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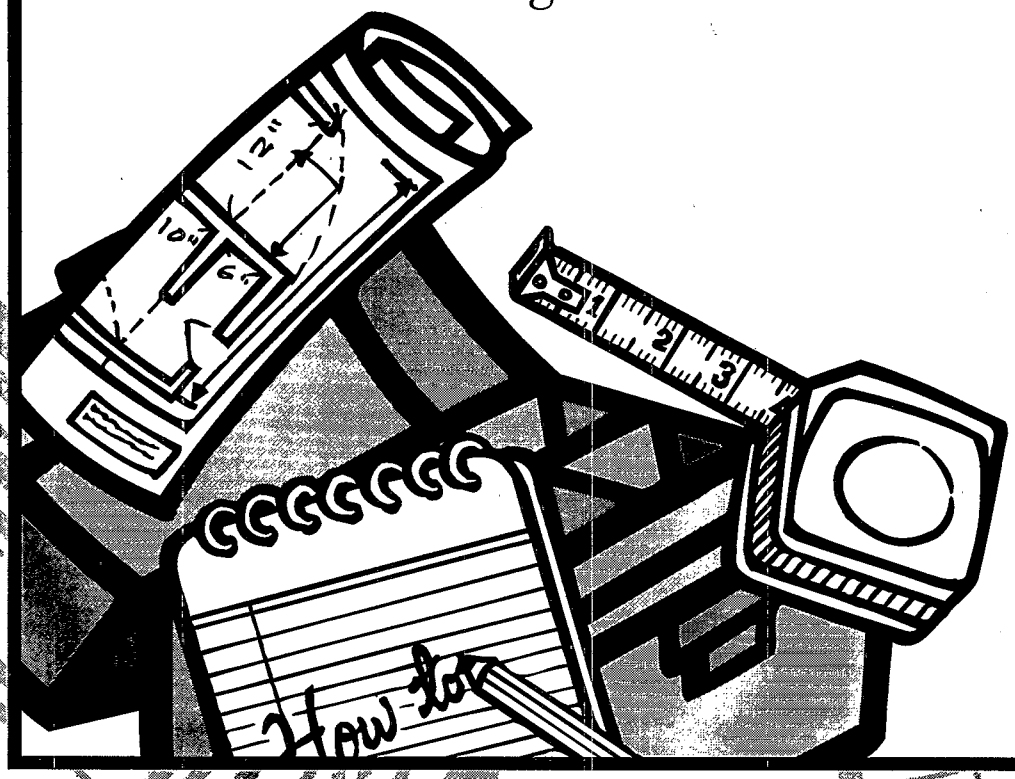
WasteWise

Resource Management

Innovative Solid Waste Contracting Methods



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

EPA WASTE WISE

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Clark County, Nevada

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General Motors Corporation*

Healthcare Waste Solutions, LLC

Jackson County, Missouri*

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Northeast Utilities*

One Beacon Street (CB Richard Ellis-Whittier Partners)*

Public Service Enterprise Group (PSEG)*

Iowa Department of Natural Resources

Raytheon*

The Saunders Hotel Group

Shattuck Hospital

Texas Instruments*

Verizon*

West Des Moines School District

* *WasteWise partners*

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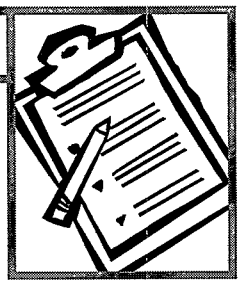

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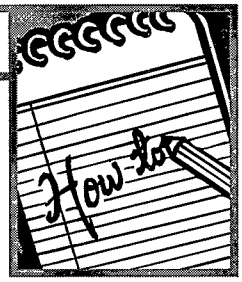


What is RM Contracting?

Resource management (RM) is an innovative contractual partnership between a waste-generating organization and a qualified contractor that changes the nature of current disposal services to support waste minimization and recycling. As a performance-based contract strategy, RM taps into the expertise of external contractors to bolster waste reduction and recycling through value-added services, such as improved reporting, dedicated customer service, and analysis. The key to success in RM contracting is changing the compensation structure to provide incentives for contractors and reward them for achieving mutually determined goals—shifting the contractors' profitability model from "haul/dispose more volume" to "minimize waste and manage resources better."

RM contracting is based on three premises: 1) significant cost-effective opportunities to reduce waste, boost recycling, and otherwise optimize services exist; 2) contractors will pursue them when offered proper financial incentives; and 3) financial incentives to contractors are supported by the savings generated through cost-effective improvements to your current waste/recycling system. For example, if contractors identify cost-effective recycling markets for disposed materials or techniques for preventing waste altogether, they receive a portion of the savings resulting from the innovation. This arrangement enhances the recovery of readily recyclable materials while promoting opportunities to develop new markets for difficult-to-recover materials. As a result, RM promotes a business-driven effort—rather than regulatory initiatives—to make waste reduction and pollution prevention a priority.

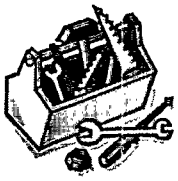
Since most organizations contract for waste disposal services, recruiting a waste/recycling contractor is a standard part of business operations. This manual can help you evaluate, plan, and implement an RM program by hiring an RM contractor. It provides a step-by-step process for organizations interested in developing an RM program—from evaluating your current activities and costs, to issuing a request for proposal, to designing appropriate financial incentives, to implementation.

Examples of Successful RM Implementation

General Motor's Orion Assembly Plant (Auto Manufacturer):
- Reduced waste management expenses by 30 percent in the first 3 years.
- Achieved a 25 percent reduction in per vehicle waste.

Public Service Enterprise Group (Utility):
- Reduced hazardous waste from 1,460 tons to 103 tons (1992 to 2000) and recycled more than 94 percent of non-hazardous waste (2000).
- Reduced total waste management costs for both hazardous and non-hazardous waste from $6 million to $4.25 million during the first three years.

One Beacon Street (Office Building):
- Increased recycling rate from 28 percent in 1990 to more than 60 percent in 1999.
- Reduced waste and recycling costs by 60 percent through avoided disposal costs and increased recycling revenue.



Additional resources on RM contracting are listed in Appendix A.

What Are the Benefits to Waste Generators?

Solid waste and recycling contracts directly influence how the vast majority of waste streams are managed. Most waste and recycling contracts, however, feature a profit incentive to contractors to maximize disposal levels (hauls) and/or a limited scope of service with multiple contractors handling separate waste streams or recyclables. This "fragmented" approach often lacks an emphasis on recycling and resource efficiency[1]. Furthermore, waste and recycling contracts are often loosely managed—once rates are established, waste generators tend to only contact their contractors if waste and recycling containers overflow. For these reasons, traditional contracts do not tend to support waste reduction efforts.

RM makes good business sense because it allows organizations to save money, while receiving better service and improving resource efficiency. RM contracting helps you achieve a higher level of recycling and waste minimization. Although the degree of success in existing recycling and waste minimization programs varies widely in different organizations, even the most successful programs reach a plateau. Benefits of RM contracting include:

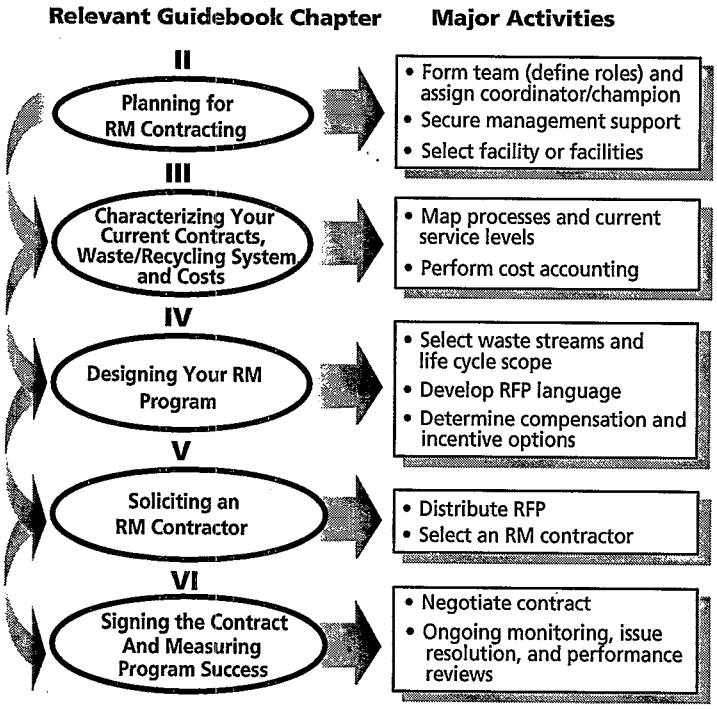
- Reduced cost and potential liabilities
- Increased quantities of materials currently being recycled
- Addition of new materials for recycling
- Increased waste minimization opportunities
- Improved data tracking and reporting

Most organizations believe they could improve current recycling operations and waste minimization if they had more resources. Using an external RM contractor to perform additional activities for which there are no internal resources helps overcome this problem. RM contractors bring expertise that is simply not found in traditional waste and recycling contracts.

A number of WasteWise partners have already demonstrated that RM contracting benefits their bottom line while also conserving resources. Based on their experiences—highlighted in the enclosed *WasteWise Update*—and the valuable input they have provided for this manual, WasteWise encourages other organizations to explore RM and the benefits of implementing this innovative contracting strategy.

[1] Resource efficiency refers to source reduction, reuse, and recycling/diversion, or other means to decrease generation and disposal of waste (e.g., enhanced procurement/delivery techniques, material handling, or use).

Figure 1.1: Activities by Chapter



Using This Manual

This manual is intended to help commercial entities consider and implement an RM program. The term "commercial" in this guide is meant to include all commercial, institutional, and industrial settings, as the contracting methods in each of these settings is similar. The step-by-step approach to establishing an RM program is shown in Figure 1.1. Note that the appendices contain many useful tools such as sample language to develop a request for proposals and suggested compensation mechanisms.

This manual uses a variety of icons to highlight key concepts and suggestions for the reader.

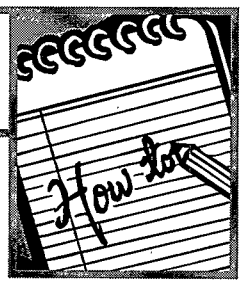
The toolbox icon highlights references to tools listed in the appendices.

The stop sign signifies key "decision points," which are critical steps in the RM process where the internal team analyzes and discusses a set of data or information and comes to a consensus on whether/how to move forward.

The hand signifies work steps required for a particular phase in the RM process.

The light bulb indicates ideas, examples, and success stories.

Chapter 2: Planning for RM Contracting



Before beginning the planning process, you should conduct a quick appraisal of your current system to identify any immediate impediments to RM contracting.. Fundamental questions to consider include:

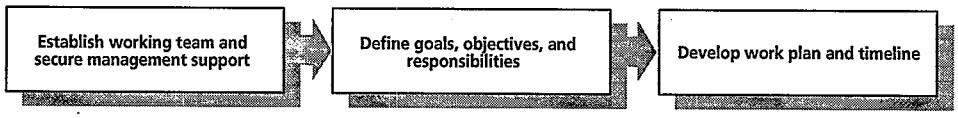
Is RM possible for your organization?

- Can you hire a new contractor within the next year or do you have long-term contractual commitments?
- How many vendors currently handle your waste and recyclables?
- If you were given more resources, do opportunities to improve your current solid waste/recyclables management exist (including reuse and waste reduction initiatives)?

If your answer to the first question is that you are locked into your current contract for at least 2 years, **and** you will incur penalties if you break it, you will likely want to postpone development of an RM program until about 8 months prior to the end of the contract. The second two questions can help you assess whether RM can offer benefits. If you have two or more vendors, transitioning to RM would allow one contractor to take over all waste-related services. By doing so, the RM contractor can adopt a systems approach to manage all waste-related activities, instead of multiple contractors taking a piecemeal, waste-stream-by-waste-stream approach.

RM contracting reinvents the current processes of handling and managing resources—or what was previously known as waste. Like any new business model, fundamental change might be resisted or misunderstood. RM's success relies, by and large, on acceptance of innovations and a fundamental change of mindset. Careful planning lays the foundation a successful RM program.

Figure 2.1: Initial Planning Steps for an RM Contracting Program



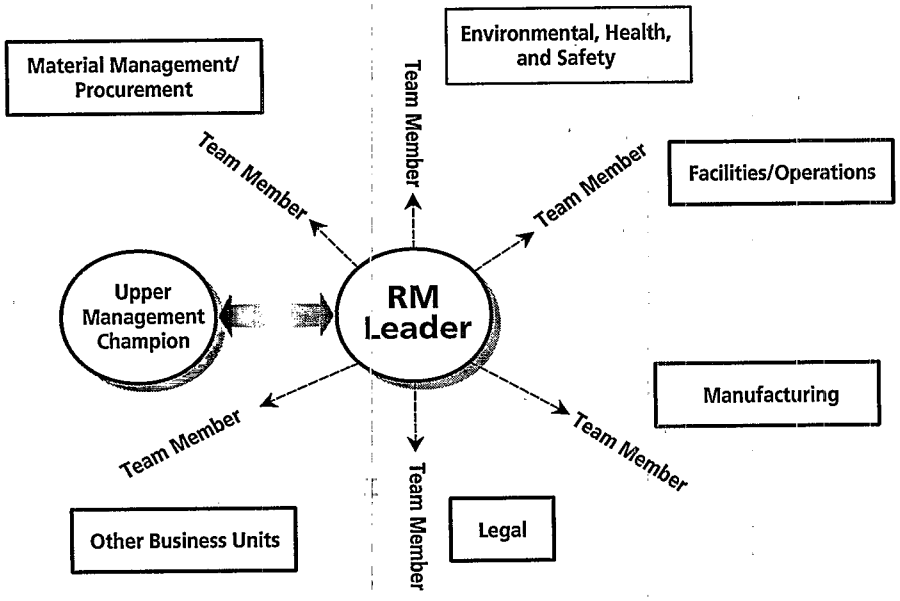
Establish an RM Team

To address all concerns during program development and implementation, you must involve key stakeholders from the initial planning stage. Equally important is securing top management commitment at the outset. You can take several critical steps to accomplish this:

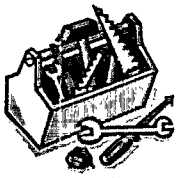
Steps to establish an RM team.

- **Assign an RM leader** to spearhead the planning process and oversee RM implementation. The team leader must have knowledge of current internal waste and recycling activities, as well as an understanding of the current external contracting process.
- **Assemble a working team** with representatives from departments or divisions with responsibilities for people who generate or handle waste or manage waste/recycling activities. Include procurement staff that oversee contracts (or, in the absence of a contract, those who hire waste/recycling contractors under informal agreements). Also include representatives from finance, accounting, environmental health and safety operations, facilities engineering, manufacturing, and legal staff. Some roles might not apply, depending on the structure of your organization/facility.

Figure 2.2: A Cross-functional RM Team



A cross-functional team ensures that the concerns of different functional units are addressed during the planning and implementation stage. The team members have access to vital information for characterizing the current waste management process. They also play a key role in communicating with and securing buy-in from their respective divisions. A team with procurement, environmental, and operational individuals helps you strike the right balance between cost reduction, environmental goals, and service needs.

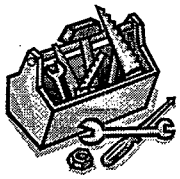


See Appendix B for a sample presentation to use in explaining RM contracting to upper management.

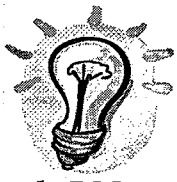
- **Secure top management support** early in the development of an RM program. Appropriate management decision-makers must be informed about, and committed to, the program during its development and throughout its implementation. *Identifying and establishing communication channels with an upper management champion is important.* At a minimum, the champion should be regularly informed of the working team's progress. The champion plays a key role in ensuring that suf-

ficient resources are allotted for the whole program and providing support and direction throughout the process. He/she will be extremely valuable in helping your organization overcome any potential institutional or organizational barriers. The management champion is essential to ensure timely and organized communication between the RM team and other upper management decision-makers.

- **Define the roles of the working team** and the responsibilities of each team member. Individual responsibilities will generally align with respective organizational units.



Sample goals and objectives are available in the sample RFP in Appendix D.



Example RM goals.

Define Goals and Objectives

Your goals and objectives should clearly identify why your organization wants to implement an RM program and what it expects the program to achieve. Your goals should be developed with support from your team and should address the most pressing needs of the organization. Where possible, RM program goals should be linked to broader organizational strategies or goals (e.g., mandated recycling targets, corporate environmental policy and goals, EMS).

Goals can include the following:

- Promote efficient use of resources and cut costs by reducing waste at the source, reusing materials, and recycling.
- Improve environmental performance and workers' health and safety.
- Contribute to improvements in quality of production (e.g., by helping reduce scrap rates).

Specifically, clear objectives and measurable targets contribute to achieving each goal. Objectives should lend themselves to measurable results through performance metrics once your program has been implemented. Achieving consensus on program goals and objectives at the beginning of the process will avoid backtracking or straying "off course" as the program develops.

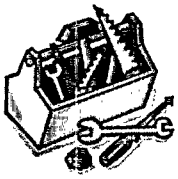
Develop Work Plan and Timeline

Once the team establishes and agrees upon the goals, objectives, and targets, it should develop a work plan outlining all stages of the RM contracting process. The three major tasks to include in the work plan are:

1. Evaluate your current system and conduct a comprehensive cost baseline.
2. Design your RM program and issue a Request for Proposal (RFP).
3. Select an RM contractor and implement the program.

Under each task, the work plan should itemize what actions are needed, who will be responsible, when the tasks will be completed, and what resources are required. Establish regular meetings with the team to complete the tasks of the work plan. Make sure you establish a recordkeeping mechanism to record decisions and responsibilities for these meetings.

To establish an internal timeline, use the three major tasks on the previous page as milestones. The first task of evaluation and conducting the baseline might take between 1 to 3 months, depending on the speed of your team and the availability of data. Designing your program and finalizing the RFP can take between 1 to 2 months. Finally, from the point the RFP is issued until you implement a program should require 2 to 3 months. The entire process can be completed in 4 to 8 months. Note that during this time, there will be periods of inactivity, such as waiting for RFP responses.



See Appendix C for a sample work plan.

Establishing goals, a project timeline, and a work plan can be accomplished by convening a kick-off meeting in which all team members participate and contribute their thoughts. If possible, the management champion should also participate to show support. The team leader should create draft materials and distribute them prior to the kick-off meeting.

Identify and Overcome Internal Barriers to RM Contracting

Developing an RM program involves introducing some very different ideas and processes. Any type of change—even those that promise net benefits to the organization—can upset the balance of what is comfortable and familiar. Some internal obstacles you might encounter are summarized in the table below. The majority of the obstacles can be overcome through effective communication, good listening, and careful planning and preparation that address the underlying reasons for reluctance or skepticism. Internal consensus is critical to secure an environment in which the contractor is free to focus all of its energy on improving your system and not becoming sidetracked by internal discord.

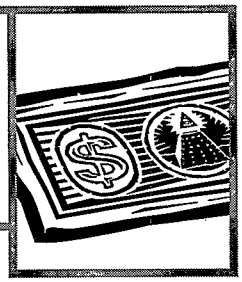
Ideas for overcoming obstacles.

Table 2.1: Internal Obstacles and Suggested Strategies

Internal Obstacle	Strategy
Lack of understanding and realistic expectations of RM contracting. RM is a new contractual relationship that will succeed when the company understands it is a true partnership and that the contractor will be interacting more in internal operations, not just at the loading dock.	**Provide education and outreach.** Clearly state the expected benefits and realistically convey the required commitment. Use information from case studies (in presentations in Appendix B) to show how RM contracting has worked in other organizations.

