solid waste generated within the region. This Regional System Fee (RSF) is $13.57 per ton. It recovers the cost of solid waste programs for waste reduction, education and outreach, and the management of household hazardous waste.

Metro also charges an $8.35 per-ton excise tax on solid waste to support the region's system and other activities. The excise tax revenue helps the agency pay for urban planning, the Metro Council office, tourism and the regional parks and greenspace program. As of September 1, 2006, the RSF and excise tax charge is $21.92 per ton.

The fee structure, however, includes categories of waste that are completely or partially exempt from the full Metro fees and taxes. These exemptions include materials from environmental cleanup activities or those that are considered Useful Materials. Through this exemption process, the generators of ECM pay Metro a Regional System Fee of $2.50/ton and an Excise Tax of $1.00/ton. In addition, disposers of auto fluff or other materials a landfill determines appropriate for beneficial use pay no User Fees to Metro and the landfill must not charge a Disposal Fee for this material.

Metro Code Title V, Chapter 5.01, Solid Waste Facility Regulation provides the following definition of Useful Material:

<u>Useful Material</u>: means material that still has or retains useful physical, chemical, or biological properties after serving its original purpose(s) or function(s), and which, when separated from Solid Waste, is suitable for use in the same or other purpose(s). Types of Useful Material are: material that can be reused; Recyclable Material; organic material(s) suitable for controlled biological decomposition such as for making compost; material used in the preparation of fuel; material intended to be used, and which is in fact used, productively in the operation of landfills such as roadbeds or Alternate Daily Cover (ADC). For purposes of this Code, Cleanup Materials Contaminated by Hazardous Substances are not Useful Materials.

This definition specifically excludes cleanup materials, which would exclude PCS from the definition. *Section 5.01.150 User Fees* specifically provides the following exemption from Metro user fees:

User fees shall not apply to:

5.01.150(b)(3) Useful Material that is accepted at a Disposal Site that is listed as a Metro Designated Facility in Chapter 5.05 or accepted at a Disposal Site under authority of a Metro Non-System License issued pursuant to Chapter 5.05, provided that the Useful Material: (A) is intended to be used, and is in fact used, productively in the operation of the Disposal Site such as for roadbeds or ADC; and (B) is accepted at the Disposal Site at no charge.

These Metro Code definitions indicate that material accepted at no charge and used productively at the landfill, excluding Materials Contaminated with Hazardous Substances are exempt from User Fees, as long as the material was accepted at no charge (no disposal fee).

Section 5.01.150(c) is also relevant:

5.01.150(c): Notwithstanding any other provisions of this Code, user fees shall apply to Cleanup Material Contaminated By Hazardous Substances that is derived from an environmental cleanup of a nonrecurring event, and delivered to any Solid Waste System Facility authorized to accept such substances. Such Cleanup Materials Contaminated By Hazardous Substances may be subject to credits against user fees pursuit to Section 5.02.047 of this Title.

The following fee credit also exists in Chapter 5.02.047:

5.02.047(c) Any person delivering Cleanup Material Contaminated By Hazardous Substances that is derived from an environmental cleanup of a nonrecurring event, and delivered to any Solid Waste System Facility authorized to accept such substances shall be allowed a credit in the amount of $11.07 against the Regional System Fee otherwise due under Section 5.02.045(a) of this Chapter.

Metro code Title V, Chapter 5.02, Disposal Charges And User Fees provides the following relevant definitions:

<u>5.02.015(c) Cleanup Material Contaminated By Hazardous Substances</u>: means solid waste resulting from the cleanup of releases of hazardous substances into the environment, including petroleum contaminated soils and sandbags from chemical spills. Cleanup Material Contaminated By Hazardous Substances does not mean solid waste generated by manufacturing or industrial processes.

The Metro Regional System Fee and Excise Tax Report that each disposal company is required to submit for documentation of material generated within the Metro region

includes definitions on the report form which differ from the definitions in the Metro Code. The following definitions are on the form (the form is included as Appendix A):

Environmental Cleanup Material: ECM is the solid waste resulting from the cleanup of releases of hazardous substances into the environment, including petroleum contaminated soils and sandbags from containment of chemical spills provided that such substances are derived from nonrecurring environmental cleanup activity. ECM does not mean solid waste generated by manufacturing or industrial processes; it does not mean material that itself is hazardous waste. If an ECM is used for beneficial use it is nevertheless subject to the ECM Regional System Fee (currently $2.50/ton) and the ECM Excise Tax (currently $1.00/ton).

This appears to be the clearest statement of the fees required for ECM.

Another term defined on the reporting form is the definition of Beneficial Use. It should be noted that this definition does not appear anywhere in the Metro code, but only on the reporting form.

Beneficial Use: Beneficial Use material is material that is accepted by a landfill at no charge, and is intended to be used, and is in fact used, productively in the operation of landfills for such purposes as ADC or roadbed. Only Beneficial Use material that meets these requirements, and is not ECM is exempt from Regional System Fees and Excise Tax.

URS understands, based on these definitions, that any ECM, including PCS, would pay the reduced Metro Regional System Fee and Excise Tax of $3.50/ton, regardless of the actual use of the material in the landfill. The Metro Code, however, does affect the ability of the landfill to charge disposal fees when accepting this material. If the material is used beneficially, no disposal fees can be charged. If the material is not stated as being used beneficially, disposal fees are acceptable.

The reporting form definition of Beneficial Use also allows the landfill operator to determine which materials are beneficial and their appropriate use at the site. There are no standards or other criterion for beneficial use, other than that the operator does not charge a disposal fee and uses the material consistent with its determination. The Metro Code defines useful material but not beneficial use. The result: the Metro Code and its reporting forms are not clear on this issue.

Metro Code neither defines ADC nor describes the current DEQ approval process for it. ADC material, however, may be considered by landfill operators to be material beneficially used at the landfill, thus causing a crossover from a DEQ approval process, which in turn triggers changes to Metro fees due. Our review of the database and interviews found cases in which ECM is reported as “ADC” and thus no Metro fees are collected on the material due to its beneficial use. This does not correspond with the existing rules, which indicate that all ECM, whether used beneficially or not, should incur the required $3.50/ton in Metro fees.

Part of the difficulty with this issue is a lack of a consistent approach between Metro and DEQ on useful material. Metro Code provides no reference to DEQ's ADC definition or the approval process for the designation. DEQ does not recognize a beneficial use category or useful material, but rather only ADC.

3.2 The History of Beneficial Use Policy

This section provides a brief context for current Metro policies toward some existing reduced fee materials. This context is important background information in the evaluation of how relevant the current policy is today.

Environmental Clean-up Material

The Metro policy for the management of ECM was a derivative of the agency's position on PCS. The growth in PCS generation was the result of federal and state efforts to clean up underground storage tanks (UST). This clean up activity included the development of facilities to recover and treat the volatile hydrocarbons in the soil that were considered an environmental threat.

The Metro policy to support these facilities was based on the premise that treating the PCS was a better recovery option than landfill disposal. Metro created an exemption to process PCS at these facilities while maintaining fees at landfills to discourage disposal.

The operation of PCS treatment facilities reached its peak during the UST program. The program's success and corresponding drop in facilities also reflected a change in the source of PCS. Brownfield recovery replaced the UST program as the primary generator of PCS. Brownfield sites tend to have lower levels of contamination than UST sites. Metro, in response to this change, revised its policy to provide fee and tax reductions at landfills for this material, based on a lower environmental risk related to land disposal and the desire to encourage the development of Brownfields.

