REGIONAL SOLID WASTE ADVISORY COMMITTEE MEETING
April 21, 1999

ATTENDEES

Voting Members

Ed Washington, Chair, Metro Councilor
Jeanne Roy, Citizen, City of Portland
Merle Irvine, Willamette Resources
Scott Bradley, Waste Management
Mike Leichner, Washington County Haulers (alternate), Pride Disposal
Dean Kampfer, Multnomah County haulers (alternate), Waste Management
Rick Winterhalter, Clackamas County
Tom Wyatt, Browning-Ferris Industries
David White, Tri-C/ORRA
Bruce Walker, City of Portland, (alternate)
Mike Misovetz, Citizen, Clackamas County
Lynne Storz, Washington County
Jeff Murray, Recycling Industry (alternate), Far West Fibers
Steve Schwab, CCRRA (haulers association), Sunset Garbage
JoAnn Herrigel, City of Milwaukie
Tam Driscoll, City of Gresham
Sarah Jo Chaplen, City of Hillsboro (Washington County cities)
Frank Deaver, Citizen, Washington County

Non-Voting Members

Bruce Warner, REM Director
Rob Guttridge, Clark County (alternate)
Marti Roberts-Pillon, DEQ (alternate)
Doug DeVries, Specialty Transportation Service

GUESTS

Eric Merrill, Waste Connections
Kent Inman, American Compost
Easton Cross, Easton Cross Consultants
Dean Large, Finley Buttes Landfill
Henry Mackenroth, City of Oregon City
Diana Godwin, Regional Disposal Co.

METRO

Rod Park, Metro Councilor
Doug Anderson
Jennifer Erickson
Jim Watkins
Leo Kenyon
Connie Kinney, Clerk to the Committee
Marv Fjordbeck
Terry Petersen
Bryce Jacobson
Meg Lynch
Bill Metzler

ACTION ITEM

Chair (Councilor) Washington asked for a motion to accept the SWAC minutes from the March 17th meeting. Ms. Mary Jo Chaplen noticed that the March minutes were seconded by a member of SWAC, who was a non-voting member. Chair Washington asked for correction to the March minutes. The motion was seconded. Merle Irvine made a motion to approve the March minutes, David White seconded the motion, the Committee unanimously approved the March 17, 1999 minutes as submitted.

UPDATES

Mr. Terry Petersen, REM Acting Director said he was happy to be back as the interim director of the REM department and said he has always enjoyed working with the SWAC. He said there are many large issues and he will do all he can to help the committee and help Chair Washington chair the committee.

Mr. Petersen reminded the committee that there was an informational hearing this afternoon before the REM Committee regarding Metro's proposed State legislation to restrict disposal of pool chlorine. He said that Metro has proposed legislation restricting this chemical from being disposed of through regular garbage pickup; a few SWAC members have voiced their concern with some of the wording of that bill. He said staff has tried to address some of those concerns and has a new approach to discuss with Metro's Council. He advised anyone interested to attend the meeting.

Mr. Petersen said REM has been talking to its Transportation contractor (STS) about some changes to its contract with Metro, which would save Metro money. He said he would be available to take questions after today's meeting.

Mr. Petersen said Metro had another chemical spill at Metro South Transfer Station. He said there was some acid in the pit at Metro South, and it caused Metro to close the building for about eight minutes and evacuate the public due to the drifting cloud. He said it was one of the largest clouds he has experienced from this type of spill; luckily, no one was injured. He thanked BFI for helping to respond to this emergency.

Mr. Petersen said Metro staff and Clark County staff are working together to see if efforts can be made to team up in other programs such as the IGA agreement currently to help Clark County handle its used paint.

Mr. Petersen thanked those persons who helped in the annual Metro/SOLV-it event, which coincides with Earth Day. He said this year's event occurred last Saturday in Clackamas County; Metro staff and family collected 6 tons of garbage, 4 tons of yard debris, 12 tires, syringes and remnants of an old methamphetamine lab.

Mr. Merle Irvine, Willamette Resources in Wilsonville said his facility is now open to the general public to receive waste on Saturdays and Sundays from 9:00 a.m. to 4:30 p.m. Willamette Resources will accept anything but putrescible waste and hazardous waste from the public.

DISPOSAL CONTRACT: Status and Next Steps

Chair Washington distributed information on the process to determine use of disposal savings from the renegotiation of the disposal contract with Waste Management (attached as Exhibit A). Chair Washington said that in May the Council, Executive Office and a representative from the Auditor's office will sit down to identify needs and set priorities. The time and place has not yet been identified. He said that, if necessary, discussion items will be brought to the REM Committee in June to hold hearings, establish policy objectives and create lists of options. Chair Washington said that on July 21 this committee will then review those options and make recommendations. He said the Rate Review Committee will meet in August to review options and make recommendations regarding solid waste fees, and in September the REM committee and the full Council will meet to hold hearings and adopt a new rate ordinance. Councilor Washington asked for comments.

Mr. Walker said that from the comments Metro's Executive Office made in the paper, it appears that identification of needs and setting of priorities do not relate to recycling programs and that it is broad-ranging, non-related funding decisions.

Chair Washington replied there have been no decisions contemplated with regard to where savings should be placed. He said that of course Mr. Burton is free to express his wishes and concerns as to where he would like to see those savings passed to. He said however, Council has not made any decisions and is waiting to hear all of the options.