Internal Obstacle	Strategy
"We can do it better internally" argument. There might be resistance to the suggestion that an "outsider" can improve the current system. An associated concern is the perceived threat to job security for those with responsibilities for waste/recycling or contracts management.	**Conduct an objective assessment of the current waste/recycling system to look for potential opportunities to improve cost-effectiveness.** RM contracting is not strict "outsourcing," but adds resources to recycling and waste reduction activities.
Loss of control. An unspoken fear is that in providing an increased scope of service and more access to a single RM contractor, some element of control is surrendered. In fact, organizations often gain greater visibility and control of their services and resources because they possess better information to make decisions. Under RM, you make the decisions, set the goals, and guide the process, while the contractor brings ideas, innovations, and resources to help implement change.	**Properly characterize the nature of the relationship between your organization and the RM contractor.** It is a partnership, but you remain the final decision-maker. The RM team and the contractor should establish a mutually agreed upon protocol for decision-making and resolving concerns that might arise.
Waste/recycling issues are not a priority. The costs of waste and recycling contracts often comprise less than 0.1 percent of total operating costs for an organization. Thus, reducing costs in this arena are generally not a priority for companies, and waste and recycling often does not receive management attention.	**Conduct a baseline assessment** to identify how much your organization is actually paying for waste, recycling, and associated activities. This activity might be eye-opening to some and might be what is needed to stimulate interest in pursuing the RM contracting option.

Chapter 3: Characterizing Your Current Waste/ Recycling Activities and Costs

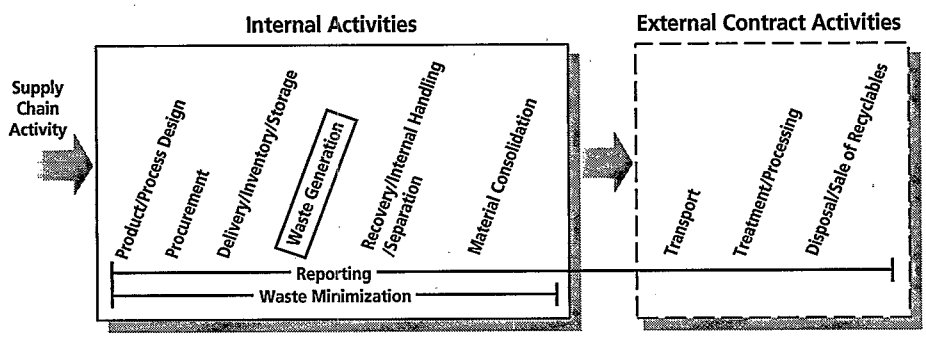


Understanding your current waste and recycling system—internal activities, contracts, current recycling levels, and associated costs—is crucial for you to evaluate RM contracting. This "baseline" will be used to design key elements of an RM program, including the nature of services you wish to receive, pricing structure, and financial incentives. In establishing a baseline, you will also uncover areas for improvement for your current program. Thus, your current waste and recycling baseline is a systematic documentation and cost assessment of activities you are currently performing. At the same time, it allows you to identify what you are not doing and what activities an RM contractor could perform to help you reduce waste and costs.

In conducting the baseline assessment, you will be forced to question how materials you purchase ultimately end as waste or recyclables. After all, any material that ends as waste is originally purchased, delivered, stored, and used. It is then consolidated and collected by an external contractor and ultimately disposed of or recycled. These activities, during any material's life cycle (see Figure 3.1) within your organization, will comprise the baseline.

The material life cycle provides a framework to help you characterize your waste and recycling system and the costs associated with it. Through material procurement, product/process design, material use, and internal material handling processes, your organization has a direct influence on the types and composition of waste generated and how materials are ultimately managed at the end of their life. Note that activities related to waste minimization and reporting cut across all other internal activities in the material life cycle. Indeed, waste minimization activities can occur at

Figure 3.1: Material Life Cycle (Waste Generator Perspective)



any point in a material's life cycle. Note also that the stages of the life cycle are categorized by internal material management activities and external waste and recycling contractor activities. This distinction is important because, at its core, RM contracting seeks to provide external contractors with more responsibility over internal activities to assist you in diverting more waste or eliminating waste altogether.

Steps to characterize waste.

There are three key steps to characterizing your waste and recycling system. Using the material life cycle, your baseline is made from the completion of the following steps:

1. Identify internal and contracted waste/recycling activities
2. Estimate current costs for each waste and recycling activity
3. Estimate current diversion rates

By design or by default, many individuals in your organization affect waste related activities. This chapter will help you document what your organization is already doing.

Identify Current Waste and Recycling Activities

This first step is primarily meant to identify major activities performed by internal staff and external contractors related to waste and recycling. Once current activities have been identified, you will assign costs to each task. Remember that as you gather data on what you are doing in this first step, you might be able to capture much of the cost data required for the next step.

At the end of this first step you should have three lists: 1) external contractor activities, 2) internal activities related to waste or recycling initiatives, and 3) internal areas where little or no activity is taking place. Think of this third list as your "wish list" or areas for improvement that can be addressed by an RM contractor.

Examples of external contract activities.

Table 3.1: Sample Record of Externally Contracted Activities

Facility	Number of Contractors		Frequency of Service		Compensation	
	Waste	Recycling	Waste	Recycling	Waste	Recycling
Facility A	1	3	2x week pick-up	Commingled OCC and paper 1x week Metals: 1x month	Trash: $90/haul, $55/ton tip fee	No service fee
Facility B	1	0	3x week pick-up	N/A	Monthly fee: $550/month/ compactor (compactor rental, hauling & disposal) Additional pick-up: $125/haul	N/A
Facility C	1	2	5x week pick-up	OCC & office paper: 1x week Aluminum: 1x month	Trash: $110/haul, $70/ton landfill tip fee, $105/month container rental	No service fee Receive half of the revenue from OCC and paper
Facility D	2	4	Trash: 3x week pick-up Confidential paper: 1x week	OCC & office paper: 1x weekly Aluminum: 1x monthly Organics: 1x weekly Metals: on call	Monthly fee: $275/month/ container (hauling & disposal) Container rental: $75/month Shredding fee for confidential paper: $3/minute	No fee except for organics ($500/month collection fee)

External contracted activities should not be difficult to identify (see Table 3.1). Determine how many contractors are serving your facilities, the service received, the current frequency of service, and length of service contract. For example, you might have one solid waste hauler that services four containers 7 days each week and two recycling companies that come to your site weekly. Your current contract or billing statements can tell you your current service levels. Listing the current service level and the compensation structure for the external contracted activities will provide the foundation to assign costs to contracted services. Table 3.1 shows a sample of records on service arrangements and levels for externally contracted activities.

Current *internal activities* might be a bit more challenging to identify. Table 3.2 shows major functions, responsibilities, and cost elements (applicable for estimating costs in next section) for each internal activity. As you go through the activities in the table, note which of the activities are being performed, who has responsibility for each, and where each is being performed. Engaging the whole RM team in this exercise is important because team members will have different perspectives on waste and recycling activities. You should brainstorm with your internal team to ask numerous questions related to the life-cycle stages such as:

- Who manages the contract? What activities are involved?
- Who communicates with contractors when problems arise or additional service is required?
- How are waste and recyclables collected internally?
- Who is responsible for internal waste and recyclables movement, consolidation, and processing (e.g., bailing or sorting of recyclables)? What activities are involved?
- If janitorial contractors are responsible for internal material movement, what is their role and who manages their services?
- Do we have anybody who devotes time to identifying waste reduction or recycling opportunities? What does this involve?
- Do we systematically look at how material choices in packaging, product design, and procurement affect downstream activities?

As you examine each material life cycle stage (see Table 3.2), list the waste and recycling activities currently being performed. For example, note who is responsible for issuing the waste contract, who interacts with waste and recycling contractors, and who has responsibility over waste minimization. Make sure you identify individuals who need or gather waste data for any types of reports or regulatory permits as well as individuals who handle billing and paying contractors.

Table 3.2: Sample Organizational Functions, Responsibilities, and Cost Elements

Life Cycle Stage	Department/ Organizational Functions	Associated Cost Elements	Opportunities to Improve
External Contract Activities			
Waste hauling and disposal	• EH&S* • Facilities • Janitorial contractor	• Waste hauling and disposal fees for external contractors • Labor for information tracking and reporting on waste and service levels	• Optimize waste hauling • Improved reporting on waste and service levels
Recycling hauling and processing	• EH&S • Facilities • Janitorial contractor	• Recycling processing fees for external contractors • Labor to track recycling levels and revenue from sales of recyclables • Recycling revenues	• Increased recycling of materials that are currently recycled • Explore recycling markets for other materials • Optimize recycling hauling • Improved education to minimize contamination • Improved reporting on recycling and service levels
Internal Activities			
Reporting	• EH&S • Facilities • Janitorial contractor • Operations	• Labor to gather reporting data • Labor to monitor hazardous waste management	• Improved reporting in waste and recycling service levels • Improved tracking and reporting on hazardous materials
Material compaction	• Janitorial contractor • Facilities	• Labor and expenses associated with onsite consolidation of materials (e.g., bailing of recyclables, operation of compactors)	• Minimize contamination • Optimize onsite material consolidation
Recovery internal handling/ separation	• Operations • Facilities • Janitorial contractor	• Labor and expenses associated with onsite waste collection, material separation, and waste treatment	• Improvement in at-source separation • Increase recovery of materials through optimizing internal material handling process • Improvement in onsite waste treatment
Waste minimization	• Facilities • EH&S • Janitorial contractor • Operations	• Staff time to identify and implement specific waste minimization program	• Source reduction • Increased recycling • Increased waste diversion
Waste generation	• Operations • Facilities • Training	• Labor to troubleshoot problems, maintain manufacturing operations, etc. • Training on hazardous material handling	• Process improvement can lead to reduction in non-product waste • Improved training on hazardous material handling to minimize accidents
Waste related activities	• Waste storage • Inventory management	• Onsite storage and requirements for hazardous and non-hazardous waste	• Less waste stored on site
Procurement	• Material procurement • Facilities or whoever manages janitorial services and waste and recycling services	• Management of waste/recycling contractors • Management of janitorial contractor • Billing validation/payment	• Establish transparent billing structure minimizes labor to track and validate cost • Consolidation of waste/recycling contractors minimizes administrative cost • Environmental preferential procurement
Product/ process design	• Design and choose the types of materials procured	• Labor to look at the choices of material use that allow increased reuse and recycling, or minimize downstream waste generation	• Work with supply chain on packaging • Reusable drums/pallets initiatives • Inclusion of waste minimization as one criterion in material choice

Examples of internal activities.

**EH&S - environmental, health, and safety*

You might find that your organization does very little internally to proactively manage waste and recyclables. Research and experience shows many organizations simply do not devote much time or attention to waste minimization on a continuous basis, probably because waste is typically a small fraction of overall operating costs and is not a core activity of many organizations. Research further shows that cost saving opportunities do exist, and most organizations admit they could improve this area of business if they could devote more time or resources.

An important task in this step is to identify what additional waste-related activities currently are not performed (or are performed on a limited basis), but which you might perform if you had more people, time, or money to do them. This step will constitute your third list that you can consider your "wish list." For example, better education and training, expanded programs to recycle other materials, and improved research on secondary commodity markets are all examples that can be put on your wish list. This is where an RM program can help your organization—to use external contractor expertise and resources to continuously improve your waste and recycling system. The whole point of an RM program is to encourage an external RM contractor to devote resources to internal activities where you are doing little or nothing.

You should have three lists before moving to the next step.

- A list of external contractor services and responsibilities (similar to those on Table 3.1).
- A list of internal activities you are currently conducting.
- A wish list defining the scope of services you will request in an RM program as developed in Chapter 4.

Estimate Current System Cost

To estimate your current system costs, you must assign costs to your external contractor activities and the items identified on your internal activities list. The external costs often comprise the majority of costs for many commercial organizations. Internal costs are often low simply because organizations do not spend much time or effort on many of the internal activities we show in the material life cycle. The sum of external fees paid to contractors and internal costs your company incurs is the baseline that you will use to compare current system costs with the costs for adopting RM contracting.

External Contracted Costs

Fees you paid to an external contractor typically include all waste and recycling services, including costs for collection, disposal, and recycling processing and any container rental fees. You should estimate these costs from the last 12 months of bills you paid your contractors. Table 3.3 shows an example of total external contracted costs separated by waste costs and recycling costs; note that in Table 3.1 you already identified the activities.

Examples of external contracting costs.

Table 3.3: Sample of External Contracting Costs

Facility	Annual Waste Cost	Net Annual Recycling Cost	Container Rental Cost	Total Annual Cost
Facility A	$42,353	$0	N/A	$42,353
Facility B	$16,200	N/A	N/A	$16,200
Facility C	$60,078	($1,980)	$1,260	$59,358
Facility D	$23,515	$6,000	$1,800	$31,315
Total				**$149,228**

Research has shown that actual fees paid to external contractors often differ from agreed-upon fee schedules and levels of service. Differences can be due to additional waste or recycling services requested that might not be documented in your contract. Also, many contractor bills do not separate individual services, but instead bill a single lump fee for numerous services. Such billing practices make it difficult to discern exactly what you are paying. In some extreme cases, organizations are overcharged for services they are not receiving and continue to pay for such services simply because they pay bills without checking them. For these reasons, it is important to use the last 12 months of bills to estimate your baseline costs for external fees to contractors. A key element of RM is establishing transparent, itemized pricing and billing so the services you are paying for are clear.

Internal Costs

Internal costs must now be estimated for the list of internal activities you previously identified. These include: 1) the labor costs associated with internal material handling (movement of trash or recyclables within facilities) and administrative or overhead costs related to contract management, billing, and reporting; and 2) costs of owned equipment (e.g., bailers, compactors, recycling containers). You might not be incurring costs from ownership of equipment because organizations often include these costs (such as container rental) in contractor fees. If you do own equipment, however, estimate these internal costs.

Most internal costs are labor costs. The magnitude of these costs will depend on how much your organization is actively promoting recycling and waste minimization. Costs will include labor for any individuals who perform internal activities related to any stage of the material life cycle. For example, labor costs of staff responsible for internal material movement and handling should be included here as should an estimate of environmental staff time for gathering data for reporting or compliance related activities. Similarly, time spent managing contractors (including labor costs for accounts payable and contract management), or separating or consolidating waste should be included. Refer again to Table 3.2 "Sample Organizational Functions, Responsibilities, and Cost Elements" on page 12, which lists cost elements for internal activities to ensure you identified all relevant internal costs.

To estimate labor costs, you will need to communicate directly with staff to get an estimate of individuals' time spent on waste and recycling related issues. Once you have time estimates, you will need labor rates to convert time into money. Your finance department can provide you with these different labor rates. For the purpose of this exercise, use fully burdened labor rates (i.e., inclusive of all benefits).

An RM program can either eliminate or greatly reduce some of your internal labor costs. Note that many of the labor costs will likely be a portion of a person's time. For example, you might have two individuals that spend only 25 percent of their time collecting recyclables. Although such costs might not be completely eliminated with RM, understanding these costs is important for two reasons. First, for labor tasks currently performed internally, an RM program will likely reduce or eliminate the time needed for these tasks (e.g., reporting), allowing you to use time on more strategic, core activities. Second, and perhaps more importantly, it gives you a good idea of what you are doing now and how RM contracting can offer additional services. Such additional services can be added to your wish list and highlights the value of RM contracting to provide additional services.

If you are not focusing on recycling and waste reduction internally, your cost baseline might be predominantly external contractor fees with minor internal labor costs for the management of contractors and waste or recycling environmental reporting tasks.

Estimate Baseline Recycling Rate

To balance the cost side of the baseline, you now want to see how well your organization is managing waste and recyclables (e.g., your resources). To measure your performance, you will want to create a minimum set of baseline metrics that includes your current recycling rate(s). Baseline metrics are important because RM contracting financial incentives are based on cost savings from diversion and waste minimization activities. You must be able to measure your RM contractor's performance from your baseline to reward the contractor when it performs well. In addition, if your baseline recycling rate is very low, many opportunities probably exist for your RM contractor to immediately help your organization improve.

Surprisingly, many organizations do not track the basic information that will be required to calculate a recycling rate, so you might have to use the best information you can locate. If you do not currently measure waste and recycling tonnage, you will likely need to request information from your current waste or recycling haulers so you can estimate tonnage. Information usually has to be culled from bills and, depending on your current pricing structure, you will likely only be able to obtain information such as number of pick-ups or number of containers hauled. Customers might be provided with data on waste and recycling tonnage if the haulers' compensation is based on tons of materials handled, or such information is required under the contract agreement. Research has shown, however, that most organizations do not receive tonnage data so you will likely need to estimate waste tonnage and recycling amounts to calculate metrics.

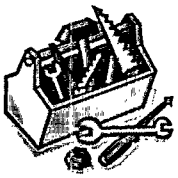
Your estimate can be based on:

- Collection frequency
- Volume of waste/recyclable containers
- Percentage of containers filled at the time of collection
- Volume-to-weight conversion factor for waste and recyclables

Your contractor will, at a minimum, bill you for the first two items, so these data should be readily available. You should check with your internal RM team to verify this information and to check, on average, the fullness of containers when the contractor services them.

Estimate annual waste tonnage using the following equation:

Annual waste tonnage = Volume of waste container (yd^3)
x Conversion factor (ton/yd^3)
x Percentage of container filled (%)
x Number of pick-ups per year



For the standard volume-to-weight conversion factors for various types of materials and general trash, refer to the resource guide in Appendix A.

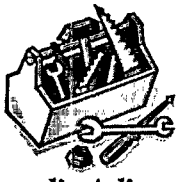
Similarly, you can estimate annual recovered tonnage using the equation below. Calculate the tonnage recovered for each material you currently recycle.

Annual recovered recyclables = Container volume for the selected recyclable (yd^3)
x Conversion factor (ton/yd^3)
x Percentage of container filled (%)
x Number of pick-ups per year

Finally, estimate your baseline recycling rate by using the following equation:

$$\text{Recycling rate} = \frac{\text{Total annual recycling tonnage}}{\text{Annual recycling tonnage} + \text{Annual waste tonnage}} \times 100\%$$

In addition to your overall recycling rate for all materials, you might want to calculate individual recycling capture rates for each material you currently recycle. To calculate individual recycling capture rates, divide the total amount of a given material that is recycled by the total amount of that material generated (the amount recycled plus the estimated amount that is still disposed).

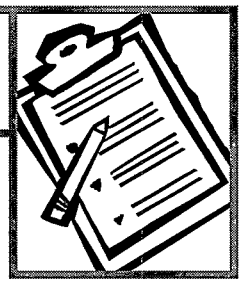


Appendix A lists several resources that provide guidance on estimating recycling capture rates.

Your baseline recycling rate will be used later. Establishing quantifiable performance targets (see Chapter 6 for examples) is a core component of an RM program. These targets should be tied to the baseline recycling rates or other baseline metrics. An advantage to adopting RM contracting is that, by nature, RM programs track this information.

Your baseline should now be complete and this information will be used in developing your RFP, evaluating bids, and negotiating.

Chapter 4: Designing Your RM Program



With your baseline costs in hand, the next steps are to: 1) define the specific scope of services you want the RM contractor to perform, and 2) develop a request for proposal (RFP) that clearly articulates your desired services and program scope to potential RM companies that will bid for your work. These activities should occur somewhat simultaneously, as they are interrelated. Remember: there is no right or wrong way to design your RM program; this process is meant to be flexible to fit your particular needs and context.

Define Program Scope

Defining your program scope involves determining the materials and related life cycle services[2] you want your RM contractor to perform.

Steps to define program scope.

Steps to Define Program Scope

1. Review baseline data from Chapter 3.
   - Current external contracted services.
   - Current internal activities and costs.
   - Wish list of new services.
2. Group RM materials and services into two areas.
   - Include all current external services and internal activities.
   - New services identified in your wish list.
3. Consider leaving out sporadic or miscellaneous waste streams, and roll them into the program after implementation.

What Materials, Waste Streams, and Services Should Be Included?

Include all externally contracted waste streams and recycling in your RM program. Dividing responsibilities among multiple contractors results in a fragmented approach, wherein different contractors compete for the total amount of your "resources" that end as waste or recyclables. RM contracting fosters a "systems view" by giving responsibility to a single contractor to manage all your waste/resource streams. The more materials you allow your RM contractor to manage, the more

[2] These are services such as material handling, education/training programs, reporting, etc.

likely the contractor can bring innovation and improvement to your program. Further, selecting one RM contractor sends a strong signal to RM bidders and your internal stakeholders that your program is about more efficient material/resource use.