The Brownfield program provided the impetus for generators of other environmental cleanup materials to seek similar fee and tax reductions at landfills. Metro modified its policy to include these materials based on the premise that much of the material was generated through special, one-time clean-up events. Industrial wastes generated on a recurring basis were not afforded the fee and tax reductions.

Metro established a reduced rate for all ECM through negotiations with the solid waste industry based on the reasonable costs Metro may incur to monitor the flow and use of ECM materials. This is the policy that is in effect today.

Scrap Tires

The Metro policy decisions on scrap tires were based on market and material recovery activities in the mid 1990's. The early development of the scrap tire processing industry was based on providing a supplemental, tire-derived fuel (TDF) source for the pulp and

paper industry. The processing generated a residual material and it was this residual material that was originally exempt from Metro fees, in order to encourage tire recovery.

The TDF market faltered and Metro's no fee policy on scrap tires changed to include the disposal of shredded tires in landfills. The lack of markets and prohibition of whole tire disposal in landfills created a need for the recognition of shredding tires as the only approved option.

The rationale for this policy was that if the private sector didn't process the scrap tires that it would become a public sector responsibility. The corresponding exemption from fees and taxes provided an avoided cost that allowed for the private sector to continue recovering and processing scrap tires while developing new markets for materials.

The generating rate of scrap tires remains relatively constant over time, based on a correlation of one tire per year per person. This steady material stream is different from the event-based generation of ECM. And, similar to the changes in the sources of ECM, the early history of scrap tire recovery related to the clean up of large, orphan tire disposal sites.

The development of Metro scrap tire policy, which includes an exemption from fees and taxes, is based on a competitive market model. However, it does provide equivalent incentive for industries that shred and use tires in landfills as drainage layers and for industries that use the tires to make products and have a lower volume residual that goes into a landfill. If one of these uses would be considered to be a higher and better use of scrap tire materials, then some consideration may be appropriate for adjusting fees to encourage the higher and better use.

Auto Fluff

Auto fluff is currently listed as an accepted ADC at Columbia Ridge Landfill only by the DEQ and is considered Useful Material by Metro. As such, it is accepted by landfills with no disposal fee charged and paying no Metro fees. The history of this goes back a long time and auto fluff was probably the first material exempted from Metro fees and taxes due to its potential beneficial use in landfills.

It seems that generators of auto fluff in the region worked diligently to obtain this beneficial use determination. Through technical arguments for its benefit at the landfill, arguments to support the recycling industry generating auto fluff, and policy decisions by DEQ and Metro, auto fluff was exempted from Metro fees and taxes, as well as landfill disposal fees, as a beneficial use material.

Some regulatory personnel have raised the issue as to whether or not auto fluff is truly a beneficial material in a landfill because it is less "soil-like" than many other ADC materials. However, the DEQ has approved it as ADC and the landfill in this region using the material expressed no reservations regarding its viability as a beneficial use material.

3.3 The Beneficial Use Material Market

An important element in the URS work was to review Metro data on reduced and exempt fee material volumes relative to municipal solid waste volumes disposed at landfills. This comparison served to establish why a landfill might have a larger volume of material to be used beneficially than the volume of actual solid waste accepted for disposal.

Landfill operators presented reasons for these volume differences. The primary factor for landfill volumes is the solid waste generator market. Each facility competes for materials in every waste category. The availability of reduced or exempt fee material is based on market activity.

The Metro region has been a consistent generator of waste materials through its business and population growth. The landfills pursue environmental or beneficial use materials on a project specific basis, often resulting from environmental cleanup work. This activity offers no guarantee of future volumes. As a result of market activity, the operators may compete for more than their current requirements of cover material (including beneficial use material), in case they cannot obtain all the material that is necessary for their operation at a later date.

As an example of this, one operator indicated that though the volumes of ECM material at one landfill were fairly consistent the last few years, their projections of the volume of ECM for this year were less than half what it had been. The project specific nature and difficulty in guaranteeing future volumes of ECM motivate the landfill operators to obtain more of this material than they may need today, in case there is a shortage tomorrow. In addition, the landfills may charge a disposal fee for ECM that is disposed at their sites, thus they are motivated to collect as much ECM as possible in order to maximize revenues.

The policy issue in this situation is matching the appropriate disposal or treatment option with the material, or at least not having policy that drives material to disposal that might otherwise be reused. Metro's approach is to provide a disposal policy that encourages market opportunities and solutions for material recovery and reuse.

The context within which the terms environmental cleanup and beneficial use materials appear is unclear. The definition of these terms on the Metro reporting forms is not contained in the Metro code, which may make it harder for the disposal companies to report correct and consistent information. At a minimum, it may make it difficult for Metro to obtain consistent reporting information on a company-to-company basis, as different companies may report the same thing in different ways.

These inconsistencies create a problem for the disposal site operators. They all recognize that the reduced fee process has inconsistencies, but they are willing to continue working within its structure. Their expressed concerns are based in how the current inconsistencies may create a competitive imbalance in the solid waste disposal

market. In interviews with private disposal companies, it was apparent that some took more advantage with inconsistencies in policy than others.

These companies made it clear that in their opinion the first responsibility of Metro and DEQ, as regulators, is to provide equity in the market. As one person commented, this may best be accomplished by meeting the requirements of the current code the operators know, even with some inconsistencies, versus meeting the code they may get from significant regulatory revisions.

The agencies have a different perspective on their primary responsibility. Their respective regulations mandate the safe disposal of solid waste to protect the health and safety of the region and state. Metro's responsibilities also include assuring proper disposal locations, an appropriate fee system, and landfill capacity for the region. Materials that are reduced fee for any reason will necessarily require more Metro oversight and involvement than full fee materials, to ensure compliance with the conditions which allow the reduced fees.

4.0 VOLUME AND TRACKING OF REDUCED FEE MATERIALS

URS completed a review of the database that Metro uses to track information submitted by disposal companies regarding the volumes and types of material they receive from generators within the Metro region. Section 4.1 discusses some of the issues that URS identified during a review of the database. Section 4.2 discusses the trends that URS identified with respect to the changes in volumes of reduced fee materials over time. These trends and future material volumes were discussed with representatives of the disposal companies during the URS interview process.

4.1 Review of the Metro Database

URS conducted a review of Metro's information database regarding material disposed of at landfills that receive solid waste from regional generators. The reporting forms submitted to Metro (Regional System Fee and Excise Tax Report, Appendix A) by each landfill are the primary source for populating this database. Each disposal company submits the forms monthly to Metro. This information is then entered into the Metro database. URS identified a number of inconsistencies as well as what appeared to be extraneous information in the database during the review.

The database research included reviewing a sample set of monthly forms submitted to Metro by a landfill company. The review indicates that the report format does not promote a consistent method for reporting materials, specifically with respect to some of the reduced fee materials such as PCS. Similar materials are often reported using inconsistent terms on the reporting form. Information can also be entered into the Metro database in different ways, due to a lack of standardization, propagating inconsistencies and reducing its utility.

In addition, under the current reporting methods, a landfill operator may identify a delivered load as “useful material” for a future beneficial use. This anticipated future beneficial use load requires no Metro User Fee and the landfill would collect no disposal fee for the material. The landfill, however, may charge a transaction fee for the management and transportation of the material. And, after the delivery and designation, Metro will have no knowledge if and when the landfill places the material beneficially.

URS noted during the review that the reporting forms might identify the same materials in different ways. Landfill operators may use different names for the same materials. One operator may report the material by its name (e.g. auto fluff) while another operator reports the material by its application (e.g. ADC). This discrepancy limits the value of the database as a tracking method for these materials.

The following terms have been listed in the database for the same field:

- PCS
- ADC
- Beneficial Use
- ECM
- Contaminated soils
- Daily cover

Each of these descriptors may be used to describe the same material (e.g. petroleum contaminated soil.) Conversely, these terms may represent four or more different materials based on the source of the ADC or the “beneficial use” material.

It’s important to this research process to understand that the terms “ADC” and “beneficial use” do not describe a specific material. They describe only the use or application of that material. Part of the problem in the material determination or designation process may be that the term “beneficial use” is a vague descriptor of application that may have little value in the material tracking methodology. A clear guidance on reporting reduced fee materials will improve Metro’s ability to track them. Changes to the reporting form may also promote more consistent reporting behavior.

URS, through this review, recognized that the database might benefit from a few basic changes that would make the information more accessible and useful. For example, there could be a single document to accompany the database that describes the fields within it, their respective purpose, and provides standards for data entries into the database. This process could also be used to document changes over time to fields, or to document when fields are added or deleted, to support the understanding of the history of various datum. Currently, none of this information exists in written form.

Part of the discrepancy with the database is the lack of clarity in reporting whether the material described in a record originated from inside the Metro boundary. Historically, this designation has been based on the generator identification or a coded description (e.g. PCSIN vs. PCSOUT). The problem with the use of non-standard nomenclature such as this without guidance is that individuals may interpret it to mean different things. It would benefit Metro to add a single field to indicate whether a material originated from within the boundary or not. A reporting form change could prompt the landfill operators to include this information on their monthly forms.

The Metro database also has multiple extraneous fields that may create problems and distractions from legitimate, critical data. These extraneous fields also provide an avenue for non-standardized applications (e.g. extra fields appear to be added and inconsistently used resulting in fields which contain undefined data). The database is congested as a result of extraneous fields. Metro would benefit from updating the database and purging unused or ambiguous fields. By restructuring the database, critical data can be sorted and filtered more effectively, subsequently making evolving trends easier to identify.

4.2 Volumes and Trends of Reduced Fee Materials

An important component of the research scope for this report was an assessment of the regional volumes and trends of reduced-fee materials. URS assessed this information in three categories:

- The total tons and types of materials that each area landfill claims as exempt from user fees.
- The total tons and types of materials that each area landfill claims at the reduced fee environmental cleanup rate.
- The change in these volumes and materials over time.

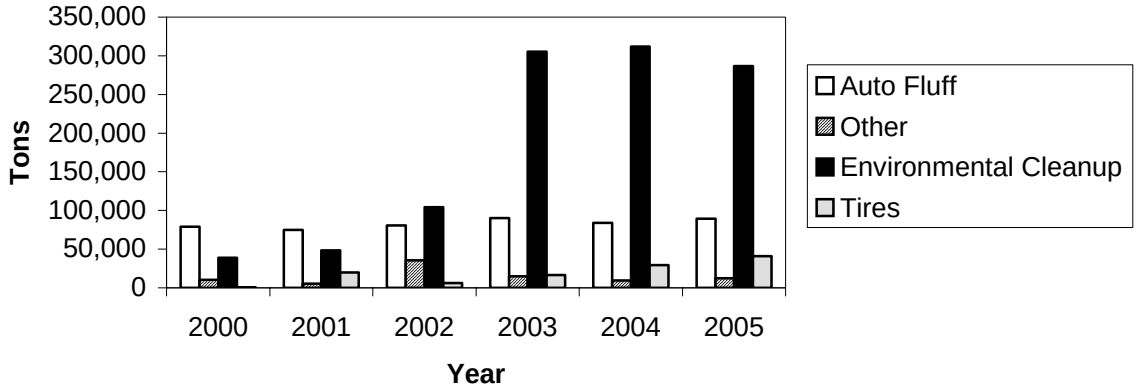
URS assessed these categories through queries to the existing Metro database. Table 1 provides total volume of specific types of reduced fee materials from the Metro region that were disposed of in landfills. Figure 1 depicts this information graphically.

Table 1 - Solid Waste Incurring Reduced or No Regional System Fees
(tons per year)

Year	Useful Material		Environmental Cleanup	Tires
	Auto Fluff	Other		
2000	79,070	10,252	38,965	526
2001	74,769	5,208	48,507	20,057
2002	80,764	35,543	104,070	6,325
2003	90,122	14,879	305,393	16,587
2004	84,169	9,557	312,077	29,529
2005	89,404	12,324	286,594	41,087

Notes: Useful Material is not subject to Regional System Fees.
Environmental Cleanup Material (includes PCS and dredge material) is subject to a "reduced" net Regional System Fee of $2.50 per ton.
"Other" materials may include process sludges, screening fines, or any material approved by DEQ for use as ADC.

Figure 1
Solid Waste Incurring Reduced or No Regional System Fees



This figure generally correlates with information that Metro assembled and provided at the start of this project. This demonstrates that the recent increases in reduced fee materials accepted at disposal locations in the last several years have been largely attributable to an increase in the volume of ECM disposed at landfills.

Appendix B Tables B-1 through B-7 provide information regarding the volumes of these reduced fee materials accepted on a landfill-by-landfill basis.

Tables B-1 through B-78 were created using existing Metro data contained in an Excel database and correspondence between URS and Metro staff regarding specific material volumes.

Additionally, URS was provided with the Access version of the database that contains the raw data used to produce the Excel file. Upon review of the raw data within the Access database, it is apparent that only an individual well versed with the Access database could accurately interpret and apply its contents to provide effective data analysis.

Tables B-1 through B-7 indicate that of all the facilities that maintain a Designated Facility Agreement (DFA), Columbia Ridge is the only facility that receives auto fluff. Disposal of material such as ECM is distributed across multiple facilities, however the majority (80%) of ECM is disposed at Hillsboro Landfill. Most tire shreds are taken to Wasco (29%), Coffin Butte (36%), and Hillsboro (24%) Landfills.

5.0 USES OF BENEFICIAL USE MATERIALS IN LANDFILLS

URS asked disposal company personnel about how reduced fee materials are used in landfills. The most common answer was that these materials were used as ADC in landfills. For a few landfills, personnel indicated that reduced fee materials were used exclusively for ADC. At other sites, reduced fee materials are reportedly used in different ways, which include: ADC, road bedding, temporary operating pads, side slopes, and to fill in void spaces in the disposal of asbestos materials. When no use is immediately required, some landfills will stockpile reduced fee materials for these uses in the future.

Interviews included a discussion of what properties make a material beneficial for use in landfill operations. The common denominator in the answers seemed to be that the more “soil-like” the material, the more likely it can be used beneficially in the landfill operations.

Though the term “soil-like” lacks specificity, the material should be compactable and contain fines and a minimum of large particles. A more accurate phrase could be, the more “loam-like”, the more useful the material. Some materials that do not fit this description, such as auto fluff, are still reportedly accepted as useful material, and are mixed with more soil-like beneficial use material in order to obtain an increased volume of material that can be used in landfill operations.