Services in the RFP Must be Structured to Ask Bidders:

- How much will it cost you to manage our current services?
- What additional services can you provide? Note: the cost to provide new services will be financed from the cost savings achieved as measured from the baseline costs of existing services.

In bundling the largest number of waste/resource streams and accompanying services possible in your RM program, the challenge now becomes how to articulate this in the RFP. Your baseline data from Chapter 3 will greatly aid this process. Recall from your baseline, you made three lists: your external contracted services and costs, your current internal services and costs, and your wish list (services or activities that are not currently performed but you will want the RM contractor to implement in the near future). As you think about structuring your RFP, group your material streams and services into the following two areas:

- **Current service levels for waste and recyclables.** This category will include trash service and any recycling service that is required on a regular basis. These services should correspond to your external contractor activities *and* any internal activities you are currently performing. Note that you estimated the activities and associated costs from the first two lists made in your cost baseline.
- **New diversion and source reduction activities that currently are not provided either internally or externally.** This category can be thought of as additional value-added services you want from your RM program and will correspond to your wish list of new internal activities in the material life cycle.

Example RM services.

Sample Services for an RM Program

Existing Services	New Services
• Waste hauling and disposal	• Waste/recycling tracking systems
• Recycling	• Audits/comprehensive quarterly reports
• Billing	• Improved capture of materials currently recycled
	• Design and implementation of new separation and recycling
	• Staff & supplier education/training
	• Research on difficult waste streams
	• Onsite personnel (optional)

Tying Your Cost Baseline to Services in the RFP

Categorizing services as either existing and new will allow you to compare bids to current costs, determine who is the most qualified bidder, and maximize the potential of RM contracting. Keeping existing services separate is extremely important since this will be structured as the base scope of work in the RFP. You will ultimately compare a bidders' proposal (financial bids from prospective RM contractors to manage your existing service) directly to your current baseline costs.

Evaluating the value of new services is not so straightforward. As mentioned above, the base financial bids for securing existing services will be compared to your baseline costs and you can immediately determine if you will see cost savings. Because you currently are not incurring costs for the proposed new services, however, a similar direct financial comparison is not possible. Ultimately, you will not be able to evaluate the full value of an RM program until you receive RFP responses back. Further discussion on evaluating bids is provided in Chapter 5.

What To Do With Miscellaneous Waste Streams

Many organizations generate sporadic or small waste streams such as fluorescent light bulbs, batteries, construction and demolition debris, electronic waste, and some hazardous waste. Although an RM might be able to help you manage this waste more effectively and increase reuse, recycling, and diversion, you might consider initially leaving these services out of your base scope of services in the RFP. The primary reason is that predicting the level of service and frequency of service you will require for such waste streams is difficult. From the bidders' perspective, accurately placing a bid on these services will be difficult, and therefore your evaluation of the bid will be difficult too.

If you want to see the value that potential RM contractors can bring to manage specific miscellaneous waste streams, you can include them in the RFP, but keep the descriptions and the financial bids separate from your base scope of work for managing existing services. In this way you can test the market for specific waste streams by requesting prices to handle certain quantities of waste in the RFP (see Appendix E for an example bid table). Research has shown that these services have typically been rolled into RM programs once your RM contractor proves it can manage these waste streams better than you can internally. This requires the RM contractor to better understand your operation to make such a case, however. Thus, it is best to leave miscellaneous waste streams out of the base scope of work. When you can predict a large amount of work will be required, as is the case for construction and demolition debris, you can ensure the winning bidder has the first chance to bid on such work as it develops.

What If Existing Contracts Have Restrictions

Some of your current contractual obligations might limit what you can immediately include in the RM program. For instance, if your organization has recycling or waste contracts that are long-term and involve penalties for breaking, you might not be able to immediately include services in the old contract as a service in your

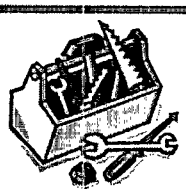
new RM contract. Similarly, many commercial organizations might be required to use a single franchise hauler for waste services. We still recommend that your RM contractor manage these waste streams; however, you will be required to use your existing contracted price from your franchise agreement. In this case, the RM contractor will treat hauling and disposal as a "pass-through" cost[3]. The RM contractor can then re-bid any "pass-through" services as the applicable contracts expire.

Develop Your Commercial RFP

The RFP is the vehicle by which bidders will tell you how they can improve your current system, so it is important to encourage open dialogue. Two overarching principals govern contracting: 1) make sure you ask for what you want, and 2) make sure you get what you requested. Contracting failures can almost always be attributed to not following one or both of these critical principals. Thus, the RFP must provide information to prospective bidders explaining the services you are requesting. In bidders' responses, you then evaluate their qualifications—focusing on capabilities, experience, and staffing—and assess their ability to provide the requested services. The RFP is where you communicate clearly and concisely what you want in terms of services and results.

Golden Rules for RFPs

- Keep it simple
- Keep it short
- Be open and flexible

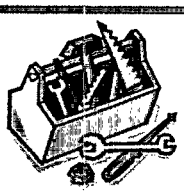


Appendix D provides a sample RFP that can be used in commercial, institutional, and industrial contexts.

You should follow three fundamental rules in drafting your RFP: 1) keep it simple, 2) keep it short, and 3) keep it open and flexible. The most important aspect of the RFP is simple, clear, and unambiguous language so that every bidder provides proposals and financial quotes with the same understanding. To keep it short, ask only for information that will enable you to judge bidders' qualifications to meet the needs established in your goals and objectives.

Be open and flexible in allowing bidders to tell you how they will improve your system. Because you are seeking more value-added services, stressing your goals and desired outcomes is essential but do not necessarily outline how to meet your goals. Think "outside the box" and give the contractor maximum autonomy to achieve results. In doing so, you allow bidders to bring ideas to the table before the program has even begun.

Elements of an RM RFP



The model RFP language in Appendix D provides examples and more detail on each of these RFP elements.

Although each organization might be different in the services it requests, the following six elements should be part of any RFP and are essential to clearly document your requirements to potential bidders.

The Cover Letter. This piece is an often unnoticed, but important aspect of the RFP, as it is the first document the bidders read. The cover letter sets the tone for the RFP process and should invite bidders to submit proposals and describe the

[3] "Pass through" costs are the existing fee structures that determine your baseline costs. An RM contractor can still manage the materials and work to reduce these costs, but must respect existing agreements.

general intent of your program. You should express the goals and objectives of your RM program in a few sentences—emphasize that your organization is looking for more than hauling and disposal. The cover letter should also include essential information such as dates for the bidders' briefing, when responses are due, and when you expect to award a contract.

The Introduction. This section provides background information on your organization and the underlying purpose of the services you are requesting. A description of your organization might include the number and location of facilities you want to include in the RM program, including descriptions of their size (e.g., employees, square footage, or other appropriate measures). You should also include a succinct description of the nature of your business (e.g., processes, services, products) and the comprehensive nature of services you are requesting.

The most important aspect of the introduction is conveying your organization's purpose in implementing an RM contracting approach. You might begin by describing the corporate philosophy and reasons for seeking RM services from an outside contractor. This section leads into more detailed and specific objectives that your organization is seeking to accomplish by soliciting RM contracting services. Much of this work will have taken place in the planning process. Don't create a laundry list; limit yourself to three to five such objectives. This activity will force you to focus on identifying core goals. Contract length and overall partnership approach should also be stated.

Bid Instructions. Bid instructions provide a roadmap for bidders on how to assemble and present their materials including format, content, and delivery requirements. Specific elements to consider for this section are included in the model commercial RFP language in Appendix D.

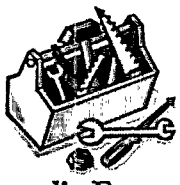
Scope of Work. This section is the main section of the RFP and describes the scope of services and, specifically, RM requirements the awarded bidder is expected to provide. As the model RFP language (Appendix D) shows, you should describe the scope of work in two areas:

1. **Scope of Services** provides a broad overview of services required under the RM program. Specific services are detailed in the RM Requirements section. In this section, define the length of the contract, materials to be managed, number of facilities, and service locations. It should be very brief.

2. **RM Requirements** asks bidders to detail how they intend to provide new, value-added services. This will be done through narrative responses and by requesting bidders to submit an operations plan to obtain and improve upon existing services. This section also outlines the desired results and performance requirements for new, value-added services. Appendix D, Section 4 has detailed examples and sample language.

Breaking the scope of work into two separate sections—RM requirements and scope of services—emphasizes that you are requesting something different from a typical hauling and disposal contract. Remember to be open and flexible. Your primary concern is that your needs are met, not how they are met. It is important to clearly state the desired end result or expected outcome, but the manner in which the work is to be performed should be left to the bidder's discretion. For instance, you can state that you want to increase diversion by 40 percent during the first 3 years of your RM program and ask bidders how they intend to help you meet this goal. If you are too vague or imprecise (e.g., our organization is committed to recycling), you run the risk of having bidders not respond directly. If you are too prescriptive (e.g., you want your RM to increase recycling of all materials by the same amount), you risk stifling any innovation that the contractor might express in their response. Flexibility provides bidders the latitude and freedom to innovate and provide you with more options to best to meet your performance objectives.

Normally, bidders will respond to how they can meet the scope of work through a combination of a "narrative proposal" or "operations plan" and their qualifications in performing similar services for their existing clients. You want the bidders response to the proposed scope of work to detail how they intend to conduct all activities specified in the scope of work.



Appendix E provides example bid forms and incentive structures.

Payment for Service and Incentives for Waste Reduction and Efficiency. The RFP must contain language to guide bidders on how you want the financial bids submitted. You must include fees you will pay the RM contractor for obtaining the current waste hauling, disposal, and recycling services and compensation for other RM services.

Proposal Evaluation Criteria. The RFP must communicate how you intend to evaluate the bidders responses. See Chapter 5 for a sample set of criteria and detailed methods to use these criteria.

Chapter 5: Selecting an RM Contractor

As you finalize the RFP, you can start to prepare for the solicitation process. You should establish bidding procedures to ensure that each step—from the identification of prospective providers to evaluation of proposals to final selection of contractors—is fair and open. An open and competitive bidding system provides a level playing field to all contractors and minimizes the potential for outside pressure on the final bid selection.

Identify Contractor Pool

Because RM contracting is an emerging service model, growth and delineation of the contractor base will continue to be dynamic. RM contracting requires a broader range of knowledge and management expertise. Many types of companies are converting to RM contractors. Companies from more established sectors (e.g., waste, industrial cleaning) are applying their know-how (as well as acquiring new competencies) to offer a new type of performance-based service. Supplying RM services is by no means limited to traditional waste management companies. Other companies, such as recycling companies, consultants, and property managers and brokers, are also making inroads to supplying RM services. RM contractors commonly obtain many of the responsibilities and subcontract other services. For example, property managers and consultants will manage internal systems and give hauling and other external activities to subcontractors. In fact, many companies that now provide RM services see this contracting strategy as a new source of revenue to diversify their profits and as a competitive advantage in marketing themselves to new customers.

Who Are the RM Contractors and Their Customers?

At least three categories of established companies are providing RM services to waste generators:

- Waste Management, a WasteWise partner, offers RM-like services to large industrial generators as part of in-plant services. Other smaller handling and disposal companies also offer RM services.
- Companies with specialized expertise in internal waste or process management and/or resource efficiency, including custodial firms, industrial cleaning companies, property management companies, and consultants/engineers.
- "Waste brokers," a rapidly growing segment of the solid waste industry that provides hauling and disposal contract management services for national companies.

These companies see RM service as a market "differentiator" that will allow them to gain or retain an account in an extremely competitive industry and as a conduit to diversify profit by supplying a wider range of high-value utility and environmental support functions.

Ideas for finding contractors.

Although several large national companies offer RM contracting services, much of the solid waste and recycling market is local or regional. Start with the following sources to identify prospective contractors:

- Your current contractors with whom you have positive experiences.
- List of pre-qualified contractors obtained from your purchasing/procurement office.
- Recommendations from other companies/local governments that have RM-like programs.
- Organizations that advance the RM approach[4].

Because RM contracting is still relatively new, some providers might have the ability, expertise, and willingness to provide these services, but are unfamiliar with how to structure their contracts according the RM principles. By sending the RFP to a wide array of companies you maximize your chances of locating interested contractors and receiving responsive bids. As the market for RM contracting matures, a more distinct group of top RM contractors will surely emerge.

Steps for issuing the RFP.

Issue the Request for Proposals (RFP)

Following a defined process will ensure that all providers are provided with the same information. The main steps in issuing an RFP include:

1. Issue RFP
2. Convene pre-bid meeting
3. Receive bidders questions and provide responses
4. Inform internal personnel, apart from the RM team, about the RFP
5. Accept proposals/bids and acknowledge receipt

Issue RFP

Once the list of prospective contractors is finalized, issue the RFP. Attached to the RFP should be a form that requires bidders to acknowledge receipt of the RFP and indicate whether they plan to submit a proposal. This form should also ask for contact information of contractor representatives planning to attend the pre-bid meeting. The RFP can be issued electronically or in hard copy. Managing the process to the greatest extent possible through e-mail will save time and shorten the overall schedule for the competitive process.

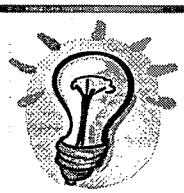
Convene Pre-bid Meeting

A pre-bid meeting is usually organized within 2 to 4 weeks after the release of RFP. The meeting can last from 2 to 4 hours and should include an overview of your facilities and a description of RM program goals. Allow time for a followup question-and-answer period. After the meeting, arrange a site/facility tour to let

[4] The Tellus Institute <www.tellus.org> is in the process of compiling an RM supplier contacts database.

the contractors understand the working environment and to better assess their cost for implementing the new RM program. The pre-bid meeting serves two main purposes:

- Provides a forum for interested contractors to pose questions about the RFP, the proposal preparation process, and the organization procuring RM services.
- Provides an opportunity for your team to clarify instructions, and—most importantly—ensure that the rationale of RM contracting and goals of your program are understood by all bidders.



Ideas for a pre-bid meeting.

For the above reasons, you should strongly encourage contractors to attend the pre-bid meeting if they have indicated that they will be submitting a proposal. Key members of RM internal working team should attend the pre-bid meeting to address questions about different aspects of the RFP. The RM team leader should run the meeting.

Suggested Pre-bid Meeting Agenda

- Introduction
- Company overview
- RM rationale and goals of your program
- RFP discussion/clarifications
- Questions and answers
- Concluding remarks and restatement of schedule
- Facility/site tour

Receive Bidders Questions and Provide Responses

Even after the pre-bid meeting, additional queries will certainly arise. There are some questions prospective bidders will not want to ask in front of their competitors. The RFP should include a deadline after the pre-bid meeting for any prospective bidders to submit written questions. The RM team leader should manage all submittals and inquiries. Internal RM team members should be prepared for ad hoc meetings in case queries require discussion and input from several team members. All questions, together with answers, amendments, and/or addenda should be sent to all contractors that have received the RFP. This process will ensure a level playing field.

Inform Internal Personnel About the RFP

The RM leader should coordinate RM team outreach activities to inform all employees about the status of the RFP process. Include in the update the number of bids you expect to receive and the schedule for the internal review process. This activity raises the profile of the RM program and helps achieve buy-in during implementation when those affected have felt engaged and informed throughout the planning and RFP process. Ensure your management champion is engaged so he/she can communicate progress to upper management.

Accept Bids or Proposals and Acknowledge Receipt

All incoming proposals should be properly logged and checked for completeness. You should promptly send notifications to contractors who have submitted complete proposals. For incomplete bid submission, a reminder should be sent to inform the bidders the missing items (if you decide not to disqualify them).

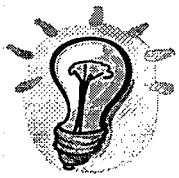
Evaluate Bids and Select Contractor

You are now in the final stage of the process-bid evaluation and contractor selection. Remember that the aim of this solicitation should not be to focus exclusively on the lowest-priced bid, but to seek qualified contractors who provide the best value. In the long run, the "best value" bidders are those that will be able to provide the most complete service at the least cost. Your selection should rest on the technical soundness and creativity of the proposals, cost, and qualifications of the bidders.

Make sure the evaluation process and results are well documented so that your team can justify your recommendation to top management.

Develop Evaluation Criteria and Weightings

A structured evaluation process will keep you and your team on track. You should have included the evaluation criteria in the RFP. At this stage, you should establish the specifics of each criterion based on questions raised or issues highlighted in the RFP and determine the weightings for each criterion and their sub-components. Table 5.1 presents sample evaluation criteria and example weightings that might be assigned to each criteria. The criteria and weights should reflect your own program goals and service needs. Weightings for each criterion and their sub-components should be discussed and agreed upon by the whole team. This process is meant to aid your discussion, and responses within a few points of each other can be considered roughly equal.



Examples of bid evaluation criteria.

Table 5.1: Sample Evaluation Criteria and Weightings

Criteria	Maximum Points	Actual Points
Technical Aspects of the Proposal	**35**	
Potential for resource efficiency improvements	15	
Operations and maintenance for existing services	10	
Education and outreach activities	5	
Facilities / equipments provided	5	
Information Management	**15**	
Measuring and reporting service levels and waste generation source reduction/recycling rates	5	
Measuring and reporting savings	5	
Methods / mechanisms for information sharing	5	
Financial aspects of the proposal	**35**	
Base service fee (for existing operation)	15	
Gain sharing proposal / estimated cost savings	15	
Method of determining payments and terms of payments	5	
Experience, background, and qualifications	**15**	
Relevant experience	5	
General management capability	5	
References	5	
Total	**100**	

The best strategy for evaluating bids is to have all team members rate each proposal. After the individual grading is complete, convene a meeting to review the ratings collectively to reach consensus on the final selection.

Evaluate Cost Savings Using Baseline Costs

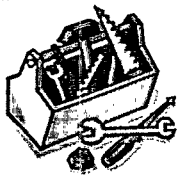
The bids are structured so bidders submit their base proposal to take over existing services. These are the only fees your organization should pay. New services are financed from cost savings realized as a result of your program's waste diversion successes. Cost savings from an RM program are derived in two areas:

- Immediate savings for an RM contractor to take over existing services.
- Potential savings one expects once an RM contractor launches the program and helps you improve your program.

Immediate savings for an RM contractor to acquire existing services can be determined by comparing the bids to your current baseline costs (see Chapter 3) for these existing services. We will call these savings "transition savings." In addition to savings on cost of current service, you might have other transition savings, such as immediate reductions in any owned equipment (e.g., containers) that might be eliminated under the new program. Transition savings might also result from par-

tially relieved resources on labor as tasks are transferred to the contractor (e.g., redirecting the environmental manager's time on waste-related reporting to more strategic environmental activities). Although many organizations do not consider these "hidden" savings in making a business decision, you should note them in your analysis of transition savings in addition to the obvious "bottom-line" transition savings.

Potential savings are what one expects once an RM contractor starts to help you improve your program. These savings come from the new services you will receive in your RM program, and we will call these "RM savings from continuous improvements." RM savings from continuous improvements will be an estimate at best. Evaluating new services and your RM contractor's ability to reduce costs is tricky because you are, in effect, evaluating what you think they can do. Recall the underlying premise of RM is that new services are financed from the savings that result from continuous improvements.



Appendix F provides more details on evaluating bids and creating summaries that model cost and benefits.

So how do you know if these additional services will really deliver improvements and costs savings? You will not know at the time you are evaluating the bids; however, there is a way to estimate the potential savings from continuous improvement. Appendix F walks through such an analysis. Savings will depend on the amount of waste they can reduce, the amount of recycling they will increase, or additional cost-effective improvements to your program. Savings will also depend on the type of RM compensation structure in place (e.g., how these savings are shared between your organization and the RM contractor).