URS also discussed the tracking of the use of beneficial materials with the landfill operators. The operators indicated that they don’t track the final disposition of specific beneficial use materials once it has entered the site.

6.0 DEQ POLICIES AND PROCEDURES RELATIVE TO REDUCED FEE MATERIALS

URS had a number of discussions with DEQ personnel as part of this work. In addition, DEQ rules and regulations relative to reduced fee materials were reviewed. The intent was to determine how DEQ regulates what Metro classifies as beneficial use materials.

URS found that DEQ does not have an equivalent term to beneficial use material. DEQ approves and regulates ADC material only. They don't recognize Metro's beneficial use materials other than ADC, and a material must be approved by DEQ before it can be used as ADC in a landfill.

The approval process follows the DEQ "Guidelines for Alternative Daily Cover Material Application" which specify the requirements for obtaining approval of a material for use as ADC. The guidelines indicate that ADC is approved on a case-by-case base and a material approved for use as ADC at one landfill must be approved separately for use as ADC at another landfill. In addition, the testing phase of the approval process has a duration of one year.

DEQ charges a fee of $1.24 per ton of solid waste disposed in landfills in the state. Materials approved for use as ADC are discounted $0.81/ton Solid Waste Disposal Fee and a $0.13/ton Orphan Site Account Fee and thus are charged a DEQ fee of $0.30/ton. No other reduced fee materials discounted by Metro are recognized or discounted by DEQ.

DEQ personnel indicated that they have begun to recognize the statistics that in some cases landfills were receiving much more ADC than was necessary for near term use. As such, DEQ indicated they would begin to enforce existing rules stating that the DEQ discount for ADC material being used at a landfill cannot be claimed as the material enters the gate. The change will require that the landfill can only claim credit for material as it is actually used as ADC in operations.

The intent of this is to discourage taking in more ADC than is necessary in order to obtain a discount in regulatory fees. It should be noted that an analogous approach by Metro relative to beneficial use materials would probably not be practical. This approach would require landfills to segregate their beneficial use materials by what came from within the Metro region versus outside the region so that the fee credits could be claimed for actual material use.

The DEQ plans to clarify guidance with respect to ADC use. Any landfill accepting greater than 15% of its municipal solid waste volume in ADC must communicate with the DEQ in writing to indicate why higher levels of ADC are appropriate and necessary. The intent of this clarification is not to prevent greater than 15% ADC in landfills, but rather to allow the opportunity for DEQ to understand why higher levels of ADC than might be expected are necessary.

7.0 CHARGES ASSESSED REDUCED FEE MATERIALS

The Metro fees assessed to typical solid waste include a Regional System Fee as well as an Excise Tax. One or both of these fees items may be modified when reduced fee materials are received at a landfill. In addition, materials designated for beneficial use may also preclude the collection of a disposal fee but not transaction fees, such as transportation or management fees. This section provides a brief summary of the current fee structure.

Table 2 provides the current Metro fee structure for the most common reduced fee materials.

Table 2 - Metro Fees On a Per Ton Basis for Beneficially Used and Other Reduced or No Fee Materials

Material	Tip Fee[1]	Regional System Fee[5]	Excise Tax
MSW	Yes	$13.57	$8.35
ECM (incl. PCS)	Yes	$2.50	$1.00
Shaker Fines[2]	No	$0.00	$0.00
Tire Shreds[3]	Yes	$0.00	$0.00
Auto Fluff[4]	No	$0.00	$0.00
Dredge Materials[6]	Yes	$2.50	$1.00
ADC[4]	No	$0.00	$0.00

[1] Tip Fee may vary by transaction and market.
[2] The exemption of shaker fines from Metro fees has been revoked and currently testing is underway for an application to obtain DEQ approval for use as ADC. Previously, no metro fees were paid, but currently, this reduced fee is not in place.
[3] Exempt from Metro fees as stated in Metro Code 5.01.150. Tire shreds are considered to be the result of a recovery process. Tip Fees may be charged, but no Metro fees are assessed on this material.
[4] Exempt from Metro fees because it is beneficially used
[5] Fee as of September 1, 2006.
[6] Because it is considered ECM

Under Metro Code most solid waste originating from inside the Metro regional boundary that is disposed in landfills with a DFA is assessed a regional system fee and excise tax. Exceptions include the materials identified in Table 2.

8.0 OTHER STATES POLICIES WITH RESPECT TO REDUCED FEE MATERIALS

This section considers how other states' regulations contrast with Metro's policy regarding reduced fee materials. URS reviewed programs from five other states to prepare a comparative analysis of how the respective agencies regulate materials that Metro allows for beneficial use.

8.1 Maine

URS contacted the State of Maine's Department of Environmental Protection (MDEP), Bureau of Remediation & Waste Management to obtain information about the regulation of solid waste as it relates to Metro's current policy regarding "useful material."

Maine's Bureau of Remediation & Waste Management does not provide fee breaks or exemptions for materials that are identified by landfill operators as having a "beneficial use." The bureau's representative stated that they do not offer any "breaks" on fees for materials such as PCS in an effort to encourage reuse or to discourage landfill disposal of the material.

Their position is that if a landfill operator is able to utilize a material that is otherwise identified as a waste, a subsequent financial benefit may be realized through cost avoidance. However, fees or taxes assessed by the state do not vary based on the end use of the material originally transported for disposal.

8.2 New Jersey

URS contacted the New Jersey Department of Environmental Protection (NJDEP), Bureau of Solid and Hazardous Waste Management.

The NJDEP has a program to encourage the removal of material from the waste stream prior to landfill disposal. It does not provide fee breaks for materials placed in landfills. Through the NJDEP program, certain materials, which would otherwise be disposed in a landfill, are screened in a beneficial use determination (BUD). Any material that is labeled as "beneficial use material" must be authorized by the state through the BUD process.

New Jersey's BUD process is complex. It requires an application that includes detailed information about the origin of the material, its proposed use, laboratory analysis, and any known or potential environmental impacts associated with the use of the material. The purpose of the detailed application process is to demonstrate that use of the material outside a licensed solid waste disposal facility would not result in a threat to humans or the environment.

The BUD process provides a consistent tool to measure the appropriateness of a material for an alternate use outside a landfill in an effort to legally manage the material without being subjected to the restrictions associated with solid waste regulations.

Although the NJDEP utilizes the BUD process to encourage the removal of material from the waste stream prior to disposal, it does not offer an incentive for the reuse of materials at landfills through fee breaks or exemptions.

8.3 Minnesota

The Minnesota Pollution Control Agency (MPCA) and Dakota County's Environmental Management Department indicated that they offer exemptions for materials being disposed in landfills. The materials must be identified as useful through a prescreening process and must be used beneficially.

The MPCA screening process for useful material is relatively informal and is not defined in code. The evaluation process relies on the individual permitting officer's discretion for material being considered for alternative uses within the landfill. General state guidelines say that material approved for alternative use within the landfill must not produce excessive dust and cannot result in litter or odor problems. Additionally, the material must serve as a good firebreak.

The permitting officer evaluates the material using a variety of tools ranging from personal knowledge to health screening models to determine if the material should be approved. In the case of auto shredder fluff, the MPCA has identified it as unsuitable for a "useful material" designation because it is combustible and would not provide a good firebreak. Subsequently, auto shredder fluff is diverted to neighboring states for disposal, which has resulted in regional conflict concerning the appropriate management of this material.

Similar to the NJDEP, MPCA has a program designed to identify appropriate material for reuse outside the landfill. In contrast to the MPCA approval process for material inside a landfill, the approval process for reuse of materials outside the landfill is very detailed and closely monitored.

MPCA has two divisions of materials within its program. The first division of material is a list of approved beneficial use materials. This list was developed when the original policy was drafted and is based on an extensive MPCA review of the materials, their uses, and potential environmental issues. This evaluation process is not formally documented for public review. The other MPCA division of material is referred to as those that require a case specific beneficial use determination (CSBUD).

MPCA policy regarding CSBUD materials requires the following criteria for approval:

- The solid waste must not be stored in anticipation of speculative future markets

- The solid waste must be characterized in accordance with part 7035.2861 (laboratory testing)
- The solid waste must be an effective substitute for an analogous material or a necessary ingredient in a new product
- Use of the solid waste does not adversely impact human health or the environment
- The solid waste must not be used in quantities that exceed accepted engineering or commercial standards (Excess use of solid waste is not authorized by this part and is considered disposal)

Dakota County has similar policies to MPCA regarding the use of materials inside the landfill. The evaluation process is informal and not documented in code. Once a material originating from a specific waste stream is approved, it is exempt from the county solid waste tax.

The Dakota County Environmental Management Department representative referenced the Department's historic and ongoing struggle to identify excessive application of materials that are approved for beneficial use. Audits of their exemption program are conducted to verify that materials approved for ADC and received for reduced fees are applied in landfill operations in a usual and customary manner.

Specific landfill operating plans include normal cover volumes that should be used in the course of daily operations. This minimum permit-specific tonnage or volume is used to estimate an average annual tonnage or volume. The estimated volume is provided to the operator as a guide for the amount of material that can be claimed as ADC. Material in excess of this estimate is expected to be assessed normal fees and taxes.

In some instances the state or county has had to retroactively request fees from landfill operators whose facilities claimed exemptions for volumes of ADC that were well above normal operational requirements or industry standards.

8.4 Washington

Washington State's Department of Ecology has a program called Beyond Waste. This program is similar to other states that encourage alternative uses for materials that may otherwise be delivered for landfill disposal. There are no fee breaks or exemptions by the state for material disposed in landfills regardless of its use in landfill operations.

Ecology developed another program that allowed generators to participate in a screening process with the objective of obtaining a BUD. The BUD allows the generator to apply the material for an agricultural or industrial purpose, to remove the material from the waste stream. Both programs serve to reduce, reuse, and recycle, however they are not designed to address these objectives beyond the scales of a landfill.

URS spoke with representatives from King County's Special Waste Unit and the City of Tacoma. The City of Tacoma offers no fee breaks or exemptions for material disposed in landfills regardless of the materials use. In King County, operators can claim credits on ADC as it is used. The representative does not believe ADC is currently stockpiled.

8.5 California

California's Integrated Waste Management Board (IWMB) is the state agency designated to oversee, manage, and track California's waste. Materials that are previously approved by Cal/EPA (e.g. Dept. of Toxic Substances Control and Dept. of Water Resources) for alternative or beneficial use (i.e. ADC, road improvement, erosion control) are accepted at landfills with no disposal fee. However, only materials actually beneficially used can be claimed. If more material arrives at the facility than can be used, it must be assessed the regular solid waste fees.

The IWMB, as part of its oversight, has performed onsite audits that included measuring the working face footage and measuring ADC thickness. When the agency has found ADC volumes to be excessive, IWMB has retroactively applied fees to this material. The agency conducted the audits as they became concerned about excessive ADC volumes.

9.0 ALTERNATIVES DISCUSSION AND RECOMMENDATIONS

URS, through its research for this evaluation of specific regional disposal trends, has identified a series of issues and opportunities for Metro that forms the basis for the conclusions and recommendations in this report.

This evaluation process allowed URS to observe aspects of the region's solid waste system. The region's approach to this system has changed dramatically over two decades. The changes reflect a management process that has moved from a simple model to one that is much more complex.

Two decades ago, Metro was operating the region's primary solid waste disposal site, the St. John's Landfill and a transfer station, Metro South, in Oregon City. The region was searching for a local site to replace the landfill. The difficulty of this search, which included an expedited super-siting process by DEQ, led to a policy decision to consider an out-of-region landfill for the region's waste.

Today, the Metro region's solid waste is delivered by transfer trailer for disposal at the Columbia Ridge Landfill near Arlington, Oregon. The Metro Central transfer station in northwest Portland has replaced the St. Johns Landfill. The Pacific Northwest is served by three large regional landfills, and the changes to the disposal cost structure over time, based on a tip fee that has grown by a factor of five over two decades, has changed the region's approach to material recovery and recycling.

This evolving model of managing solid waste is based on the state's waste management hierarchy and Metro's mandate to reduce, reuse and recycle materials to meet a growing demand for regional sustainability.

The complexities of this very different model, in turn, create opportunities within the potential solutions. The opportunities are based on much larger disposal fees and is driving the potential diversion of materials from landfills to markets for recovery and reuse. The current success of the region's scrap tire recovery program is an example of market development for material recovery. Originally, tires were used as fuel and it was the residual material that was exempted from Metro fees and taxes to encourage recovery. Eventually, that market collapsed, and shredding the tires and landfilling became the only viable option. Metro fees and taxes on the shredded tires was exempted in order to continue private sector recovery of used tires. This prevented tire recovery from becoming a public sector task and expense. This provides a good example of Metro influencing the market with their fees for the good of the region.

The URS research on the region's approach to reduced fee material volumes and use has revealed what may be a small problem that may be resolved modestly by accepting some inconsistencies or with greater effort for a more complete solution. The most complicated options from the URS research may be that Metro should either simplify its current approach or stop the agency's oversight of the reduced fee material streams. These options are based on a fundamental question that was asked a number of times throughout our research. The question: why does Metro care about these materials and their use?

URS understands that Metro has important oversight responsibilities for management of the region's solid waste. These include the proper management of materials, ensuring appropriate landfill capacity, ensuring proper handling of reduced fee materials, and research for the development of sustainable solutions. In fact, the more Metro fees are reduced on a material, the more scrutiny that material should see from Metro, in order to ensure proper conditions are being met to qualify for the reduced fees. The question, however, pertaining to Metro's role in the management of these materials is important. Its importance is also relative to the context of the region's waste volumes and facility services.

The answers to this question often correspond to the perspective of how the region's solid waste system serves its users. The generators, processors and disposal site companies may see no clear value in the Metro oversight process on reduced or exempt-fee materials. For these participants, the marketplace, operating in a reasonable regulatory format resolves the destination and disposal costs of these materials.

Metro, as the oversight agency, views its role as one that assures the system's integrity. This role includes the responsibility to confirm that the region's generators pay the appropriate fees and that the designated disposal facilities use the generated waste for

the proper purposes. The value to the region, from the agency's perspective, is an integrity of process that requires certain fees to cover those costs.