You can now compare your current program cost with the estimated program cost of various proposals. Hopefully you have competitive bids that represent an immediate decrease in costs through transition savings, and you receive additional new RM services at this reduced cost. This then leads to savings from continuous improvements after the program is launched if it is successful. If all bids are higher than your current baseline costs, your RM team should decide whether the proposed additional services justify any increase over current costs.

A final word of advice on the value of RM—in evaluating the benefit of an RM program, we recommend you take a "cost neutral" stance. Cost neutral means that you pay no more than you are currently paying and still get new RM related services. In short, you get more "bang for your buck" since you receive additional RM services at no cost. Most organizations do not (or cannot afford to) devote significant resources to design and implement waste minimization and recycling programs. Allowing an external RM to share cost savings with you if they help you improve the management of your waste and recyclables makes good business sense. If your RM contractor successfully helps you find cost-effective ways to divert waste from landfills, then you will also share in the cost savings. More importantly, the environmental impact of your organization will be reduced.

Down-Select Bidders for Further Discussion/Evaluation (Optional)

In some cases, an obvious "winner" will emerge. For example, one bidder might be well below other bids, offer you immediate savings, and meet all qualifications. You will hope to receive several competitive bids from which you can choose the best-valued proposal, however. To save team members' time, you can choose several top proposals based on the results of the evaluation criteria and focus only on those. You can then invite the "down-selected" bidders to give oral presentations to help the team make their decision. If you decide to have bidders give a presentation, your team members should prepare a set of standard questions for all bidders. Those questions should address the most important issues and relate to issues that are most difficult to elaborate in the proposal, or can be better explained through interactive discussions. You might have specific questions for one bidder, but gathering information that is comparable among the selected bidders is easiest.

For all qualified bidders, seek recommendations from the bidders' references and summarize them for the team. The exhibit on the following page offers a sample list of some standard questions to ask each reference to ensure you make fair comparisons amongst bidders.

Examples of questions for bidder references.

Sample Questions for Bidder References

Scope of Your Program

1. What services does Company X provide for you? (e.g., recycling, marketing of recyclables, management of waste and recycling data, environmental reporting, outreach, and education)
2. What types of materials are covered by Company X's services?

Compensation

3. How is Company X compensated?
4. Do you share revenue from sales of recyclables?

Communications

5. Who is the point of contact at Company X? By what means and how often do you communicate with Company X?
6. Does Company X respond to you promptly? Are you satisfied with the level of communication?

Performance of Vendor

7. Is Company X providing sufficient resources to meet your needs?
8. Are you satisfied with the service provided by Company X?
9. Has Company X exceeded your expectations or their promise in any way? Have they fallen short in any way?
10. Have you ever experienced problems working with Company X? If so, how have these problems been resolved?
11. Have the services provided by Company X helped you to enhance waste diversion, recycling, and source reduction? If so, please provide examples of initiatives that have helped you to achieve your program goals.
12. Would you recommend Company X as a resource management provider? Why or why not?

[ ] Highly recommended [ ] Recommended

[ ] Doubtful [ ] Unsuitable

Select the Bidder and Present Your Recommendation to the Top Management

As you move toward negotiations, you will follow one of two approaches. If you have identified one clear winner, you will simply work with that bidder. Alternatively, if you have identified several qualified bidders, you might decide to negotiate with more than one company to see if you can again leverage to increase services or reduce costs. Limit negotiations to two or three bidders. Before you enter negotiations, ensure that whoever does the negotiations has the authority to make decisions, compromises, or tradeoffs.

Chapter 6: Signing the Contract and Measuring Program Success

With the hard part of the solicitation process behind you, you are now ready to enter final negotiations with the selected provider and sign a contract. The contract will not be a totally new document. Much of the contract is about packaging work products that have already been completed and making any necessary changes. The contract will consist of three main components:

1. **Standard terms and conditions.** Your organization should have a standard set of terms and conditions you can use. Consult your legal and procurement staff.
2. **Scope of services.** These can be taken directly from the RFP and the winning bidder's response. Make sure reporting and billings requirements, as well as any training and meeting participation requirements, are clearly defined.
3. **Compensation and RM incentives.** This section can be taken directly from the RFP, the winning bidder's response, and the terms of any subsequent negotiations.

In some cases, the contract can be the RFP and response to the RFP (after all points have been negotiated), along with the standard terms and conditions. Thus, your contract is largely created already and the payoff for your hard work is almost at hand.

Final Notes on Negotiation and Inking the Contract

Your goals in negotiation should reflect the nature of your RM program—a strategic partnership. Obtaining a fair price for existing service is important, but rewarding your RM contractor for making your program a success is equally important. Waste costs are often a small cost center, and *the real value of RM is obtaining value-added services without increasing your overall costs.* Before negotiation, you should bear in mind that the key to success of an RM program is cooperation and mutual benefits.

When the negotiation is complete, you should seek management approval for the final contract. Once the contract is signed, your company is entering a new relationship with your RM contractor. The contract represents the living document that will define your expectations and relationship with your RM. A clearly defined contract will avoid ambiguity about responsibilities and payment and is the foundation for an equitable partnership.

Measuring RM Contractor Performance and Program Success

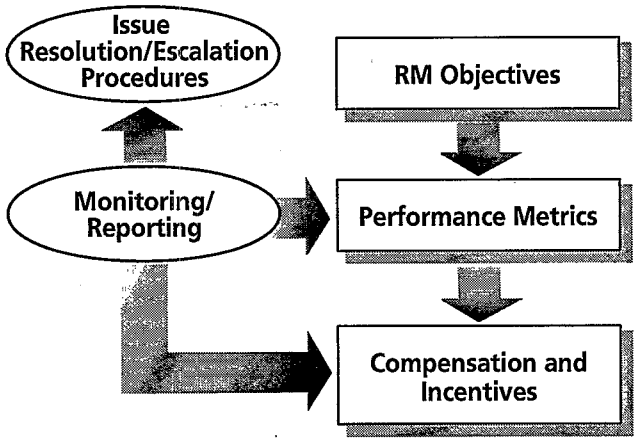
RM is based on a strong relationship between you and your contractor built on trust. The true success of an RM program will be determined in the long run by how effectively you communicate with your contractor (and vice versa), monitor and review performance, and take joint action to meet the stated RM objectives. Paying attention to all of the interconnected issues should facilitate program launch and foster continuous improvement in your program.

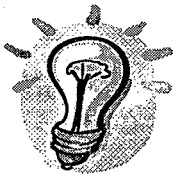
Monitoring your RM performance against simple, measurable metrics will ensure that standards and expectations are being met. Both you and your RM contractor should mutually agree upon reported metrics. Your baseline diversion and recycling rate(s) are a good starting point. The one reason for waiting until after the program is awarded is to address any uncertainty over the quality and/or availability of data. Metrics should be finalized in the first 3 to 6 months of the contract. A suggested set of metrics is provided in the text box below.

Sample Performance Metrics

- **Waste generation (tons/time period/# units)**—Normally measured as tons per time period (week/month) normalized to some business critical measure (e.g., per 100 widgets produced), # units produced (manufacturer), # guest nights (hotel), # square feet, employees, or net sales (retail).
- **Hauling cost per ton discarded ($/ton)**—This measures the efficiency with which the RM contractor is managing the cost of hauling materials (recyclables/waste) by optimizing compactor use, hauling only full containers, etc. The actual disposal tip fee on waste should remain constant.
- **Recycling rate (%)**—Equals weight recycled divided by (weight recycled plus weight disposed) multiplied by 100. This is a standard metric that is most often used to track recycling progress. Be aware that this measure can be affected by a decrease in total generation (lowering the denominator).
- **Capture rates for different materials (%)**—Equals weight of material recycled divided by (weight recycled plus weight disposed) multiplied by 100. Same calculation as recycle rate, only by material. This can be calculated only if recyclables of interest are segregated and waste sorts occur to determine the amount of the interested material disposed of as trash.
- **User satisfaction surveys**—For the people components (complaints, on time pick-ups, responsiveness to inquiries, improvement proposals, etc.).
- **Environmental benefits** such as greenhouse gas reductions (see Appendix G).

Figure 6.1: Linkages Between RM Objectives, Performance Measurement, and Compensation





Example performance metrics.

The more integrated the performance metrics, monitoring, and reporting requirements, the easier it will be to ascertain whether RM program goals are being met. See Figure 6.1. Although most data tracking and reporting will be completed by the RM contractor, you will be responsible for monitoring and managing progress.

Establishing reasonable but explicit communication protocols and conflict resolution processes will lead to mutual understanding and commitment to the program. The RM program and business relationship with your RM contractor is more likely to succeed if you plan for the following important communication pathways:

- **Meet on a quarterly basis with your RM team** to discuss progress, status, and performance of services. You should assign a single point of contact within your own organization who is primarily responsible for overseeing the RM contractor. Remember, your own employees will play a large role in making the program a success, and you might need to pull in your own personnel affected by the program (e.g., operations/facility maintenance, procurement) as necessary. These meetings provide a basis for regular communication and number of benefits:
  - They instill the "partnership approach" that leads to shared responsibility and initiative to work towards waste elimination.
  - In reviewing metrics, the RM contractor and your RM team can identify potential trends, and predict and preempt problems.
  - When a problem does present itself, meetings provide a venue in which to take action to resolve the issue early on before it becomes more costly to resolve. Meetings might reduce the chance of recurrence if problems are explicitly addressed.
  - They provide time to review contractor reports detailing waste reduction activities, cost savings, reductions in greenhouse gas emissions, and other metrics that gauge performance. The most detailed metrics will do no good unless tracked.

- **The contract should have established ground-rules and procedures** to resolve issues and conflicts, since questions will invariably arise. A protocol to discuss and escalate these issues to the proper decision-makers for resolution is key to keeping the program on track.

- **Ensure that proper support is being given to contractor** to help implement improvement activities.

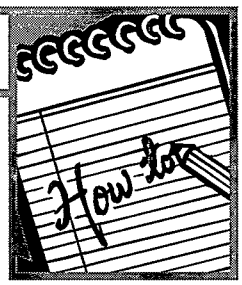
Your RM contractor should also establish a broad internal communications plan that informs internal players outside of the RM team of the status of the program. This step can be as simple as update postings in company circulars or newsletters, or optional "program update" brown bag meetings for interested employees. Because employees are on the "front lines," they can be an excellent source of information to bring up issues, concerns, or ideas. Your RM contractor has an incentive to play a key role in providing this internal communication because it will help keep the program on track and increase its chance of success.

Elements of Well-managed Performance-based Contractor Relationships

- Clear communication of company's business culture and program objectives.
- Performance-based compensation and incentives.
- Objective performance criteria that are negotiated, measured, and reviewed periodically to ensure consistency with program direction.
- Ongoing monitoring and exchange of knowledge and information.
- Formal process/reporting structure for issue resolution.

A final word of advice: the RM contractor's performance is only half of the picture—the other half is your job. Many organizations that have engaged in strategic partnerships with external vendors have run into problems and immediately assumed the contractor was not performing adequately. Success of the RM program is contingent on attentive management, timely feedback, and appropriate support for the contractor. The communication and performance measurement that is so essential to program success is a two-way street.

Appendix A: RM Resources



Resource Management

- EPA's WasteWise Program - *What is Resource Management?* <www.epa.gov/wastewise/wrr/rm.htm>
- *From Waste to Resource Management: Reinventing Waste Contracts and Services* (A discussion paper prepared for EPA) <www.epa.gov/wastewise/pubs/rmpaper.pdf>
- Resource Management Case Studies:
  - *Resource Management in Clark County, Nevada* <www.epa.gov/wastewise/pubs/clarkrm.pdf>
  - *Advancing Resource Management in Nebraska: A Research and Demonstration Project* <www.epa.gov/wastewise/pubs/ne_rm.pdf>
- "Strategic Contracting Increases Waste Prevention and Materials Recycling," *Resource Recycling*, March 2001. <www.epa.gov/wastewise/pubs/rr_rm.pdf>
- "Waste Service Providers Become Resource Managers," *Biocycle*, April 2000, p.51. <www.jgpress.com/BCArticles/2000/040051B.html>
- "Resource Management: Strategic Partnerships for Resource Efficiency," *WasteWise Update*, March 2002. <www.epa.gov/wastewise/pubs/wwupda17.pdf>

Waste Composition and Characterization

- California Integrated Waste Management Board - Solid Waste Characterization Database <www.ciwmb.ca.gov/WasteChar/DbMain.htm>
- Minnesota MSW Composition Study <www.moea.state.mn.us/policy/wastesort.cfm>
- Alameda County Waste Management Authority - Waste Characterization Studies (1995-1996, 2000) <www.stopwaste.org/reports.html>
- California Integrated Waste Management Board - Statewide Solid Waste Characterization Study in 1999 <www.ciwmb.ca.gov/WasteChar/default.htm>
- Oregon Department of Environmental Quality - State Waste Composition Studies from 1994, 1996, 1998 and 2000. <www.deq.state.or.us/wmc/solwaste/swrd.html>
- Missouri Recycling Association - 1999 Solid Waste Composition Study

<www.mora.org/Pages/sw_comp.htm>

- Washington Department of Ecology - Solid Waste in Washington State 10th Annual Status Report <www.ecy.wa.gov/biblio/0107047.html>; Solid Waste and Recycling Data <www.ecy.wa.gov/programs/swfa/solidwastedata/>

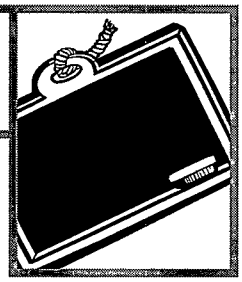
Recycling and Materials Recovery

- Oregon Department of Environmental Quality - 2000 Oregon Material Recovery Survey Report <www.deq.state.or.us/wmc/solwaste/documents/MRS2000Report.pdf>
- Minnesota Office of Environmental Assistance - SCORE Report: An Annual Evaluation of Minnesota's Recycling and Waste Management Programs <www.moea.state.mn.us/lc/score.cfm>
- California Integrated Waste Management Board - Disposal and Diversion Waste Statistics <www.ciwmb.ca.gov/lgcentral/Rates/>

Weight-to-Volume Conversion Factor

- Standard Volume-to-Weight Conversion Factor <www.epa.gov/epaoswer/non-hw/recycle/recmeas/docs/guide_b.pdf>

Appendix B: Sample RM Presentations



1. Presentation: Introduction to Resource Management

Resource Management:
From Waste to Resource Efficiency

- What is resource management (RM)?
- Why use RM to improve waste management and recycling?
- What are RM services?
- Where do contractor incentives come from?
- Who else is doing it?
- What are the benefits?
- How do we get started?

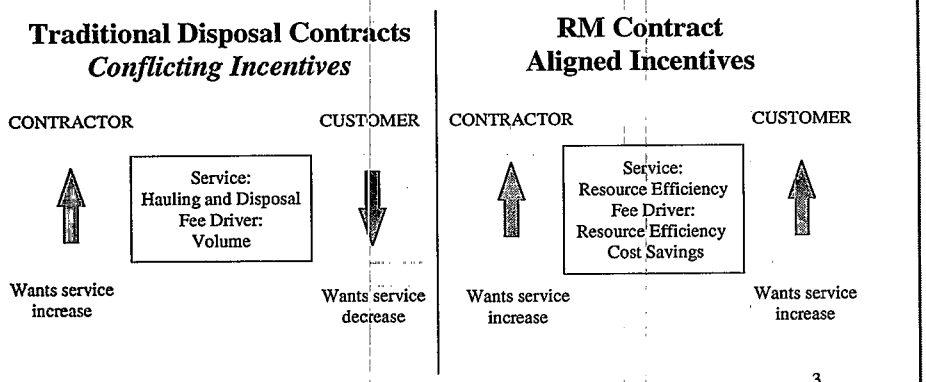
1

What is resource management (RM)?

- RM is a <u>strategic</u> alternative to traditional waste contracting and recycling
- RM contracts emphasize/reward resource efficiency (e.g., prevention, reuse, recycling, composting) throughout material life cycle rather than disposal
  - Pays single contractor for quality of service and continuous improvement in resource efficiency, rather than the quantity of waste disposed of

2

RM contracts align contractor and customer incentives and benefits



3

Why use RM to improve waste management and recycling?

- Funds spent on separate trash and recycling services could be pooled and put to better/more strategic use
- Contractors are the experts (and can do it cheaper in many cases)
- Resource (people) constraints internally
  - Means we focus on other more urgent priorities

4

Why use RM to improve waste management and recycling? (cont'd)

- Significant cost-effective opportunities to reduce waste, boost recycling, and optimize services
  - RM contractors will pursue them when offered proper financial incentives
  - Results in continuous improvement, no additional cost, and freedom to focus on core work
- Improve understanding, data visibility
  - To get incentives, contractor has to prove performance through documentation (ask yourself: do we have a good handle on our recycling rate? What is the potential to save by diverting/reducing?)

5

What are RM services?

- Single supplier for all services pertaining to resource efficiency (e.g., waste reduction, reuse, recycling, waste hauling)
- Range of services:
  - Management of subcontracts, oversight of internal processes to improve efficiency
  - Technical support: waste auditing, recycling improvements, waste reduction identification and implementation
  - Employee education/training
  - Comprehensive reporting, consolidated billing, and data management for environmental reporting

6

Where do contractor incentives come from?

- Financed from savings contractor achieves from the baseline (provided your performance targets met). Might include:
  - Avoided disposal costs, recycled material revenue from diverting more (less processing costs)
  - Avoided purchase and other costs for waste reduction/reuse initiatives implemented by contractor
  - More efficient hauling and material handling
  - Economies of scale, leveraged purchasing rates for subcontracted services

7

Who else is doing it?

- Savings at General Motors plants that have had RM contracting in place for one year or more:
  - Source reduction impacts: 20% reduction in overall waste generation (30,000 ton decrease)
  - Recycling impacts: 65% increase in recycling (from 50,000 tons to over 82,000 tons)
  - Disposal impacts: 60% decline in annual tonnage disposed of
  - Cost impacts: 15 to 30% decrease in waste management contract costs
- Multiple RM service contractors bid—suggesting profitable service provision

8

Who else is doing it? (cont'd)

- Public Service Enterprise Group (PSEG)
  - Rationale:
    - Collaborate with RM contractor to harvest lost recovery/recycling opportunities
    - Share responsibilities/benefits, organizationally aligned to process
  - Piloted at 40 facilities, now 120+
  - Reduced hazardous waste from 1,460 tons to 103 tons (1992-2000)
  - Reduced cost for haz and non-haz waste from $6 million to $4.25 million from 1994-1996
  - Recycled 94% of non-haz waste (80,712 tons) in 2000
  - Savings of $1.75 million for waste disposal/recycling over 3 years

9

Who else is doing it? (cont'd)

- Office buildings, universities, hotels, electronics and defense contractors, and hospitals committed to implement RM contracting in coming year
- Applicable to diverse organizations: commercial, industrial, institutional, municipal
- For more information, see *WasteWise Update* at: **www.epa.gov/wastewise/pubs.htm**

10

What are the benefits?

- Cost-effective service improvements
- Reduced contract administration
  - Single supplier manages all subcontracts
  - Consolidate billing
- Aligned contractor/customer goals
- Focus on "core competency"
- Improved data tracking, reporting

11

How do we get started?