In addition, Metro may reduce fees on a given material in order to promote certain recycling behaviors. Metro's current policy with respect to tires is an example of influencing a private industry market for the purposes of increasing recycling or reuse. If Metro sets reduced fee conditions, it is incumbent on them to provide oversight to ensure the conditions for the reduced fee are being met.

The following sections provide four options for consideration regarding this evaluation. First, the agency may choose to make no changes to the current process. Second, Metro may complete relatively small changes to its code and database tracking system. Third, the agency may change the process for tracking disposal trends and fees, yet still allow a form of reduced fee materials. Fourth, Metro may consider eliminating the reduced fee program completely.

9.1 Option 1: Keep the Current Process

This evaluation report describes the current Metro process for tracking reduced fee materials as a system with some flaws based on inconsistent regulatory guidance and an inefficient data tracking system.

The context of these flaws versus the size of the waste stream, however, may argue against any change in the process. Why? The volumes change each year, these material streams are not measured as part of the region's total waste generation tons, and the commitment required to change the process may exceed the value of the changes to the agency.

The research for this report demonstrated that landfill companies have two issues of concern with this process: equity and value. The equity issue is that each firm seeks assurance that its competition must meet the same requirements through a fair process and reasonable regulation. The value issue is a question of what the process provides to the industry for the fee structure that Metro imposes on the materials.

Some landfill company personnel, as providers, also acknowledge that they may prefer the process in place today, even if admittedly with some flaws, versus a change that creates competitive inequities tomorrow. This is a view of regulatory policy based on the premise that providers prefer to work with what they know versus what they may get if things change. Others have indicated more strongly that they would prefer to see some changes to the current policy. They would like to simplify the system and ensure the system can't be manipulated by some more effectively than others in order to achieve competitive advantages.

The Metro personnel that we spoke with generally indicated that they believe some level of change to the current reduced fee approach is necessary. They believe the current

framework is difficult to manage from a regulatory standpoint and that some inequities could be created by the current policy.

The current system allows substantial latitude on the providers' part in determining what materials are used beneficially and why. This allows greater opportunity to use the system to a provider's advantage and causes Metro to consider a steady stream of potential new beneficial use claims. Sometimes these are sincere requests and other times they are clear attempts at simple fee avoidance. In either case, the requests take significant time and effort on Metro's part to resolve.

This option involves keeping the current policy and system in place. This is the No Action option against which the other alternatives will be compared for potential policy changes. URS does not recommend this option to Metro.

URS believes that enough issues exist with the current policy that some changes are appropriate to make the system more user-friendly for both Metro and the providers. URS believes the decision to take no action leaves problems in place that are significant and should be addressed. It is clear from our research that the current policy has some inconsistencies. Metro should consider changes to the program but do so in a context of what those changes may require of the generators, processors, and facility operators in the region's solid waste system.

9.2 Option 2: Change the Metro Code and Database

The second URS option combines implementing certain changes in the Metro Code with improvements to its database for reporting and tracking reduced fee materials. This approach offers Metro an opportunity to revise existing policy and guidance in order to help refine and clarify the current process.

The URS research revealed that the use of terms that describe reduced fee materials as well as the fees required for them is unclear. Some information requires a reduced user fee, system fee, and excise tax for these materials. Separate information, which correlates to the landfill reporting forms, only requires a reduced regional system fee and excise tax.

Clarification should be provided regarding the conflicting definitions in the Metro Code versus those in the reporting forms. In addition, clarifications could be implemented in which "useful material" and "beneficial use material" are better defined by the agency. For example, Metro could clarify that grinding, or other particle reducing methods utilized to produce a beneficial use material are not acceptable.

The data tracking system could be made more usable by implementing a number of changes that have been discussed previously, and include:

- Update the reporting form operators use to collect consistent data to be entered into the database. Fields in the form should be well defined and choices provided to obtain consistent information.
- Provide a key or index to identify and describe the various fields within the database.
- Use a standardized system of nomenclature for the database.
- Collect good quality information regarding what materials have been generated in and out of the region. This corresponds to implementing a revised reporting form and auditing it until the operators are in the habit of reporting the information in the form Metro desires.
- Eliminate extraneous fields within the database.
- Differentiate between the type of material and its end-use using different fields.

The rationale for code and database changes is really an administrative alteration of the process. Clarifying the correlation between the code and data, refining the terms and categories that describe the reduced or exempt fee materials, and making the tracking process easier are readily implementable improvement to the existing process.

This approach doesn't change policy or procedure. It will clarify the Metro Code relative to the current fee structure and continue to mandate that the agency monitor the flow of beneficial use materials. It will also require Metro to reach an agreement with DEQ on the appropriate oversight of reduced fee material use. Some operators indicated frustration with what they consider to be double oversight between DEQ and Metro with respect to materials such as those accepted for use as ADC.

URS does not recommend the implementation of this alternative alone. We believe these are appropriate changes that should occur, but do not go far enough. These changes are components of the next alternative, and thus URS believes this should be implemented within that alternative rather than as a stand-alone option.

9.3 Option 3: Simplify the Current Process

This option is based on the premise that Metro implements one, new comprehensive category for reduced fee materials and eliminate the No Fee category. This requires that the agency revise their code to reflect this change and corresponding fee changes. This category would include a specific list of Metro-approved materials that qualify for reduced fee status. All materials would fall into either a full fee or reduced fee status, there would be no "No Fee" category. In addition, this alternative is envisioned as also implementing the changes identified in the previous alternative relative to improvements in Metro's data tracking and database.

This approach eliminates the beneficial use category as fee-exempt. The Useful Material and beneficial use definitions would be replaced with a new definition of reduced fee materials, largely defined by a discrete list of approved reduced fee items. Tires and auto fluff, under this option, would be classified as reduced fee materials. The

basis for this would be that both industries are recycling industries, and Metro's reduced fees for these items provide support to these recycling businesses.

This option creates one category with an approved list of reduced fee materials. This allows generators, on a specific case basis, to apply for approval of materials they wish to have placed on the list. Disposal facilities may use the materials as appropriate with no oversight from Metro. Under this option, URS suggests that facilities may charge tip fees for listed reduced fee materials and that Metro not attempt to account for the usage of these materials in the landfill, other than tracking quantities. Cost avoidance would encourage operators to make the best use of reduced fee materials.

Implementation of this option will benefit Metro in several ways. Metro will have a select list of reduced fee materials that the agency approves for appropriate reasons. New materials cannot be added to the list without explicit Metro approval. Currently, the landfill operators may determine what materials are beneficial and thus receive reduced fees. Metro also benefits with this option in that they will not be required to be involved in the monitoring of the proper usage of beneficial use materials at landfills. Having a discrete reduced-fee list should also eliminate ongoing problems associated with defining categories of beneficial use materials.

URS recommends this alternative as the preferred option. Further description of this option is provided in Section 9.5.

9.4 Option 4: Eliminate the Reduced Fee Process

This option considers eliminating the entire reduced fee system at Metro. As described in Section 8.0, it is not uncommon in other states for this category of material not to exist from a regulatory standpoint. Under this option, current reduced fee materials would be used in the landfill as dictated by market conditions. The landfills would bid for these materials as they do for any solid waste, and the market would drive lower prices for landfills for which the material was more inherently valuable. Metro fee and taxes would apply to all Metro materials disposed in landfills.

The irony is that while Metro reduces fees on certain materials to encourage recovery, charging full fees may actually be more effective in accomplishing this goal. Reduced fees may not be the best way to encourage reuse of these materials and support Metro's development of long-term, sustainable solutions. In some cases, the reduced fees may encourage disposal versus driving alternate methods of reuse to avoid disposal costs.

For example, under Metro Code, PCS is accepted at landfills for a reduced fee. This material is potentially useful in hot and cold asphalt manufacturing processes. URS interviewed state regulators who reported that PCS did not comprise a major volume percentage of materials being disposed in landfills. This may be due to their respective beneficial use programs, which encouraged reuse and removal of the material from the waste stream prior to disposal. More than one state regulator from other states

indicated that they specifically would not give price reductions for the disposal of PCS, as it encourages disposal rather than developing or implementing treatment options.

If materials that are currently accepted at a reduced or no fee are really useful material to the landfill operation, then that operation will realize a gain by applying that material effectively at the disposal site. They may even offer a reduced tipping fee to the generator or processor for the material. The marketplace may have a better opportunity to negotiate on the value of these materials.

Metro has a relatively unique fee structure for solid waste disposal at landfills. Many states and solid waste regulatory jurisdictions have beneficial use or material reuse programs. The majority of programs reviewed by URS have been implemented to encourage the removal and reuse of material from the waste stream prior to disposal, rather than trying to identify a use or application for the material at the disposal site. The most apparent difference from current Metro policy is that many other programs do not allow for conditional fees.

URS does not recommend this option for Metro. While many other states take this approach and use it successfully, it reduces greatly Metro's ability to influence the market. Metro would not be able to reduce disposal fees on certain items in order to encourage the recycling of some material (e.g. tires) and increase the level of sustainability of the region. This is one of Metro's main goals, and this option would decrease Metro's ability to make progress in this regard.

9.5 Conclusions

URS recommends that Option 3, refining the current reduced fee process, be selected for further development by Metro.

Each option presented to Metro by URS possesses its own set of implications, with varying degrees of complexity, difficulty in implementation, and cost impacts associated with implementation. Option 3 includes the database and data gathering improvement described under Option 2, but goes beyond this by also refining the current process of reduced fee materials.

As described previously, this eliminates the no tip fee requirement for reduced fee materials. In addition, instead of the current three-tier fee system of no fee, reduced fee, and full fee, a two-tiered system of reduced fee and full fee would exist. This would simplify the system, as would the discrete list of materials that are approved for reduced fee status. The following materials may initially be approved by Metro for reduced fee status:

- Tires, shredded or process residual
- Auto fluff
- Material approved by the DEQ as ADC, only at locations where it is approved as ADC

- Contaminated sediment resulting from one-time cleanup actions
- Materials resulting from one-time cleanup activities, including PCS

Industry would be allowed to make requests to have additional items reviewed for possible inclusion on the reduced fee list. Metro would make this determination. Some basic criteria for possible acceptance would need to be established, but URS suggests keeping these criteria general in nature. This might revolve more around Metro's desire to use a reduced fee to promote a given recycling market, or for some other purpose Metro perceives to be beneficial to the region.

URS does not believe Metro should concede that any material a landfill considers beneficial for use within the landfill is deserving of reduced Metro fees. This is the current state, and this is cause for many problems associated with disposal companies trying to claim many different types of materials as potentially benefiting the landfill for a wide variety of reasons. Many other states do not accept this rationale as a reason to reduce their oversight fees, and it has little to do in many cases with promoting any activity beneficial to the region.

URS does not recommend that Metro implement Option 1, taking no action with the current system. The existing process for reduced fee materials, although acceptable to the landfill operators who serve the Metro region, should change to provide a consistent, reasonable approach. URS perceives that a number of inconsistencies and issues related to the current system could be changed to improve the process.

URS does not recommend that Metro implement Option 2 alone, but rather as a component of Option 3. While making clarifications to the Metro Code and data management system is modestly difficult to implement, it would add clarity to the reduced fee process.

The preferred option of simplifying the beneficial use program by mandating a discrete list of reduced fee materials would be a more significant change than clarifying the code alone, but it would resolve a number of existing problems with the current system. Variables associated with fees being collected on reduced fee material would largely be eliminated, and self determination by landfills regarding what fees should be paid based on their definition of beneficial use materials would be greatly reduced. In addition, Metro would have a more definitive process regarding reduced fee materials with simple and clear guidance and policy.

The following path forward would likely be required in order to implement the changes recommended in this preferred option:

- Prepare a draft rationale for internal review
- Prepare draft Metro Code changes
- Meet with industry representatives to discuss the proposed policy changes
- Meet with DEQ to discuss proposed policy changes

- Complete Metro Council approval of policy changes

REGIONAL SYSTEM FEE AND EXCISE TAX REPORT

METRO

600 NE Grand Avenue
Portland, OR 97232-2736

For the Month Ending:

Company Name	
Address	*Phone No.*
City, State, Zip	*Date*

Column	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)
		NonSystem Licensee Information		Tip Fee	Quantity	Regional System Fee		Excise Tax	
Group	Waste Description	License Number	Destination		Tons	Rate/Ton	Amount $	Rate/Ton	Amount $
						Column (e) x (f)=(g)		Column (e) x (h)=(i)	
1 I						$13.57		$8.35	
2 I						$13.57		$8.35	
3 I						$13.57		$8.35	
4 I						$13.57		$8.35	
5 I						$13.57		$8.35	
6 I						$13.57		$8.35	
7 I						$13.57		$8.35	
8 I						$13.57		$8.35	
9 I-b						$0.00		$8.35	
10 I-b						$0.00		$8.35	
11 II						$2.50		$1.00	
12 II						$2.50		$1.00	
13 III						$0.00		$0.00	
14 III						$0.00		$0.00	
15 IV									
16	TOTAL... (Add lines 1 through 15)								

LESS ALLOWABLE DEDUCTIONS

17	UNCOLLECTIBLE CHARGES (ATTACH DOCUMENTATION)	Regional System Fee		Excise Tax	
18	DEDUCT CREDITS - REGIONAL SYSTEM FEE and/or EXCISE TAX (ATTACH CREDIT DETERMINATION LETTER)	Regional System Fee		Excise Tax	
19	DEDUCT ANY OTHER CREDITS FROM PREVIOUS OVERPAYMENT	Regional System Fee		Excise Tax	
20	**TOTAL AFTER DEDUCTIONS** (LINE 16 LESS LINES 17, 18, 19)	Regional System Fee Due		Excise Tax Due	

PAYMENT CALCULATION

21	ADD REGIONAL SYSTEM FEE DUE LINE 20(g) AND EXCISE TAX DUE LINE 20(i)		
22	ENTER ANY APPLICABLE REHABILITATION & ENHANCEMENT FEES DUE		
23	ENTER ANY REGIONAL SYSTEM FEES OR EXCISES TAXES DUE METRO FROM PREVIOUS REPORT MONTHS	Description:	
24	TOTAL PAYMENT (LINE 21 THROUGH 23)	**Make Checks Payable To: Metro**	

**** PAYMENT MUST BE POSTMARKED BEFORE THE FIFTEENTH TO AVOID PENALTY AND INTEREST****

TO BE COMPLETED BY METRO	**Report prepared by:** **Phone No.**
Amount of Check $	
Check Number	**REMIT TO: Metro Attn: Accounts Receivable**
Postmark Date	**600 NE Grand Avenue**
Deposit Date	**Portland, OR 97232-2736**
Verified By	I DECLARE THAT TO THE BEST OF MY KNOWLEDGE AND BELIEF
Reviewed By	THE STATEMENTS HEREIN ARE CORRECT AND TRUE.
	Authorized Signature Date
	Print Name and Title

INSTRUCTIONS FOR THE REGIONAL SYSTEM FEE AND EXCISE TAX REPORT

TONNAGE INFORMATION

All tonnage disposed from Clackamas, Multnomah, & Washington counties must be summarized on this report, even if there are no fees and taxes due. Please use a separate line for each type of waste.