- Establish cross-functional team
- Identify your management champion
- Verify current contractual obligations/contract expiration dates with purchasing department
- Assess baseline waste and recycling costs and service levels
- Develop options for improving resource management (internal vs. external provider)
- Develop proposal for management approval

12

2. Presentation: Baseline and Estimate of Resource Management Potential

Resource Management:
Baseline and RM Potential Estimate

- Current waste management programs
- Current contract costs
- RM objectives
- RM potential
- Proposed RM program and benefits
- Next steps

1

Current waste management programs

- Outline the following information, if known:
  - Number of waste/output streams
  - Waste handling/disposal systems (including personnel/contractor responsibilities, flow chart from waste to end disposal for wastes, including containers)
  - Tonnage/volume for each waste stream (exact reported in invoices or estimate of each waste stream based on service levels/assumed densities) can be presented as pie chart and/or separated by building if multiple facilities included
  - Identify what is recycled and present estimated or actual recycle rate (= total output as trash & recycling divided by recycling)
  - Number of vendors involved in handling all waste/recycling

2

Current waste management programs (cont'd)

Building/Waste Stream or Contract	Trash Tons	Recycle Ton	Recycle Rate
A	445.2	17.4	4%
B	36.5	20.7	36%
C	109.2	19.8	15%
D	139.2	9.3	6%
E	106.0	77.8	42%
Total	836.2	144.9	15%

3

Current contract costs

- Outline the following information, if known:
  - number of contracts to handle waste/recycling and materials handled in each, and scope of service (e.g., container rental, hauling, disposal)
  - Amount paid (or credited) in last calendar year on each contract, and brief explanation of rates (e.g., $/haul/$/ton, credit for recycling revenue determined by Official Board Markets)
  - Net cost for all contracts
  - Cost per ton managed for each
- Can be presented in table (see example next slide)

4

Current contract costs (cont'd)

2002

Building/Waste Stream/Contract	Cost	Net cu. yds.	Est. tons	$/ton
A	$19,084	3182	445.2	$42.87
B	$1,001	418	36.5	$27.40
C	$988	312	27.3	$36.20
D	$1,845	936	81.9	$22.52
E	$2,834	1591	139.2	$20.36
F	$2,893	494	106.0	$29.63
Total	$28,646	6,933	836	
Est. average $/ton	$34.55			

5

RM objectives

- Can include (but not limited to):
  - Pursue continuous improvement in resource efficiency (waste reduction, reuse, recycling/composting)
  - Reduce hazardous waste generation
  - Hold overall contract costs at or below current levels
  - Optimize current hauling, garbage disposal, and recycling operations and services to reduce overall waste management system costs
  - Have RM contractor develop a detailed tracking, reporting, and invoicing system to support goal setting, performance tracking, and decision-making ability
  - Tap contractor resources to help conduct educational outreach on aspects of the RM program or solid waste management

6

RM potential

- Insert results from your estimate of potential RM diversion and cost savings
- Normally consists of a chart or graphic with scenario depicting incremental increases in recycling and potential cost savings that might be used as contractor incentives (see example next slide)

7

RM potential (cont'd)

	Resulting Net Recycle Rate	Avoided Disposal Fee	Revenue	Total Savings	Savings as a % of Net Contract Costs
Current	15%	$4,883	$755	$5,638	NA
Scenario 1	26%	$8,036	$1,002	$9,038	12%
Scenario 2	39%	$11,442	$1,229	$12,671	24%
Scenario 3	54%	$15,302	$1,456	$16,758	38%

8

Proposed RM program and benefits

- Outline the following information:
  - Scope of services
  - What will change (e.g., contractor as partner, better reporting)
  - Potential metrics to ensure cost savings, recycling, and waste reduction performance
  - Timing of implementation
  - Estimated resources needed to implement

9

Proposed RM program and benefits (cont'd)

- Benefits
  - Cost-effective service improvements
  - Reduced contract administration
    - Single supplier manages all subcontracts
    - Consolidate billing
  - Aligned contractor/customer goals
  - Focus on "core competency"
  - Improved data tracking, reporting

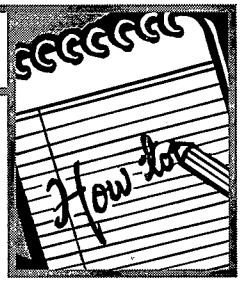
10

Next steps

- Verify expiration dates of major contracts
- Approval from top management to begin developing the RFP
- Hold initial kick-off meeting of cross-functional team
- Set workplan and schedule
- Begin drafting RFP

11

Appendix C: Sample Work Plan

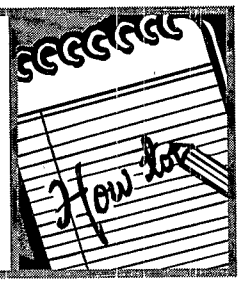


Action Item	Tasks	Relevant Manual Chapter
Evaluate Current System, Conduct Cost Baseline, and Design Your RM Program		
Identify current contractual obligations and terms	■ Seek assistance from contract and procurement departments to identify the current contractors for waste and recycling related services, the length and terms of the services contracts, and whether you will incur any penalties for switching contractors	Chapter 2
Evaluate existing waste/ recycling system and cost	■ Get all team members to characterize the current waste and recycling system (map material flows) ■ Baseline current service level, and waste and recycling levels ■ Finance department to provide information for estimation of total system cost (compare prices set out in contracts with actual bills for services; include internal management cost)	Chapter 3
Identify potential cost savings and other benefits from diversion (note: this step is optional)	■ Estimate the potential cost savings from increased diversion and recycling ■ Estimate the potential in reduction of greenhouse gas emission ■ Estimate reduction in energy use	Chapter 3
Determine the scope of RM program	■ Determine initial range of services/materials to be covered by contract	Chapter 4
Develop a Request for Proposal (RFP)		
Draft RFP	■ Draft an RFP that includes program goals and services desired	
Review draft RFP	■ Get all team members to review draft RFP—set a firm deadline for comments	Chapter 4
Finalize RFP	■ Receive and incorporate comments as appropriate	
Approval of RFP	■ Upper management/legal department sign-off on RFP	

Action Item	Tasks	Relevant Manual Chapter
Solicit Bids		
Compile list of prospective providers	■ Using local and other resources, such as trade associations (recycling, waste, environmental), compile list of potential providers	Chapter 5
RFP release to prospective providers	■ Release RFP to those interested bidders ■ Inform organization personnel that an RFP has been issued (give them this schedule)	
Pre-bid conference	■ Conduct a pre-bid meeting to familiarize bidders with organization, nature of RM and goals, "rules of the game," and facilities	
Deadline for submission of questions on RFP	■ Allow bidders to submit questions on RFP	
Receive bidder questions	■ Acknowledge receipt of each query and indicate when responses will be sent	
Send out summary of questions, comments and/or amendments of RFP to all candidates	■ Compile list of all questions and answers and submit to all bidders	
Receive proposals	■ Acknowledge receipt of each proposal	
Bid Review and Selection of Contractor		
Develop evaluation criteria/ process	■ Establish criteria by which the bids will be evaluated	Chapter 5
Bid evaluation	■ Have all team members separately rate each proposal according to the pre-determined scheme. Convene a meeting to achieve consensus or down select two to three bidders.	
Request further presentation for downselected bidders *(Optional and only if a clear selection has not yet been made)*	■ Invite downselected bidders to give oral presentation	
Present recommendation to upper management	■ Once a final bidder has been selected, develop presentation with key costs and benefits of the proposed RM program and an implementation plan ■ Make presentation and appoint negotiation team to enter into contract negotiation	
Approval and notification of the selected provider	■ Notify the selected provider of the decision and all unsuccessful bidders	

Action Item	Tasks	Relevant Manual Chapter
Contract Preparation and Negotiation		
Draft RM contract based on RFP	■ Draft RM contract based heavily on RFP and winning proposal, use legal department as resource where appropriate (e.g., for terms and conditions)	Chapter 6
Review draft RM contract	■ This task falls to the champion and legal department	
Negotiate RM contract, determine transition start date	■ Might involve up to a to full day working session, depending on scope	
Finalize and sign contract	■ Sign contract and celebrate your hard work!	
Contract Implementation		
Begin implementation	■ If there is a time lag, have periodic meetings between contract signing and start date to chart plans and resolve any outstanding issues (gets the partnership off on the right foot!)	Chapter 6

Appendix D: Model Language for Resource Management Request for Proposal (RFP)—Commercial /Industrial Sector



This appendix presents model language to help you develop your RFP for RM services. It provides key RFP components and a format to successfully solicit RM services.

The model RFP is just an example, however, it will not cover all conditions and circumstances. It is suitable for use in most commercial, industrial, and institutional settings. The suggested language should be considered a point of departure to begin building your own tailored RFP. You will likely need to make some modifications to suit your specific organization's needs and situation.

For each section and subsection, normal font text is our suggested model language, while italicized text represents our comments or guidance on what should generally be included in a section, and/or its relevance to the overall RFP process. References to "Attachments" are documents in the main text of the RFP to: 1) provide supplementary guidance to bidders, and 2) request more information (references, general information, RM compensation tables). These should not be confused with the Appendices to this RM manual.

Date

To: Prospective Bidders

Subject: Request for Proposals (RFP): Resource Management Services for X Company

X Company requests interested and qualified firms to submit offers in response to this RFP seeking resource management (RM) services for its [*number and location*] facilities.

X Company feels there is opportunity to improve its resource efficiency by reducing waste generation, beneficially reusing materials, and increasing recycling of materials currently disposed of as waste. X Company wishes to enter into a multi-year partnership with the right provider to drive, implement, and manage these efforts. The purpose of this RFP, therefore, is to obtain the expert management services of an RM contractor (henceforth "Contractor") to eliminate, reduce, re-use and recycle materials as well as (as a last resort) dispose of all wastes generated at our company. Further information on resource management can be found in Attachment I to the RFP and at the EPA's WasteWise Website at <www.epa.gov/wastewise/wrr/rm.htm>. The program will include economic incentives for the Contractor to divert materials currently going to the landfill and incinerator, or otherwise reduce waste generation.

This RFP seeks bidders who are committed to proactively partnering with X Company to ensure the application of best practice to increase overall resource efficiency at X Company's facilities. We seek a proven, high-performing contractor with management and technical staff and significant corporate commitment to achieve the RM objectives detailed in [*section reference*] of this RFP.

This letter provides a summary of the salient elements of the RFP. Bidders are cautioned to carefully examine the entire RFP and the requirements contained therein before responding.

The following are key milestones for this solicitation:

- Bidders intending to propose must fax Attachment B - "Statement of Receipt, Authority, and Intent to Propose" to the X Company primary contact by [*date/time*].
- A pre-bid conference (required) will take place on [*date*] from [*time period*], beginning at [*location*]. After the meeting, tours of the facilities will be provided.
- Questions and clarifications to the RFP must be submitted by [*date/time*].
- Proposals are due on [*date/time*].
- The contract is expected to be awarded by [*date*].

Bidders are encouraged to submit questions and clarifications pertaining to the RFP (by e-mail to the primary contact) as soon after its release as possible to allow us time to respond as fully as possible.

Proposals will be evaluated on the basis of the evaluation criteria listed in [*section reference*] of the RFP. The highest rated, competitive bidders may be required to make presentations to X Company sometime in [date range] for clarification or expansion on specific portions of their proposals. X Company will subsequently select the firm that offers the best overall value to X Company considering their response to the RM requirements and evaluated approach to optimizing total system-wide resource efficiency to achieve environmental gains and share cost-savings. X Company reserves the right to hold discussions with bidders that are the most competitive, or to reject any or all bids. The contract will be for a base period of [length of intended base contract] years with [number and length, e.g., 2 one-year] year extension options contingent X Company's satisfaction with the chosen contractor's RM program.

The RFP contains the following sections:

- **Section 1: Introduction** - Organizational background, goals/objectives for RM program
- **Section 2: Bid Instructions** - Provides required content and format for proposals, schedule, evaluation criteria, and other "ground rules" for the solicitation process.
- **Section 3: Scope of Services** - General requirements and terms for the contract (i.e., services requested, terms, locations, supplier capabilities and other requirements).
- **Section 4: RM Requirements** - Provides the requirements bidders' proposed RM services must meet, and provides the format "template" that must be followed in preparing their narrative responses.
- **Section 5: General Specifications** - The initial business terms that must be agreed to by the successful bidder.
- **Section 6: Pricing** - Gives instructions on how to provide bids for the base financial proposal and guidelines for proposals on the required resource management compensation structure. (Attachment C provides the template and further instructions for pricing.)
- **Attachments A-I** - Supporting information and several reference and authorization forms that must be returned and completed by bidders for their proposals to be considered responsive.

X Company has provided bidders the opportunity to propose their own approach to certain elements of contract compensation, including gain-sharing of documented cost savings from diversion and waste reduction initiatives. The objective is to provide bidders the flexibility to innovate and distinguish themselves while meeting our requirements.

All communications for submittal of questions and proposal correction or withdrawal prior to the closing data should be made via e-mail to the primary contact:

Name: _____
E-mail: _____
Fax: _____
Address: _____

We hope you will choose to submit a proposal to provide RM services at X Company's facilities, and look forward to seeing you at the pre-bid conference!

Sincerely,

Signatory

"X" COMPANY

REQUEST FOR PROPOSAL (RFP): RESOURCE MANAGEMENT SERVICES

Issued by:
X Company

Date Issued:
[*Date*]

Response Deadline:
[*Date*]

Information included in this RFP, including information subsequently released by X Company during the RFP process, is strictly confidential, and may not be used for any purpose other than responding to this RFP, and may not be disclosed to any third parties without the prior written consent of X Company.

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1.0 INTRODUCTION

This section provides information on X Company, the purpose and objectives of this solicitation and the resource management program, and an overview of the current waste management and recycling program at the X Company facilities included in this RFP. *This section provides bidders an introduction to your organization and your purpose for the RM contract on which they are bidding.*

1.1 Organizational Background

This section should present information that you feel is relevant to the providing bidders with a solid overview of your organization, its purpose, geographical location, key clientele and partners, size, and environmental/social/business ethic as rationale for pursuing an RM partnership. Much of this information can be gathered and condensed from your general business communications or marketing materials. Information that you should consider might include (but is not limited to):

- *Business sector/mission/purpose*
- *Brief organization structure (if there are multiple operating entities, for example)*
- *General operating area/region, and extent/scope of RFP (# facilities included)*

(Note: Detailed facility information, if there are multiple facilities, may go in an attachment, which you may wish to reference in this section)

- *Number of employees*
- *Facility square footage*
- *Other size indicators ($ revenue, etc.)*
- *Other general information that distinguishes your organization and would provide bidders a better understanding of your operating environment*

Not all of this information may be available or relevant. This section should generally be less than one page in length.

1.2 RM Program Purpose

The purpose of X Company's RM program is to obtain the expert management services of an RM contractor (henceforth "Contractor") to eliminate, reduce, re-use and recycle materials as well as (as a last resort) dispose of all wastes generated at X Company's properties/facilities/other. Further information on resource management can be found in Attachment I. The program will include an economic incentive for the Contractor to divert materials currently going to the landfill, or otherwise reduce waste generation. This initiative is a strategic sourcing partnership in which X Company wishes to collaborate closely with the selected Contractor to meet X Company's goals while creating value for both parties through savings from improved resource efficiency. It is intended that the successful bidder will be the driving force behind increased diversion, working in partnership with X Company's employees and contractors. Further, the chosen RM contractor will perform its work in the spirit of X Company's environmental policy (see Attachment F).

If there are other specific purposes for your organization's RM program, please add these here as text or bullet items.

1.3 RM Program Objectives

The Contractor's program shall meet the following objectives:

1. Pursue continuous improvement in resource efficiency (waste reduction, reuse, recycling/composting), and with X Company's approval, take a lead role in identifying, designing, and implementing innovative, cost-effective means to reduce waste generation and increase diversion at X Company's facilities.
2. Optimize current hauling, garbage disposal, and recycling operations and services to reduce overall waste management system costs.
3. Develop a detailed tracking, reporting, and billing/invoicing system to support X Company's goal setting, performance tracking, and decision-making ability.
4. Collaborate with X Company's staff to implement the RM program. This includes conducting educational training and outreach as necessary on aspects of the RM program, including but not limited to, recycling procedures or waste minimization.

1.4 Overview of Current Solid Waste Management at X Company

This section provides bidders with a concise but comprehensive description of "material flow" and waste/recycling/composting processes within your organization. This should include, at a minimum, the following information:

- *Identification of operations/areas/processes that generate different types of waste (e.g., kitchens generate over X% of our corrugated cardboard and organic wastes).*
- *Identification of key internal or contracted labor that handle/transport/separate waste internally (e.g., internal/contracted custodial, specific types of employees, all employees).*
- *System to separate and transport from point of generation to loading dock to contractor vehicle.*
- *Identification of materials that are currently recycled, and amounts (volume or tonnage, with tonnage the preference) identified for one or more recent years.*
- *Identification of tonnage disposed of in one or more recent years.*
- *Service levels for all contracts (all recycled, disposed streams to be included in the scope of RM contract) - this includes rented container/compactors numbers and volume, pick-up status (given schedule, such as 5x per week on 35-yd compactor, or state "as needed" if your service is on an "on call" basis), and details on any other waste/recycling services for which you incur costs, such as shredding/confidential services, etc. (see Table A1 of Attachment A).*

- *The nature of annual generation (i.e., identify fairly constant streams and those that are more sporadic, such as end of year clean out in a university setting). As noted in Chapter 4 of this manual, it is best to leave the sporadic waste streams out of the base scope of work. The sporadic waste stream can always be rolled into the RM program as "additional service" per Section 3.5 of this RFP.*
- *Estimated diversion rate (including recycling and any composting programs).*
- *Particularly successful or planned recycling programs, or areas for improvement or programs that you have been thinking about (e.g., recycling/reusing fly ash, initiating reusable containers program) and would like help implementing.*
- *Any operational issues that may affect program, such as planned renovations/ construction projects, or other potential constraints.*
- *Any other details that will allow bidders to get a better sense of your current programs and services.*

You should also have a statement pointing to an attachment that you will put together detailing all volumes/tonnages and service levels, such as: "Attachment A provides X Company's solid waste and recycling volume estimated for [most recent year] and the current waste/recycling service levels." *As a general rule, it is to your advantage not to disclose current rates or costs of services.*

2.0 BID INSTRUCTIONS

The following section provides instructions for preparation of bid materials that must be followed if a bidder is to be considered responsive. The information in this section should be considered the "ground rules" for the solicitation process and is intended to assist you in preparing your proposal.

The section that follows is intended to provide general terms that should be followed, and as indicated above, delineates the general procedures and conditions for the solicitation. The most critical components of this section are the required proposal components and format (2.4), and the evaluation criteria (2.6). These 2 sections can also go in its own stand-alone section to call out its importance. In addition to those paragraphs presented here, your procurement office may have additional standard instructions that might need to be included.

2.1 Statement of Receipt, Authority, and Intent to Propose

All bidders must submit a Statement of Receipt, Authority, and Intent to Propose (Attachment B) **via fax** to the X Company primary contact, [*name*], (see Section 2.3) on or before [*time and time zone*], [*date*], [*year*]. Failure to return an executed Attachment B by this date will disqualify the prospective provider.

This gives bidders the first requirement up front to complete the relevant attachment and return by a specific date. The form allows you to ascertain the number of companies that will bid, the number declined, and provides a single point of contact for each bidder for all communications. The form is also a type of solicitation contract that has each party sign off on certain conditions, such as confidentiality, independent preparation of

proposals (ensuring open competition and eliminating potential for collusion), and certification that the signatory has the authority to make a binding proposal on behalf of his/her company.

2.2 Pre-bid Conference and Facility Tours

A pre-bid conference and tours of the facilities included in this RFP will be held at [*location*] on [*date*], [*year*] from [*time*] to [*time*]. **Bidders who intend to submit a response are required to attend the pre-bid meeting and tours.** Bidders should also provide, on the "Statement of Receipt, Authority, and Intent to Propose" form (Attachment B and see Section 2.1), the names and contact information of all persons from your company who are planning to attend the conference and tour. Please limit the number of people attending from your company to three (3).

The preliminary agenda includes:

- Overview presentation by X Company explaining purpose of RM and operational overview
- Q&A by bidders
- Facility (or facilities) tour *(one consideration is whether you will provide transportation for bidders if the tour is of multiple facilities in a locale/region)*

2.3 Queries and Primary Contact Person

All inquires about this RFP must be made in written form, via e-mail, to the X Company primary contact:

Name: [*name*]
E-mail: [*e-mail*]
Fax: [*area code + fax*]
Address: [*regular mailing address*]

In the interest of fairness and the best program outcome, any questions and responses will be distributed via e-mail to all prospective providers who have indicated an intent to submit a proposal. The identity of companies who submitted questions will be kept confidential. All questions must be received by [*date*], [*year*], before [*time*]. Responses to all questions will be issued to all providers by X Company on [date], [year], before [*time*].

2.4 Proposal Required Contents and Format

At a minimum, each base proposal should address all of X Company's requirements in two volumes:

1. A narrative response specifying a preliminary operations plan for an RM program that addresses services requested in Sections 3 (Scope of Services) and 4 (RM Requirements)

while taking into consideration service levels in Attachment A. (Please note that the sub mitted response must follow the same headings provided in Section 4).

2. A base proposal and proposal for RM compensation in accordance with Section 6 (Pricing) and Attachment C (Bid Response Forms).

You should also bear in mind the proposal evaluation criteria outlined in Section 2.6 in preparing your responses. **Complete responses must be received via 1) e-mail and 2) mail/courier no later than [*time, time zone*] on [*date*], [*year*], to the primary contact noted in Section 2.3. Proposals received after the time and date specified above will be declined.** A complete proposal for this RFP should contain two (2) hard copies printed on 100% recycled paper with at least 50% post-consumer recycled fiber content. All bidders are also requested to submit an electronic copy of a complete response as Microsoft Word® (*or other required format*) documents via e-mail by the above date and time.

Bidders should respond to the points raised as directly as possible. Proposals that are incomplete, not properly endorsed, do not follow the requested format, or otherwise are contrary to the guidelines of this RFP may be rejected as non-responsive.

2.5 Proposal Schedule

The following timeline will be used for this selection process. *(If you choose to add times for milestone deliverables, be sure to specify appropriate time zone).*

DATE	ACTION
[*Date*], [*Year*]	RFP released to prospective providers via e-mail/fax
[*Date*], [*Year*]	Pre-bid conference and facility tours, [*time*] to [*time*]
[*Date*], [*Year*]	Submission deadline for questions on RFP to X Company primary contact, by [*time*]
[*Date*], [*Year*]	Summary of responses to all provider questions e-mailed to all providers, by [*time*]
[*Date*], [*Year*]	RFP responses due, by [*time*]
[*Date*], [*Year*]	The winning bidder is notified
[*Date*], [*Year*]	Contract development, definitive terms and conditions are negotiated. Transition start date is decided
[*Date*], [*Year*]	Estimated program implementation/start date

2.6 Response Evaluation Criteria

The evaluation criteria for RM responses include the following: *(criteria are not in order of ranking or weighting, although you may wish to do so and assign approximate percentage to each)*

1. Proposal Presentation
   - Thoroughness/completeness of proposal
   - Clarity and adherence to format

2. Bidder's Qualifications
   - Overall company quality in terms of reputation, financial strength, continuity of management, and ability to support indemnification and performance guarantees
   - Corporate experience and performance in waste reduction, and management of contracts of similar size and nature
   - Product quality offered, customer focused processes

3. Technical/Service
   - Ability to meet X Company's RM requirements (per Sections 3, 4)
   - Proposed approach to transition that minimizes impact on facility operations, overcome barriers, and quickly launches RM program
   - Service capabilities and responsiveness
     - Supply chain management
     - Source capabilities/Tier I integration (ability to source and manage any sub-contractors)
     - Environmental health & safety experience and record with respect to applicable regulatory programs
     - Customer communications
     - Technical staff qualifications
   - Ability to provide continuous, value-added strategic services to achieve goals
   - Ability to facilitate continuous reduction in waste generation and increase diversion

4. Management
   - Management leadership

5. Financial Benefit
   - Demonstrated price/cost reductions for total waste management system

X Company intends to award a negotiated contract to one firm to provide the services required under the terms and conditions it considers to be most favorable among those offered. Lowest price will not be the sole determining factor in awarding the contract, but rather X Company may award to the bidder whose proposal, in our opinion, represents the ***lowest and best value bid***. The winning bidder should demonstrate how it can provide the best level of service in relation to cost. For example, the bidder will have the ability to handle the full variety of resource management requirements, a reputation of providing exceptional service, a good financial condition, experienced management, reliability, demonstrated experience in comparable operations, a good

safety record, a high level of compliance with all relevant regulations, and a record of strong support for recycling, composting and waste prevention efforts.

The above list of evaluation criteria is not exhaustive and your organization, from its past contracting experience, may have additional factors that it wishes to consider. These can be added as necessary.

2.7 Proposal Correction or Withdrawal of Proposal Prior to Closing Date

Any proposal may be withdrawn or modified by written request of the bidder provided such request is e-mailed to X Company by the deadline stipulated in Section 2.4. Modifications received after the due date will not be allowed. Each correction to your proposal must be clearly marked and initialed by the bidder. X Company or its representatives reserves the right at any time to request clarification from any or all bidders submitting a proposal.

2.8 Additional Information, Investigation and Inspection

X Company reserves the right to request site visits to one or more of the bidder's existing customer facilities, to speak directly to a provider's references, and to make independent investigations as to the qualification of any bidder at anytime during the process. Performance information may be solicited from any available source. X Company may request additional information by suppliers to clarify elements of their bid proposals. X Company will notify companies after all bids are received on whether a presentation is required.

2.9 Confidentiality of X Company Information

The terms of this RFP, and all other information provided, are to be treated by your company as strictly confidential and proprietary. All data and business information is to be used solely for the purpose of responding to this inquiry. Access to this information shall not be granted to third parties except upon prior written consent of X Company and upon the written agreement of the intended recipient to treat the same as confidential. No news releases, public announcements or any other references to this proposal shall be made without the prior written consent of X Company. We may request at any time that any of our material be returned.

Should there be a breach of this request for confidentiality or other restrictions identified in this RFP, the bidder will be eliminated from consideration for this RFP.

2.10 Confidentiality of Proposals

All proposal materials shall become the property of X Company and will be held confidential. Any copies of submitted proposals will be limited to X Company employees and consultants on a need-to-know basis. No proposals or associated documentation will be returned.

2.11 Responsibility for Costs

X Company will not reimburse any bidder for any costs involved in the preparation and submission of the proposals, in making an oral presentation, or in contract negotiations. Bidders are responsible for all costs associated with responding to and submitting a proposal as part of this solicitation process.

2.12 Non-Standard Proposal Submissions

While we recognize that this RFP may request that you describe your business in ways that are different than your normal business practice, we nonetheless require that proposals be submitted in accordance with the instructions contained in this RFP. Suppliers are cautioned that proposals must follow the required format as outlined in this section, Section 4 (RM Requirements), and Attachments B through E.

2.13 Reservations and Limitations

X Company reserves the following rights and options:

- To reject any and all proposals that fail to meet the literal and exact requirements of the specifications provided in this RFP document
- To accept the proposal that is, in the judgment of X Company, in the best interest of X Company and its facilities
- To reject any and all non-responsive proposals
- To waive irregularities in any proposal as X Company may elect to waive
- To reject all proposals without cause
- To issue subsequent requests for new proposals
- To discontinue its negotiations after commencing negotiations with a finalist, if progress is unsatisfactory, and commence discussions with another bidder

3.0 SCOPE OF SERVICES

This section provides a general description of the scope of services sought, period of performance, locations of service, and other issues pertaining to providing RM services. The minimum RM elements that should be considered in bidders' narrative proposals are further detailed in Section 4.

This section lays out the basic understanding for what services are requested, period and place(s) of performance, and considerations including additional work and sub-contractor relationships.

3.1 General

The Contractor will be required to expertly manage all wastes generated by X Company at the facility/ facilities enumerated in Attachment A according to the following hierarchy: (1) reduce generation of discards[1], (2) reuse/return/donate[2], (3) recycle/compost, and (4) dispose. Services required of the successful bidder include the following:

[1] This includes any mutually agreed upon material that is deemed "waste," recyclables/compost, or surplus. The emphasis is limiting materials that need to be managed as outputs.

[2] This may include, for example, internal reuse programs, working with suppliers on return/takeback arrangements, or donating surplus materials to charitable organizations.

- Provide containers, collection, pick-up, transportation, segregation, specific processing, shipment and marketing of discarded materials;

  - Development and implementation of plans for the reduction, reuse, recycle and/or final disposal of all waste materials generated by X Company's facility/facilities with X Company's approval;
  - Oversight and coordination of on-site source separation;
  - Training for X Company staff and limited X Company contractors;
  - Performance monitoring, data tracking, and comprehensive reporting;
  - Consolidated billings for applicable facilities at required level of detail;
  - Participation in X Company RM team meetings as required;
  - The successful bidder shall also—with X Company's assistance—develop, maintain and follow work instructions, safety rules, and established policies & procedures as they apply to non-hazardous and hazardous waste management activities.

Bidders shall submit, as the main portion of the narrative proposal, a three (3) year Operations Plan per Section 4.3 that details the approach and methods for achieving the stated purpose and objectives of the resource management Program while managing wastes according to the hierarchy given in Section 3.1. The remainder of the narrative proposal will cover other critical elements of the program as enumerated above and detailed in Section 4.

Upon negotiation and mutual agreement at a later date, additional materials, including universal wastes, may be added to the scope of services.

3.2 Period of Performance

X Company is looking for a strategic long-term partner and understands many resource efficiency initiatives will take time to develop a comprehensive program. As such, this contract will be awarded for a minimum period of [*# of years of base contract*] with [*# of years for renewal option*] one-year renewal options. The initial three-year period is a commitment to work with the contractor on the RM program, after which the program may be extended for a maximum of four one-year periods if the program is successful and meets X Company's expectations.

Note: As the success of an RM program rely on a established strategic partnership, we recommend the base contract length be no less than 3 years.

3.3 Supplier Capabilities

It is understood that the primary supplier responding to this request for proposal may not have the capability to undertake all the tasks outlined. The successful candidate may develop cooperative agreements with subcontractors in order to provide and manage the full scope of services requested by X Company. Detailed information on these collaborations must be submitted as part of the original proposal (see Section 4.1).

3.4 Additional Services

From time to time the RM contractor may be asked to perform extra services not specified within this scope of work. This work will be reimbursed by X Company under a separate purchase order. This type of work may, at X Company's discretion, be competitively bid.

4.0 RM REQUIREMENTS

This section outlines minimum responsibilities and activities the Contractor will be required to perform. All narrative proposals should follow the headings below, and provide concise responses to the information requested. Bidders are expected to respond to all items in as much detail as necessary for X Company, its representatives and consultants to make a fair evaluation of your firm and the proposal for ranking.

This section spells out the specific RM requirements that bidders will need to respond to in the narrative portion of their proposals.

4.1 RM Program, Management, and Business Systems

Provide a brief description of your overall management and business systems as they pertain to the following:

- Describe your vision of an RM program for X Company.
- Identify your specific project personnel or teams that will be devoted to X Company's RM program. Include how staff devoted to X Company's RM program will interact or utilize overall company resources/expertise (include training they may receive or corporate resources or networks that will benefit X Company).
- Employee stability is essential to the programs success. What does your company do to maintain a stable workforce?
- Discuss the relationships that you plan to establish with X Company and each of its facilities included in this RFP. Include in your discussion, where applicable, the relationships you propose to establish with X Company staff and contractors or suppliers.
- Your response must identify any third parties with whom you will partner to provide the RM services requested in this RFP, including which elements you propose each third party will cover, and their credentials to provide these services.
- Complete Attachment D, "Supplier General Information."

4.2 Environment and Safety Issues

The RM contractor must comply with all applicable regulations (local, State, Federal) and X Company policies governing the recycling, storage, transportation and disposal of waste streams. Lack of knowledge of the bidder shall in no way be a cause for relief from responsibility or constitute a defense against the legal effects thereof.

- Describe your environmental and safety programs that apply to managing risks associated with the primary supplier function. Discuss the regulatory expertise of the staff members you propose to work for X Company.

4.3 Operations Plan

The RM shall provide a preliminary 3-year plan that outlines the approach and methods for achieving the purpose and objectives of RM in Sections 1.2 and 1.3 and the management of wastes per the management hierarchy in Section 3.1. X Company understands that data in this RFP is limited and that the successful bidder will refine their plan as they become more familiar with individual facilities. The operations plan in the proposal should provide a methodology, labor, equipment, and concrete opportunities for improvement in managing X Company wastestreams. The proposal should also include an approach for program transition, a tentative schedule for implementing ideas proposed to meet the RM programs' goals, and prior experience rolling out these types of programs with other clients comparable to X Company.

Attachment A contains existing levels of service for the X Company facilities covered in this solicitation. Bidders can base their operations plan on existing levels of service and the facility tours to be conducted after the pre-bid conference.

The operations plan should specifically address how you propose to handle the management of wastes in areas below. The following paragraphs outline minimum expectations/responsibilities of successful bidders in each of the four areas:

4.3.1 Reduce Waste Generation

- Identify all opportunities at each site to reduce the volume of waste generated with consent and collaboration of facility management.
- Work with designated X Company and designated personnel to develop plans and project savings.
- Obtain X Company approval for implementation.
- Implement and monitor outcomes and savings, and report metrics in writing to X Company on a quarterly basis.
- Educate and train X Company employees as needed on source reductions measures.

4.3.2 Reuse/Return/Donate

- Identify opportunities to eliminate waste being disposed of or landfilled by reusing or returning purchased materials (e.g., shipping containers or pallets) or packaging. This will involve working with X Company and operating company procurement/purchasing staff and their suppliers.
- Work with designated X Company and facility-designated personnel to develop plans and project savings.
- Obtain X Company approval for implementation.
- Implement and monitor outcomes and savings, and report metrics in writing to X Company on a quarterly basis.
- Educate and train X Company employees as needed on any instituted reuse/return programs.

4.3.3 Recycle/Compost

- Develop plans to source separate, collect, process, segregate, store, weigh, and keep records for all recyclable materials diverted from X Company waste streams.
- Identify the best markets for recycled materials and arrange for collection, processing and transportation of these resources.
- Identify opportunities to increase diversion through improvements to existing recycling programs and new recycling or composting programs.
- Current recycling programs include *(list all programs here, including any composting)*. The successful RM contractor will be expected to expand and improve these programs, while adding additional materials for recovery where practicable.
- Design and implement effective source separation and recycling programs while decreasing overall operational costs.
- The volume, weight, frequency of pickup, and revenue from recycled materials, tonnage and all other relevant metrics must be reported to X Company on a quarterly basis.
- The Contractor will be required to maintain third-party receipts, for the duration of the contract, showing weights of materials sold, resulting costs and revenues. X Company maintains the right to review all such documentation, within one working day of its request, at any time during the contract.
- Educate and train X Company employees as needed on proper compost procedures, segregation of recyclables/waste, and effects of recyclable contamination.

4.3.4 Waste Disposal

- Arrange pick-up schedule, transportation, and disposal of all non-recyclables from X Company's facilities.

- Measure X Company's waste destined for off-site facilities, maintain accurate records of each pickup's weights and volumes, and provide cost breakout for transportation and disposal fees (and any container rental fees if applicable) with each bill.
- Review, modify, maintain or establish all necessary waste management practices which provide contractor and X Company with understandable and controllable work instructions.
- Comply with all applicable regulations and X Company's policies governing the recycling, storage, transportation, and disposal of trash.
- Report in writing, the tonnage, costs, and disposal site(s) of all X Company waste, and implement and monitor outcomes and savings, and report metrics in writing to X Company on a quarterly basis.
- The Contractor will be required to maintain third-party receipts, for the duration of the contract, showing weights of materials disposed and tip fees, and X Company maintains the right to review all such documentation.

4.3.5 Process for Continuous Improvement

- Explain your process to provide continuous improvement over the term of the contract (audits, outreach and communications, etc).

4.4 Waste Composition

- Describe the approach you will use to measure or estimate the composition of X Company waste streams.
- Identify your data information management tools that will be used to track X Company waste streams.

4.5 Billing

- The contractor shall provide monthly billing statements to X Company with all hauling costs separate from secondary material processing, recycling revenues/fees, or waste disposal tip fees. Propose line items you envision that meet the above requirements for cost transparency.
- Present your procedures for billing and allocation of costs (from pick-up to bill).

4.6 Reporting and Performance Review

The selected RM contractor will provide a comprehensive quarterly report that includes all activities related to recycling and waste minimization efforts including costs, metrics, service levels, etc., and that provides visibility into waste minimization/recycling progress, performance, and costs/savings. With this in mind:

- Discuss what should be included in quarterly progress reports to X Company.
- Discuss your approach for validating cost savings and increased diversion.
- Identify the performance metrics you will employ and your procedures for formally, both internally and with the X Company, reviewing and assessing your performance.

The specific reporting elements will be mutually determined during the implementation phase and adjusted as necessary throughout the contract. It is anticipated that the successful bidder will generate a draft quarterly report after the first 3 months of the program. In this first report, the RM contractor will note specific data deficiencies that may prevent its ability to report data by facility and by waste stream as agreed upon, and propose how these deficiencies can be overcome. It is anticipated the second report, after month 6 of the program, will be fairly complete and establish the format for subsequent reports.

As noted in the above sections, the successful RM contractor will be required to maintain third-party receipts, for the duration of the contract, showing volume and weights of materials disposed/recycled and any revenues/tip fees. X Company maintains the right to review all such documentation at its premises within one working day of request.

The resource management Team at X Company and the RM contractor shall meet on a regular basis (at least quarterly) to discuss progress, status, and performance of services. The successful bidder will be largely responsible for spearheading and facilitating these meetings.

- Discuss what issues you expect to cover in these meetings and a proposed format.

4.7 Bidder's References

- List three of your current major customers and provide the information requested in Attachment E. Include as many customers as possible that are comparable to X Company's requirements insofar as size and resource management requirements are concerned.

5.0 GENERAL SPECIFICATIONS

These are the general terms and conditions that will be included in the contract if a successful bidder is chosen. The terms and conditions in the final contract will not be limited to those below, but may include additional standard contractual terms and conditions.

Note: This section should not be lengthy, and you might even choose to exclude this section altogether and only include all specific terms and conditions in the contract. The purpose of this section is to give bidders advanced notice on some of the major specifications, most of which they should be familiar with. Once again, the content is heavily dictated by your organization's contracting experience and specific needs, especially with respect to insurance or other sensitive issues.

5.1 Equipment

The Contractor shall furnish all the labor and supervision, tools, machinery and equipment to perform the work outlined in these specifications, unless otherwise indicated.

5.2 Subcontracting

The Contractor has full responsibility for: the coordination of the Subcontractor's work, including control of the quality, compliance with all federal, state, and local regulations and ordinances, and fulfillment of schedules. X Company reserves the right to reject any sub-contractor.

5.3 Third-Party Indemnification

The Contractor shall indemnify and hold harmless X Company and their agents and employees from and against all claims, damages, losses and expenses including attorney's fees arising out of or resulting from the performance of the work, provided any such claim, damage, loss or expense (1) is attributable to bodily injury, sickness, disease, or death or to injury to or destruction of tangible property, and (2) is caused in whole or in part by any negligent act or omission of the Contractor, any subcontractor, anyone directly or indirectly employed by any of them or anyone for whose acts any of them may be liable, regardless of whether or not it is caused in part by a party indemnified hereunder. In any and all claims against X Company or any of their agents or employees by any employee of the Contractor, any subcontractor, or anyone directly or indirectly employed by any of them, or anyone for whose acts any of them may be liable; the indemnification obligation under this paragraph shall not be limited in any way by any limitation on the amount or type of damages, compensation, or benefits payable by or for the Contractor or any subcontractor under Workmen's Compensation Acts, disability benefits acts, or other employee benefits acts.

5.4 Insurance

The Contractor shall purchase and maintain such insurance as will protect them from claims under Workmen's Compensation Acts and other employee benefits Acts, including but not limited to, from claims or damages because of bodily injury, including death, and from claims or damages to property which may arise out of or result from the Contractor's operation under this contract, whether such operation be by themselves or by any subcontractor or anyone directly or indirectly employed by any of them. The insurance shall be written for not less than any limits of liability specified as part of this contract, or required by law, whichever is greater.

5.5 Performance Bond

A performance bond and also a labor and materials or payment bond and a lien bond, with a surety company qualified to do business under the laws of [*the state where your facilities are located*] and satisfactory to X Company each in the penal sum to 100% of the contract amount, may be required of the successful bidder.