Group I	Putrescible, Non-Putrescible (processed & unprocessed), and Other Special Waste (DEQ permit required),
Group I-b	Putrescible Waste originating outside Metro Region
Group II	Environmental Clean Up Material
Group III	Beneficial Use Material, Inerts, or other non-taxable materials
Group IV	Other (please specify)

Lines 1-15

Column (a)	In the appropriate grouping distinguish the waste using one of the above descriptions.
Column (b)	Enter the Non System License (NSL) Number the waste is being reported under. Does not apply to facilities operating pursuant to a Designated Facility Agreement (DFA) with Metro.
Column (c)	Enter the name of the landfill or transfer station the waste was disposed at.
Column (d)	Enter the disposal rate (this figure is for reporting purposes only; it is not used for calculating fees or taxes).
Column (e)	Enter the number of tons, to the nearest hundredth ton, subject to the Regional System Fee and Excise Tax (per your regulatory instrument) in the report month
Column (f)	The Regional System Fee (RSF).
Column (g)	Calculate the RSF amount by multiplying the number of tons in Column (e) by the rate in Column (f).
Column (h)	The Excise Tax (ET).
Column (i)	Calculate the ET amount by multiplying the number of tons in Column (e) by the Excise Tax rate in Column (i).

Note: Columns (b)&(c) are for facilities that have been issued Non-System Licenses by Metro. A separate line must be used for each different combination of Waste type and columns (b)&(c).

Line 16 Total lines 1-15. Enter totals for Column (e) tons, Column (g) RSF, and Column (i) ET.

LESS ALLOWABLE DEDUCTIONS

Line 17 Enter uncollectible RSF charges in Column (g) and uncollectible ET charges in Column (i).

Uncollectible may only be claimed by a disposal site if a good faith effort to collect and a determination was made to write off the bad debt. Amounts entered on Line 17 must be supported by documentation attached to this report, such as a copy of an NSF check, bank notice, or bankruptcy notice.

Line 18 Enter the amount of RSF Credits in Column (f) and ET Credits in Column (i). To support amounts entered on Line 18 attach a copy of the determination letter from Metro (used to notify facilities about Credits).

Line 19 Enter the amount of any previous overpayments of RSF in Column (f) and ET in Column (i).

REGIONAL SYSTEM FEE AND EXCISE TAX DUE

Line 20 Calculate the total RSF and ET due by deducting allowable deductions (Lines 17-19) from the total RSF in Line 16 Column (g) and from the total ET in Line 16 Column (i).

PAYMENT CALCULATION

Line 21 Enter the sum of the RSF in Line 20 Column (g) and the ET in Line 20 Column (i).

Line 22 Enter any applicable Rehab & Enhancement fees due to Metro.

Line 23 Enter the amount of any RSF and ET owed to Metro from previous report months.

Line 24 Enter the sum of Line 21 Column (i) and Line 22 Column (i). This is the total payment due.

DEFINITIONS

Environmental Cleanup Material (ECM) – ECM is the solid waste resulting from the cleanup of releases of hazardous substances into the environment, including petroleum contaminated soils and sandbags from containment of chemical spills provided that such substances are derived from nonrecurring environmental cleanup activity. Environmental Cleanup Material does not mean solid waste generated by manufacturing or industrial processes; it does not mean material that itself is hazardous waste. If an ECM is used for beneficial use (defined below) it is nevertheless subject to the ECM Regional System Fee (currently $2.50/ton) and the ECM Excise Tax (currently $1.00/ton).

Beneficial Use – Beneficial Use material is material that is accepted by a landfill at no charge, and is intended to be used, and which is in fact used, productively in the operation of landfills for such purposes as alternative daily cover or roadbed. Only Beneficial Use material that meets these requirements, and is not ECM is exempt from Regional System Fees and Excise Tax.

Table B1 – Roosevelt Landfill
Solid Waste Incurring Reduced or No Regional System Fees
(tons per year)

Year	Useful Materials		Environmental Cleanup	Tires
	Auto Fluff	Other		
2000	-	-	633	526
2001	-	-	20,253	96
2002	-	-	2,446	249
2003	-	-	621	3,643
2004	-	-	4	2,599
2005	-	-	5,383	32

Table B-2 - Finley Buttes Landfill
Solid Waste Incurring Reduced or No Regional System Fees
(tons per year)

Year	Useful Materials		Environmental Cleanup	Tires
	Auto Fluff	Other		
2000	-	7,121	-	-
2001	-	2,363	-	-
2002	-	2,209	-	-
2003	-	-	-	-
2004	-	-	-	299
2005	-	-	-	379

Table B-3 - Wasco Landfill
Solid Waste Incurring Reduced or No Regional System Fees
(tons per year)

Year	Useful Materials		Environmental Cleanup	Tires
	Auto Fluff	Other		
2000	-	-	-	-
2001	-	-	-	-
2002	-	29,721	-	5,160
2003	-	11,291	59,591	6,510
2004	-	5,765	121,324	10,760
2005	-	1,675	98,637	10,878

Table B-4 - Coffin Butte Landfill
Solid Waste Incurring Reduced or No Regional System Fees
(tons per year)

Year	Useful Materials		Environmental Cleanup	Tires
	Auto Fluff	Other		
2000	-	-	-	-
2001	-	-	-	-
2002	-	-	6,610	-
2003	-	-	17,413	4,986
2004	-	1,452	16,945	15,049
2005	-	10,649	731	21,051

Table B-5 - Delta Sand & Gravel Landfill
Solid Waste Incurring Reduced or No Regional System Fees
(tons per year)

Year	Useful Materials		Environmental Cleanup	Tires
	Auto Fluff	Other		
2000	-	3,131	-	-
2001	-	2,845	-	-
2002	-	3,613	-	-
2003	-	3,588	-	-
2004	-	2,340	-	614
2005	-	-	-	3,972

Table B6 - Columbia Ridge Landfill
Solid Waste Incurring Reduced or No Regional System Fees
(tons per year)

Year	Useful Materials		Environmental Cleanup	Tires
	Auto Fluff	Other		
2000	79,070	-	129	-
2001	74,769	-	2	-
2002	80,764	-	6	-
2003	90,122	-	564	-
2004	84,169	-	4,883	-
2005	89,404	-	1,487	-

Table B-7 - Hillsboro Landfill
Solid Waste Incurring Reduced or No Regional System Fees
(tons per year)

Year	Useful Materials		Environmental Cleanup	Tires
	Auto Fluff	Other		
2000	-	-	38,203	-
2001	-	-	28,252	19,961
2002	-	-	90,008	916
2003	-	-	227,204	1,448
2004	-	-	162,753	208
2005	-	-	175,323	4,775