5.6 Health and Safety Considerations

The Contractor shall take all reasonable precautions in the performance of the work under this contract to protect the health and safety of employees and of members of the public, and to minimize the danger from all

hazards to life and property. The Contractor will be responsible for supervising all its personnel to insure that the provisions of the Occupational Safety and Health Act of 1970 are being complied with, especially OSHA Standard for Machinery and Machine Guarding, 29 CFR 1910.212, 1984, and OSHA Standard for Personal Protective Equipment, 29 CFR 1910.132-136, 1994. In the event that the Contractor fails to comply with said regulations, X Company may without prejudice to any other legal or contractual rights, issue an order stopping all or any part of the work; thereafter a start order for resumption of work may be issued at the discretion of X Company. The Contractor shall make no claim for compensation or damages by reason of or in connection with such work stoppage.

5.7 Nondiscrimination and Sexual Harassment Issues

The Contractor agrees to post in a conspicuous place available to employees and applicants for employment, notices setting forth the provisions of the nondiscrimination clause in the contract. The Contractor shall also periodically train all drivers and other service personnel serving X Company on awareness and prevention of sexual harassment.

5.8 Termination

X Company reserves the right to terminate this contract, or any part thereof, on 30 days written notice if, in X Company's sole judgment, which shall be final, such action seems justified.

6.0 PRICING

This section outlines the guidelines for preparing your quote for RM services at X Company. In addition to the narrative proposal outlining your RM program (see Section 2.4), you should prepare your quote for the requested services over a 3-year period (*note: the base contract length*). Consistent with the goals of the RM program, quantities of waste currently disposed are expected to decrease over this three-year period. X Company has divided requested services to be bid in two sections: 1) a base financial proposal, and 2) a resource management compensation structure.

6.1 General

X Company recognizes that any supplier will provide on-site services for whatever level of services the buyer chooses to purchase. X Company also recognizes that the typical approach in the marketplace to providing these services is to charge a management fee in addition to the cost of hauling and disposal. This is not the type of approach X Company desires. Rather, X Company is prepared to make an extraordinary commitment to the right partner(s) and develop a compensation structure that is tied directly to contractor performance allowing the successful partner(s) to share in the savings achieved under this program. This rewards the successful partner(s) for bringing technical expertise, process discipline, best industry practices, new technologies, metrics and industry talent to implement a successful program.

X Company will only consider responses that meet all of the requirements for the RM program (see Section 4), and is consistent with program objectives (see Section 1). X Company seeks an RM provider who can achieve favorable pricing on waste and recycling, and provide a range of additional resource management

services. To successfully meet its goals, X Company is prepared to develop a strategic partnership with a provider over a minimum [*initial contract length*] year period.

6.2 Base Financial Proposal

X Company is seeking a supplier that can achieve competitive pricing on existing waste and recycling services to all of its facilities. Part of the base proposal must include the billing, reporting and data management requirements as defined in Sections 4.5 and 4.6 of this RFP.

The base proposal must consist of two components: a bid for hauling, recycling, and disposal services and an estimate of revenues or costs associated with existing recycling levels. In short, the base proposal should reflect the price to overtake the existing levels of service as detailed in Attachment A. Bidders must submit a base proposal in the format of Attachment C to this RFP (Tables C-I and C-II) and be prepared to break out costs by facility if requested.

6.2.1 Disposal

- Separate costs for hauling and disposal must be submitted.
- There are to be no volume guarantees on behalf of X Company. The objective of the program is to decrease the amount of waste sent to the landfill.
- Costs must be broken out by facility.

6.2.2 Recycling

- Hauling and processing costs must be separate.
- Provide revenue estimates or costs for secondary commodities for the materials listed in Attachment C, Table C-II.
- X Company is open to innovative structures such that X Company and the successful bidder share in the benefits of recycling during high commodity markets and share the risk during low markets.

6.3 Proposals for Resource Management Compensation

The goal of the RM program is to allow the successful bidder to profit from helping X Company achieve cost effective diversion and waste reduction. X Company understands the successful bidder will incur costs to provide RM related services. Instead of proposing additional fees for these services, the successful bidder is expected to propose a means to cover any recurring expenses, along with its profit margin, from overall RM program savings. You may also choose to propose a cost recovery mechanism for start-up expenses (see Attachment G to this RFP). Your proposal for resource management compensation that will provide you with an incentive for waste reduction, efficiency, and service enhancement should be completed following Attachment C, Bid Section C-III.

Savings may come from avoided landfill disposal costs, reduced hauling fees, increased recycling revenues or the elimination of a waste stream altogether, or any other documented cost savings. Overall program savings

must be documented against reductions in the baseline costs. Baseline savings can be achieved in a number of ways, including but not limited to:

- Increased recycling from existing programs through better education and outreach to X Company's employees.
- Stream lined logistics through optimization of container sizes and pick up schedules.
- Implementation of new recycling programs (new materials or new facilities).
- Working up stream with suppliers on packaging or returnable drum/pallet systems.
- Other diversion initiatives.

Within the first 6 months of the program, the successful bidder and X Company will establish a mutually agreed upon baseline. This baseline will be calculated based upon the negotiated prices as set forth in the base proposal and the existing levels of service as detailed in Attachment A, and will serve as the current level from which diversion levels and cost savings will be measured.

Attachment G outlines some **options** for different compensation elements that you may wish to consider for your proposal.

ATTACHMENT A: X COMPANY WASTE AND RECYCLING SERVICE LEVELS, 2001

The following two tables are sample template of waste and recycling volume and service levels.

Table A1. Waste and Recycling Volume Estimated for 2001

	Disposal *	Recycling *				
Facility	Trash (tons)	Cardboard (tons)	Newspaper (tons)	Mixed Office Paper (tons)	Plastics	Est. Recycling Rate (%)
Facility A	264	30	9.6	11.0	1.0	25%
Facility B	172	42	2	12	3	
Total	436	72	11.6	23	4	
Recycling Total		110.6 tons				

* Hypothetical figures

Table A2. Waste and Recycling Service Level

	Container Size and Collection Frequency				
	Disposal	Recycling			
Facility	Trash	Cardboard	Newspaper	Mixed Office	Bottles and Cans
Facility A	One 40-yd compactor; on-call service	Two 2-yd containers; 5 times weekly	Two 0.5-yd containers; once per week	One 2-yd container; once per week	Two 0.5-yd containers; once per week
Facility B	One 35-yd compactor; on-call service	Three 2-yd containers; once per week	One 0.5-yd containers; once per week	Two 0.5-yd containers; once per week	Two 1-yd containers; twice a month

ATTACHMENT B: STATEMENT OF RECEIPT, AUTHORITY AND INTENT TO PROPOSE FORM

Please return your response to this attachment (this and following page) via fax to [*name of contact*] at [*phone number*] by no later than [*time*] on [*date*]. Detailed information on the pre-bid meeting (directions, agenda, etc.) will be sent [*number of days*] prior to the meeting.

Authorization

The individual submitting the Proposal represents and certifies as part of the Proposal that he/she is authorized to act as an agent for the company responsible for this Proposal.

Confidentiality

The information and data contained in this RFP is confidential and may not be discussed or disseminated to any third party without X Company's prior written permission. Company shall not disclose any information contained in or concerning this Request for Proposal, directly or indirectly, to any person or business entity except for a limited number of employees directly involved in preparing a response to this RFP. No news releases, public announcements or any other references to this proposal shall be made without the prior written consent of X Company.

Independent Preparation of Proposal

Any proposal submitted in response to the RFP will be developed independently, without consultation, communication, or agreement for the purpose of restricting competition, to any matter relating to costs or terms with any other respondent or any representative of such respondent.

A. Statement of Receipt and Intent to Propose

_____ Hereby acknowledge Receipt of RFP
(Company)

_____ Print name

_____ Authorized Signature

_____ Title

_____ Date

Please **"BOLD"** one and delete the other **BEFORE RETURNING THIS PAGE.**

We plan to submit a proposal in response to the X Company RFP for resource management Services.
(Please fill in Part B and C)

We do not plan to submit a proposal in response to the X Company RFP for resource management Services.

(Cont'd on next page)

B. Authority and Intent to Propose

Companies must designate one point of contact for all proposal communications. Each bidder is responsible for notifying X Company immediately of any change to such point of contact.

Name of Authorized Agent:	
Title of Authorized Agent:	
Company Represented:	
Signature of Authorized Agent:	
Date:	

RFP Contact:	
Contact Address:	
Contact E-mail:	
Contact Phone:	

C. Representatives Attending Pre-bid Conference and Facility Tour

Number Attending Site Visits (max. 3)	
1. Name and title of attendee #1:	
Phone:	
E-mail Address:	
2. Name and title of attendee #2:	
Phone:	
E-mail Address:	
3. Name and title of attendee #3:	
Phone:	
E-mail Address:	

ATTACHMENT C: RFP BID RESPONSE FORMS
Bid Section C-I. Base Proposal - Waste and Recycling Service Cost

The following tables provide a template for bidders to follow. It forces them to disaggregate their pricing and make their bids "transparent".

Please provide your waste and recycling service costs for Contract Year 20XX based on the service level in Attachment A. You are also given space below the table to document any expected rate changes in subsequent contract years.

If this bid is accepted, the contract will in no way guarantee the successful bidder the current estimated tonnage or levels of service (see Attachment A) over the life of the contract. In fact, it is {X Company}'s intent with an RM program to increase diversion such that land filled tonnages and waste hauling service will decrease while recycling service will increase over the contract period.

Waste Disposal Bid

Contract Year 20XX			
	Unit cost	Estimated No. Units *	Sub-Total
Hauling (per pick-up, 35-yd compactor)	$		$
Hauling (per pick-up, 40-yd open box)	$		$
Add hauling for other containers per above rows	$		$
Disposal (per ton)	$		$
Other Costs ++ (_____ _____)	$		$
Estimated Total Waste Collection and Disposal Cost			**$(1)**

* Base estimates on service level in baseline year (see Attachment A)
++ Specify the type of costs (e.g. container rental) in space given in table

Indicate in the table below if you expect changes in Contract Years 2 and 3 to the rates bid for Contract Year 20XX.

	Year 2	Year 3
Hauling rate change (container 1)		
Hauling rate change (container 2)		
Disposal Rate change		
Other cost change		

Paper Recycling

Indicate the number and size of receiver containers (provide costs of containers, if any, in "Other Costs" portion of table below):

Contract Year 20XX			
	Unit cost	Estimated No. Units *	Sub-Total
Hauling (per pick-up)	$		$
Processing (per ton)	$		$
Other Costs ++ (_____ _____)	$		$
Estimated Total Paper Recycling Cost			**$(3)**

* Base estimates on service level in baseline year (see Attachment A)

++ Specify the type of costs (e.g. container rental) in space given in table

Indicate in the table below if you expect changes in years 2 and 3 to the bids given for contract year 20XX.

	Year 2	Year 3
Hauling rate change		
Disposal Rate change		
Other cost change		

Note: The Paper Recycling table can be duplicated for other recyclable streams (corrugated cardboard, commingles containers, etc.) to provide a form for all current recycling services.)

Bid Section C-II. Resource Management Compensation

The request for a proposed RM compensation mechanism should remain fairly flexible. You might want to insert language like that below and provide examples to bidders on how they may choose to structure their compensation proposal in a separate attachment to your RFP, given in this sample RFP as Attachment G.

{X Company} intends to share documented savings that come from resource efficiency improvements proposed by the RM contractor, including but not limited to: avoided hauling cost, avoided disposal cost, commodity revenue or other cost savings the successful bidder can document. The bidder is required to propose a feasible and equitable contract mechanism outlining how cost savings will be shared for the three contract years. Provide required descriptive support and tables in this section.

Please see Attachment G for examples of potential compensation mechanisms. Bidders are encouraged to propose innovative, equitable compensation schemes. As per Section 5.3 of this RFP, the Contractor and {X Company} will establish a mutually agreed upon baseline in the first 6 months of the program.

Note: The successful bidder will be required to track and report savings that come from the RM program. The actual compensation mechanism for RM services will be negotiated and finalized during contract negotiation. (Attach additional pages as necessary)

Name: _____

Title: _____

Signature: _____

Company Name: _____

Date: _____

ATTACHMENT D: SUPPLIER GENERAL INFORMATION

Please provide the information requested below.

Supplier name:	
Address:	
Phone:	
Fax:	
Hours/days of operation:	
Emergency operation hours/services:	

General company description:	
Years in business:	
Company Status (Public, Private, Subsidiary):	
2001 Revenue:	
Number of customers:	
Number of customers in the [*geographical area, e.g., Northeast*] US Region:	
Number of customers in the [*x*] industry:	
Number of employees:	
Number of employees in the [*geographical area, e.g., Northeast*] US Region:	
Number of employees servicing the [*x*] industry:	
Office locations:	
Provide a description of your client base:	
List parent company and/or subsidiaries:	

ATTACHMENT E: BIDDER REFERENCES

Provide the names, contact and other information of three current customers with similar facility management needs and organizational structure as X Company whom we may contact for references. By providing this information, you authorize X Company (or designated representative) to contact these customers.

Customer Reference #1:	
Company name	
Business type	
Contact person	
Title	
Phone	
E-mail	
Address	
Services provided	
Approximate contract value ($) and/or tonnage managed	
Number of years as customer	
Waste minimization/recycling milestones	

Customer Reference #2:	
Company name	
Business type	
Contact person	
Title	
Phone	
E-mail	
Address	
Services provided	
Approximate contract value ($) and/or tonnage managed	
Number of years as customer	
Waste minimization/recycling milestones	

Customer Reference #3:	
Company name	
Business type	
Contact person	
Title	
Phone	
E-mail	
Address	
Services provided	
Approximate contract value ($) and/or tonnage managed	
Number of years as customer	
Waste minimization/recycling milestones	

ATTACHMENT F: X COMPANY ENVIRONMENTAL POLICY

[Insert your company's / organization's environmental policy.]

ATTACHMENT G: RESOURCE MANAGEMENT COMPENSATION OPTIONS

[See Appendix E of this RM manual.]

ATTACHMENT H: FACILITY ADDRESSES AND LOCATION MAPS

i. Facility A

[Map of Facility A]

[Address of Facility A]

ii. Facility B

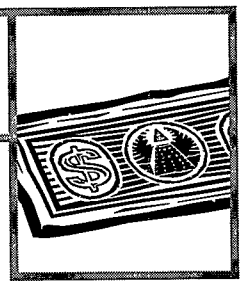
[Map of Facility B]

[Address of Facility B]

ATTACHMENT I: RESOURCE MANAGEMENT - STRATEGIC PARTNERSHIPS FOR RESOURCE EFFICIENCY

[See enclosed Waste Wise Update.]

Appendix E: RM Compensation Options



As we've seen in Appendix D, your RFP should be structured to request compensation proposals from bidders so you can ascertain:

- How much it will cost for the RM contractor to take over existing services ("base proposal") (see Appendix D, sections 3.1, 6.2).
- The bidders' proposed compensation format for other RM services (basically a formula for splitting cost savings achieved from the base proposal costs, see Appendix D, section 6.3 and "RM Compensation Options" below).
- Pricing for additional miscellaneous waste streams that not regularly generated and are not specifically included in your request for proposals (see "Miscellaneous Waste Streams" below).

Structuring services in this way will allow you to compare proposed costs with your current cost baseline. It will also allow you to evaluate several different bidders' proposed compensation options to determine which is likely to make the most of RM by providing strong incentives for the selected contractor to reduce, reuse, recycle, and maximize efficiency of service.

This appendix provides sample tables and examples to help structure the RM compensation components of the bid and miscellaneous waste streams as effectively as possible.

The Link between Base Proposals and RM.... Transparency is the Key

Getting bidders to present separate pricing for service components such as hauling, disposal, processing fees, container charges, etc. is necessary for RM to work. By making prices "transparent", cost savings from recycling, waste reduction, and other efficiencies can be realized. You are then able to redistribute a portion or all of the cost savings resulting from improvements to your RM contractor. This isn't possible when you are simply paying a lumped fee for all services (which results in a fixed level of service at a fixed cost).

Our experience has shown that disposal and hauling costs often cannot be disaggregated because it is not economical to put scales on trucks (which may be collecting waste from other clients). In this case, structuring pricing on a $$/pick-up level, while less preferable, would still allow you to recoup costs for each avoided pick-up (as a result of waste reduction, etc.)

RM Compensation Options

Two main options exist for the RM compensation component. These can be provided as samples in an Attachment to your RFP. The final choice of which method is selected will be determined by the level of comfort the customer and bidders have with each option and whether consensus can be reached. The goals of such a mechanism is to create a mutually beneficial business relationship that drives inefficiency and cost out of system, reduced costs, achieves cost-effective resource efficiency, recovers savings, and shares savings between you and your RM contractor. The compensation and incentives should be tied to continuous improvement in resource efficiency such that your RM contractor's profit margins improve from helping you decrease waste generation and increase reuse and diversion (recycling and composting). Two different compensation options follow:

Option 1. Pass-Through of Service Costs with "Shared Savings" and Performance Bonus. The contractor provides all required services (e.g., tip fees, hauling fees, container rental) on a "cost pass-through" basis. This cost pass through is based on the bids received to take over existing services (Base Financial Proposal). When the contractor implements changes or improves the system to permanently decrease costs, the contractor shares in some of those savings. Examples of savings opportunities include diverting more materials (taking advantage of marginal total cost of recycling vs. disposal), making handling and hauling procedures more efficient, "right-sizing" containers for cost savings and behavioral change (e.g., smaller trash bins, more prominent recycling stations), and helping to reduce waste generation in the first place.

Shared savings can work in numerous ways, especially in varying the percent of savings received by the customer and the contractor. Several options are outlined below; the percentage split in shared savings is shown for exemplary purposes.

You and the contractor share all cost savings at 50/50 percent.

You get 100 percent of the savings up to a predetermined level (for example, 5 percent). Once this level has been reached, then you and the contractor split the savings above this amount usually in a ratio that benefits the contractor. For example, you could get the first 5 percent and then above this amount, you get 30 percent of the savings and the contractor gets 70 percent.

The use of a performance bonus is a third option. Under such a scheme, you increase the percentage of cost savings given to the contractor when the company meets certain performance targets. For example, as a variation on option 1, initial savings are split 50/50. If the contractor is able to meet certain performance targets, however (such as increasing overall recycling by 10 percent in any given year), you allow the shared savings to be split at a level of 60 percent to the contractor and 40 percent to you.

Option "1-c" is recommended due to its focus on measurable improvements to performance. Without this link between incentives and environmental goals, there is the risk that only the "easy" cost savings from economies of scale and leveraged buying are pursued. Its intent is to increase the incentive to the contractor and the cus-

tomer to decrease system wide costs and achieve pre-determined diversion and waste reduction goals. By tying increasing levels of diversion/waste reduction to increasing incentive levels, there is a proportionately higher incentive to commit resources for these improvements and higher diversion levels.

You may choose to ask for a performance bonus proposal as a more favorable split for the contractor, like this:

Tying Diversion Improvement to the Contractor Performance Bonus

Diversion Rate	Split (%Client/Contractor)
Current diversion rate	X%/Y%
Current diversion rate +15%	X-10%/Y+10%
Current diversion rate +20%	X-20%/Y+20%
Current diversion rate +>25%	X-30%/Y+30%

or

Tying Waste Reduction to the Contractor Performance Bonus

Waste Reduction (as measured from baseline, % in total generation, normalized if possible)	Split (%Client/Contractor)
-10%	X%/Y%
-15%	X-10%/Y+10%
-20%	X-20%/Y+20%
-30%	X-30%/Y+30%

Option 2. Fixed Cost with Guaranteed Cost Reductions. The RM contractor provides all services (e.g., hauling, recycling, disposal, containers, personnel, equipment/materials) for a pre-defined, fixed annual cost. This cost is determined based on the previous year's total costs and includes a guaranteed cost reduction.

For example, assume after the initial contract period that for the scope of facilities included in the contract, the customer is paying $120,000 per year for its services. The initial monthly cost would then be $10,000. Further assume that the contractor agrees to provide the customer with a 5 percent[1] annual cost reduction ($6,000 total or $500 per month). Under this option, the customer would then pay the contractor $9,500 per month during the first year. This would be a profitable proposition for the contractor if the company has a decent level of confidence it can realize greater than 5 percent cost savings within the first year. For example if the company achieves a 15 percent reduction in costs, they would keep 10 percent while maintaining the guaranteed 5 percent reduction to the customer. This arrangement can work well when the amount of waste generated remains relatively constant. The

[1] Note: All percent splits are used as examples and may be adjusted for each specific situation.

contract would contain a clause that if waste generation exceeds a threshold (for example +/- 5 percent) over the baseline that was used to determine the annual cost of services, the base fee is revisited. Thus, if some external circumstances (such as expansion of a facility) cause a large increase or decrease over this threshold, both parties reset the base fixed fee.

The advantage of this mechanism is that it is relatively simple, and the customer is able to budget for each year with a high degree of certainty. It provides an incentive to the contractor to provide the required services in a more cost effective way, since savings go straight to the contractor's bottom line.[2] It would also shift more of the responsibility to the contractor to drive down costs. In theory, however, the customer does not have a direct financial incentive to continue to improve since it is guaranteed 5 percent cost reduction (no more and no less). This arrangement generally is used when generation levels have been fairly predictable and stable. It might not be appropriate if generation fluctuates wildly and both parties are constantly re-setting the base fixed fee.

A simple bid table for this option might look like the following:

Sample Bid Table for "Fixed Cost" Proposals

Compensation Component	Year 1	Year 2	Year 3
1. Resource management fee. Indicate the annual fixed fee for the first 3 years to cover the all base services as detailed in Attachment X and additional RM Requirements per Section X of this RFP.	$	$	$
2. Guaranteed savings as a percent for each contract year			
3. Indicate gain-shared savings split beyond guaranteed savings shared between X Corporation and contractor; X Corporation % / Contractor %			

Other Options:

Compensation per unit

(e.g., $/per unit of product made or $/employee, hotel guest, square foot for institutional clients), $$/square foot for retail)

Advantages are that costs "self-adjust" to production or work loads, and there is an incentive to the contractor to decrease costs for larger profit margin. As with other compensation options, however, unavoidable cost increases (rates) can require renegotiation. This "per unit" method is extremely difficult to apply in cases where there are many different types of "units" in play. It may work well for an auto pro-

[2] This can occur either by reducing the unit price of disposal, or, more importantly, decreasing the volume disposed/increasing diversion, or managing the process (hauling, handling, contract management) more efficiently.

ducer or company that makes a single or limited number of products, but will not work well for manufacturers who make tens of hundreds of different products. If the contractor and the customer are confident in the costs, such a mechanism may be worth investigating.

Compensation for any capital expense type project

Some improvements may require some upfront capital costs - the purchase of new recycling containers, for example. In such cases, either the contractor or customer can put up the capital, but any capital costs should be fully recouped before the gain-sharing split takes effect.

Savings should be determined from a baseline of a minimum of 6 months of service/cost records. Savings will first be used to recoup 100 percent (or another predetermined percentage, with dollar cap) of any additional costs associated with the implementation of a proposed activity. Eligible costs should include any costs associated with additional containers, equipment, processing fees, but will not include the contractor labor to design and implement the program. Once any eligible costs have been recouped, the contractor and the customer can split the remaining savings at a 50/50 split, or choose some other split as described above.

In summary, the RM compensation structure must be established in a way that is beneficial for both parties. Mutual benefit is critical to establishing a strong, long-term relationship. Note, however, that the above are EXAMPLES, and other reasonable compensation options that meet the above program goals should be considered.

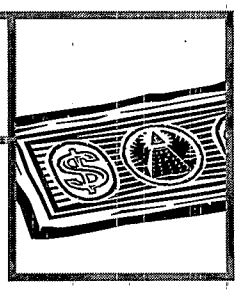
Miscellaneous Waste Streams

Similar to baseline existing services, the goal is to obtain transparent pricing for additional services that might be requested, such as disposal or recycling of universal wastes (e.g., batteries, fluorescent lighting tubes).

Example:

Unit Priced Items	Qty.	Unit Rate
Mixed batteries per pound	1	$____
Lead acid batteries, per pound	1	$____
Fluorescent bulbs per bulb:		$____
- 4 foot	1	$____
- 8 foot	1	$____
- U-shape, circular, compact	1	$____
- HID	1	$____
Broken bulbs, per pound	1	$____
Mercury, per pound	1	$____

Appendix F: Comparison of Cost Proposals



This appendix provides a guide for comparing and evaluating the cost proposals submitted by the bidders. As noted in the manual (Chapter 5), the cost saving potential presented in the cost proposals depends on different assumptions. The best way to evaluate and compare the bid is to model each compensation proposal in a spreadsheet so that you can vary the assumptions to test the sensitivity of cost saving estimations. If an obviously favorable proposal exists, you might not need to perform this exercise.

The analysis comprises three main tasks:

1. Estimate savings potential

The first step is to read through all compensation proposals, list the fees proposed and the hypothetical cost savings, and identify assumptions made for the cost savings estimation. For each type of cost savings, estimate the savings that you can realize—for some cost reduction items, you might need to share the savings with your contractor (e.g., reduced disposal cost). Remember to use your baseline cost data as a reference against all proposed scenarios.

2. Modeling the costs and benefits

Table F-1 presents a sample worksheet for modeling costs and benefits for a single bid. The example used in Table F-1 assumes that your organization pays $78,000 a year in external contracted costs and incurs additional costs of $2,500 that are spread across several individuals to handle billing, environmental reporting, etc. You should have estimated these costs in Chapter 3 of this manual. Company A has submitted a bid, and the potential savings based on this bid are discussed below the table.

Table F-1: Sample Worksheet for Modeling Costs and Benefits for Company A's Financial Proposal

	Year 1	Year 2	Year 3	Total
A. Baseline cost	$ 80,500	$ 80,500	$ 80,500	$ 241,500
A1. Current waste and recycling contract costs	$ 78,000	$ 78,000	$ 78,000	$ 234,000
A2. Internal management cost	$ 2,500	$ 2,500	$ 2,500	$ 7,500
Bid Received from Company A—Potential Savings				
B. Transition savings	$ 3,000	$ 3,000	$ 3,000	$ 9,000
Your company's share	*100%*	*100%*	*100%*	
B1. Your company's savings	$ 3,000	$ 3,000	$ 3,000	$ 9,000
C. Savings from waste disposal cost	$ 5,000	$ 7,500	$ 9,000	$ 21,500
*Your company's share **	*50%*	*50%*	*50%*	
C1. Your company's savings	$ 2,500	$ 3,750	$ 4,500	$ 10,750
D. Savings from waste hauling fee	$ 2,500	$ 3,125	$ 3,750	$ 9,375
*Your company's share **	*50%*	*50%*	*50%*	
D1. Your company's savings	$ 1,250	$ 1,563	$ 1,875	$ 4,688
E. Increased recycling revenue	$ 1,500	$ 2,250	$ 2,700	$ 6,450
*Your company's share **	*50%*	*50%*	*50%*	
E1. Your company's savings	$ 750	$ 1,125	$ 1,350	$ 3,225
Potential Cost Increase				
F. Increased recycling processing and hauling fees	$ 1,000	$ 1,300	$ 1,600	$ 3,900
Your Total Net Savings (B1 + C1 + D1 + E1 - F)	$ 6,500	$ 8,138	$ 9,125	$ 23,763

** Gain-sharing split proposed by the bidder*

Baseline External Contract Costs and Internal Costs

A. The worksheet should, at the minimum, include baseline data, which includes internal management costs and baseline waste and recycling service costs. (Line A)

Transition Savings

B. Transition savings are simply the savings that result from the Company A taking over your existing services. Recall your baseline costs for contracted services was $78,000. This example assumes Company A submitted a bid of $75,000 to take over these services amounting to a $3,000 annual savings from your current contract costs. Your company receives 100% of these savings. It is likely that the internal management costs of $2,500 are also reduced. You will need to see if you can count internal management cost savings or whether it just means that your company's employees will now spend less time to do the tasks that made up these costs, such as billing and environmental reporting. In the example in Table F-1, we only show the $3,000 savings in external contract costs.

RM Savings from Continuous Improvements

C. **Savings from waste disposal cost,** which could come from enhanced recycling and/or reduced resources use (e.g., change of disposal packaging to reusable ones, beneficial use of coal ash). These are hypothetical savings estimated according to the bidders' assumptions on the potential reduction in disposal tonnage as a result of enhanced recycling and other resource efficiency improvements. Your share of savings is based on the proposed percentage of gain-sharing bid. (Line C)

D. **Savings from waste hauling fee,** which could come from waste reduction and optimizing hauling arrangement. These are hypothetical savings based on bidders' assumptions on waste reduction potential as a result of resource efficiency improvements and optimizing hauling arrangement. Your share of savings is determined based upon the proposed percentage of gain-sharing bid. (Line D)

E. **Increased recycling revenue,** which comes from increased recycling. This is estimated based on bidders' assumption on recycling tonnage and the potential market price of recyclables. Your share of savings is determined based upon the proposed percentage of gain-sharing bid. (Line E)

Increased Recycling Fees

F. **Increased recycling processing and hauling fees,** which is the service charge for hauling and processing recyclables. Such a fee is expected to increase over time as more recyclable materials are diverted from the waste stream. This fee is estimated based on the bidders' assumptions on increased recycling throughout the contract term, and the proposed recycling processing and hauling fee. (Line F)

Total Net Savings

Total net savings equals to the sum of all savings (Line B1 + C1 + D1 + E1) minus the increased recycling processing and hauling fee (Line F).

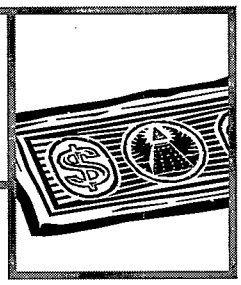
3. Testing the sensitivity of your estimation

Once you have established your model, you can test the sensitivity of your estimation to various assumptions. Those assumptions include, but are not limited to:

- Prices of recycling commodities
- Cost for waste disposal and recycling processing
- Reduction in waste disposal
- Composition of increased recycling

Run a few scenarios for each bidder's proposal, and provide your team members a summary sheet of each compensation proposal. By doing so, your team should be able to compare and rank the proposals and assign the scores for various proposals.

Appendix G: Climate Change Benefits



By providing financial incentives to the RM contractor, a successful RM program increases waste diversion, reduces consumption of resources, and fosters source reduction in your organization. As a result, your impacts on climate change can be reduced in the following ways:

- Reducing the volume of waste sent to landfills and incinerators, which results in fewer methane emissions from landfills, and reduced carbon dioxide and nitrous oxide emissions from combustion.
- Minimizing the demand for virgin materials, thereby reducing energy consumption to extract, process, and manufacture the products from those virgin materials. The reduction in energy use minimizes fossil fuel consumption, thus resulting in fewer emissions of carbon dioxide and nitrous oxide.
- Slowing the logging of trees and hence maintaining the carbon dioxide storage capacity provided by forests.

An EPA report—*Solid Waste Management and Greenhouse Gases (GHG): A Life Assessment of Emissions and Sinks*[3]—provides greenhouse gas (GHG) emission factors for 16 types of materials under different waste management strategies, including source reduction, recycling, landfilling, incineration, and composting. Based on the level of waste diversion and source reduction through RM contracting, you can quantify the GHG reductions from increased waste diversion or source reduction by using these emission factors. The following table lists the GHG emission factors presented in metric tons of carbon equivalent (MTCE)[4].

Periodic calculations based on measured diversion results should be performed to evaluate the actual effectiveness of your RM program on mitigating GHG emissions. These calculations may be something delegated to the RM contractor as part of the normal reporting process.

[3] The report is downloadable at: http://yosemite.epa.gov/oar/globalwarming.nsf/content/ActionsWasteToolsReports.html

[4] The report also presents GHG emission factors in metric tons of carbon dioxide.

Table G-1: Net GHG Emissions from Source Reduction and MSW Management Options—(MTCE/Ton)[1]

Material	Source Reduction[2]	Recycling	Composting[3]	Combustion[4]	Landfilling[5]
Aluminum Cans	-2.49	-4.11	NA	0.02	0.01
Steel Cans	-0.79	-0.49	NA	-0.42	0.01
Glass	-0.14	-0.08	NA	0.01	0.01
HDPE	-0.49	-0.38	NA	0.23	0.01
LDPE	-0.61	-0.47	NA	0.23	0.01
PET	-0.49	-0.42	NA	0.28	0.01
Corrugated Cardboard	-0.51	-0.71	NA	-0.19	0.08
Magazines/Third-class Mail	-1.04	-0.74	NA	-0.13	-0.12
Newspaper	-0.81	-0.95	NA	-0.21	-0.21
Office Paper	-0.80	-0.68	NA	-0.18	0.62
Phonebooks	-1.28	-0.91	NA	-0.21	-0.21
Textbooks	-1.23	-0.75	NA	-0.18	0.62
Dimensional Lumber	-0.55	-0.67	NA	-0.22	-0.10
Medium-density Fiberboard	-0.60	-0.67	NA	-0.22	-0.10
Food Discards	NA	NA	-0.05	-0.05	0.17
Yard Trimmings	NA	NA	-0.05	-0.06	-0.09
Mixed Paper					
Broad Definition	NA	-0.67	NA	-0.19	0.10
Residential Definition	NA	-0.67	NA	-0.18	0.07
Office Paper Definition	NA	-0.83	NA	-0.17	0.15
Mixed Plastics	NA	-0.41	NA	0.25	0.01
Mixed Recyclables	NA	-0.76	NA	-0.17	0.05
Mixed Organics	NA	NA	-0.05	-0.06	0.03
Mixed MSW as Disposed	NA	NA	NA	-0.04	0.07

Note that totals might not add due to rounding and more digits might be displayed than are significant.

NA: Not applicable, or in the case of composting of paper, not analyzed.

[1] *MCTE/ton: Metric tons of carbon equivalent per short ton of material. Material tonnages are on an as-managed (wet weight) basis.*

[2] *Source reduction assumes initial production using the current mix of virgin and recycled inputs.*

[3] *There is considerable uncertainty in our estimate of net GHG emissions from composting; the values of zero are plausible values based on assumptions and a bounding analysis.*

[4] *Values are for mass burn facilities with national average rate of ferrous recovery.*

[5] *Values reflect estimated national average methane recovery in year 2000.*

* *Excerpted from Solid Waste Management and Greenhouse Gases: A Life Assessment of Emissions and Sinks, Exhibit ES-4.*

Using the GHG emission factors from the EPA report, the Agency has also developed a user-friendly spreadsheet tool, WAste Reduction Model (WARM), to help companies calculate the GHG impact of waste reduction or recycling activities. By simply entering the baseline waste generation and recycling information, the tonnage of waste disposed, source reduced, and recycled after the implementation of

RM, and some information about the current waste management system, the tool can generate an estimate of the net GHG impact. This model could also estimate the energy impact of an RM program. A Microsoft Excel and Web-based version of this tool is available online at <http://yosemite.epa.gov/oar/globalwarming.nsf/content/ActionsWasteWARM.html>.

Appendix H: WasteWise Partners Innovate with Resource Management

WasteWise is a free, voluntary partnership program that helps organizations eliminate costly municipal solid waste (MSW), benefiting their bottom line and the environment. Through WasteWise, EPA teams with businesses, governments, and institutions to improve source reduction, recycling, and demand for products with recycled content.

At its core, WasteWise revolves around resource efficiency. Partners do more with less: they strive to reduce waste in their operations, to recycle the waste they do produce, and to dispose only as a last resort. WasteWise and RM naturally complement each other. For many WasteWise partners, RM simply means aligning waste contractors' efforts with existing WasteWise activities.

The WasteWise Advantage

WasteWise partners implementing RM can take advantage of an array of resources to facilitate the effort. WasteWise maintains an RM Web page, <www.epa.gov/wastewise/wrr/rm.htm>, that provides an overview of RM and links to other information. Partners can participate in workshops and meetings focused on resource efficiency, contracting, and performance evaluation. WasteWise publicizes best RM practices and highlights partners' RM success stories in its publications, on its Web site, and at its annual, national awards ceremony.

Every WasteWise partner works with a dedicated account representative, a single point of contact and industry specialist who can bring partners together to share RM information and connect partners with relevant outside experts and state and local officials. Account representatives also help set waste reduction goals, track progress, and measure success. This type of technical assistance can play a significant role in helping an organization structure tracking and reporting efforts for RM implementation. Partners implementing RM as part of their WasteWise goals track, measure, and report progress on an annual basis, making them eligible to receive national public recognition from EPA for their efforts.

WasteWise is currently piloting the methodology contained in this manual, *Resource Management: Methods to Improve Resource Efficiency Opportunities*, with two partners, Raytheon Company and Fairview Health Services, and will use this manual as a "how to" guide for other members. WasteWise partners indicated in the Acknowledgements section have also been critical to testing RM principles and guidelines that are addressed in this manual.

To capture the manual's suggestions in condensed form, the program recently dedicated an issue of the *WasteWise Update*, its technical assistance publication, to RM. The *Update* summarizes RM philosophy and practices and gives examples of successful implementation (to download a copy, go to <www.epa.gov/wastewise/pubs/wwupda17.pdf>).

Making It Work

Some of the biggest names in RM participate in WasteWise, and many WasteWise partners view RM as a natural continuation of their environmental and operational leadership. General Motors Corporation (GM), which coined the term "resource management," is a WasteWise charter member. GM first tested RM in 1991 and expects to complete its domestic RM roll-out by 2003. At its Orion Assembly Plant in Michigan, GM realized a 30 percent decrease in 3-year waste management costs and a 25 percent reduction in per-vehicle waste generation.

Public Service Enterprise Group (PSEG), another WasteWise charter member, began RM in 1993. PSEG's program comprises both MSW and hazardous waste; results include decreased waste management costs, generation rates, and disposal volumes. Between 1994 and 1996, PSEG saved $1.8 million through its RM efforts. For RM case studies on PSEG, GM, and other partners, see the *WasteWise Update* enclosed in this manual.

Get on Board!

WasteWise and RM go hand-in-hand. If you are considering RM, consider WasteWise. The program provides the tools, expertise, and assistance that can make successful RM a reality. Contact WasteWise today to sign up for reduced waste and improved performance:

Call 800 EPA-WISE (372-9473)

Visit www.epa.gov/wastewise

E-mail ww@cais.net

OMB No. 2050-0139
Expiration Date: May 31, 2004

Preserving Resources, Preventing Waste

Partner Registration Form

☐ **Yes! My organization is ready to become a WasteWise Partner. Please send me a membership packet.**
(Please complete sections A, B, and C)

☐ **I would like more information about the program.**
(Please complete sections A and B)

Section A: How did you hear about the WasteWise program?

☐ Another Company, Government, or Institution (Name) _____
☐ Direct Mail from WasteWise _____
☐ Other EPA Program (Name) _____
☐ Periodical/Publication (Name) _____
☐ PSA/Advertisement (Location) _____
☐ Trade Association (Name) _____
☐ WasteWise Website _____
☐ Workshop/Conference (Sponsor) _____
☐ Other (Specify) _____

Section B: Complete and return for more information or visit our website at <www.epa.gov/wastewise>.

Organization Name: _____
SIC Code or Industry Sector, or Type of Government: _____
Check if a: ☐ Subsidiary or ☐ Division. Name of Parent Company (if applicable): _____
Principal Contact: _____ Title: _____
Address: _____
City: _____ State: _____ Zip: _____
Phone Number: _____ Fax: _____
E-mail: _____

Section C: Continue with this section ONLY if you are joining as a partner.

Facilities to be included in initial waste reduction efforts:

(e.g., corporate or government headquarters only, regional facilities, all offices and plants, etc.)

_____

_____

Approximate Total Number of Employees in these Facilities: _____
Signature of Senior Official: _____
Print Name: _____
Title: _____
Date: _____

Please fold and mail or fax to WasteWise at 703 308-8686 or register electronically at <www.epa.gov/wastewise/join.htm>.