Mr. Walker asked if the method to capture these monies would be through the excise tax?

Chair Washington said he had no idea and that he was truly not trying to be evasive but there has truly not been a determination made on how funds will be spent.

Mr. Walker said he understood that Mr. Burton was putting it forward for public discussion, but there is a lack of clarity on the part of the City on the actual mechanism of funding. He said it was the City's understanding that monies realized as a result of savings on the solid waste contract be spent on solid waste issues other than those funds collected as excise tax.

Chair Washington asked what the committee wished Council to do, and Mr. Walker said he would just like a clarification of how they proposed to look at it. Chair Washington said they would do that.

Mr. White said as an observation that he has attended many Metro meetings where he has heard several discussions on the disposal contract savings. He said that Councilor Kvistad has suggested a moratorium on passing any savings on for a year or two in order to study the impact on recovery, even though his philosophical preference would be to pass all the savings along, because the money belongs to the citizens in the region. Mr. White said he hoped that one meeting of the SWAC would be sufficient to discuss all of the issues involved with this contract savings. He asked for as much information as possible as quickly as possible so that everyone can move forward with one mind.

Mr. Cross (from the gallery) commented that perhaps staff has made draft proposals with regard to this subject. Chair Washington replied that if they have produced a proposal, he has not seen it nor does he know anything about the existence of one.

Mr. Petersen commented there have been various discussions about some of the options but that Councilor Washington is exactly right when he says that staff has not produced any draft proposals and that it would be premature at this point to put anything into writing. He said staff is waiting for direction from the Executive Officer and Council before proposals are made.

Mr. Cross said that comments have been made that a 50/50 split will be proposed and that 50% will go to excise tax and 50% to waste reduction.

Chair Washington said that he was being very honest when he says he has not written anything on this subject, he has made no conclusions nor has he heard of or seen any written proposals. He said it is also his belief that other members of the Council will be as open-minded as he as to how they will proceed with the savings from the Waste Management contract. He said if staff has made proposals, neither he nor the Council have seen them. He said he was sure there was many ideas floating around in people's minds, but if anyone has something written down on this subject, they have not shared it with him nor has there been any discussion with the REM Com and they are certainly not ready to finalize any thoughts on this subject at this point.

Ms. Herrigel asked if Chair Washington anticipated any written proposals to be presented at the May meeting with Council, Executive Officer and the Auditor's Office, or will that happen in June? Chair Washington said he expects that from that meeting will come proposals.

Chair Washington said he has not committed a vote to anything.

Councilor Park commented he wanted to echo what Councilor Washington just said: He has not made any decisions, nor has he seen any proposals. He said at this stage, everything is wide open and said that the Executive Officer is free to make whatever proposal he deems worthy. He said it takes four votes from the Council and they are all wanting to make a good business decision on doing the right thing with Metro's resources.

Chair Washington asked the committee to trust him and the rest of the council that there is no hidden agenda out there to spend the contract savings.

Ms. Mills commented there seems to be a lot of mistrust in the process. Therefore, she suggested that it might help to schedule a June meeting for SWAC to receive the information that is out at that time, thereby allowing SWAC some time to forward recommendations on the proposals.

Chair Washington said he was sure he could accommodate that desire. Chair Washington commented, however, concerning the "mistrust," that if he tells her or anyone to trust his judgment, to please give him the opportunity to prove to all of them what he is about and they can indeed trust him. Chair Washington said he would devote as much time as necessary during June to discuss the proposals on the table. He asked the committee members to hold their calendars open because if the regular June 23rd meeting was not sufficient to take care of the discussion they could meet again June 30th.

Ms. Driscoll asked if the May meeting would be open to the public and Chair Washington replied that all Metro meetings were open to the public. He said this particular meeting however was probably going to be held off-site on a date to be announced, and that anyone wishing to attend would be welcome as an observer, but not a participant, because it is important that the attendees flesh out criteria.

Mr. Schwab commented that since no one else has said it, and since he sits on the Rate Review Committee (RRC), it is widely felt that solid waste funds should be used for solid waste issues. He said that most likely if a proposal to do differently comes before either RRC or SWAC, the members will probably tell you they are not interested.

Councilor Park commented that the Metro Charter is set up to recognize that the region believes Metro should place first priority on transportation and land use planning. Plus, this Council is trying to nurture a better working relationship with Metro's Executive Officer, and if the Metro Charter needs to be restructured, it needs to go before the voters of the region. He said that however, he personally has not made any decisions about the contract savings. He said he believes any proposal will come about through an honest process and balance things across the board.

Chair Washington asked if there were any further questions and thanked the committee for their forthrightness and honesty. He asked them to please give him and the Council a chance and reassured the committee members that the process will be very open. He said he did not remember actually reading the article whereby Metro's Executive Officer proposed a 50/50 split of the contract savings.

Chair Washington then introduced Mr. Terry Petersen (Acting REM Director) to compare the old and new Metro Disposal Contracts.

Mr. Petersen said that on the reverse side of the handout just distributed, "Proposed Process to Determine the Use of Disposal Savings," are some key elements of the new contract as compared to the old contract. He said the first one, the disposal price, is determined by blocks of tonnage and the change to the contract is all in that first tier. The amount changes from $28.18 to $22.31. He said the blended rate over all tonnage is $23.94, which will drop to $17.37. Mr. Petersen said this equates to a little more than a $6.00 drop in the average or "blended" rate as a result of the contract.

He said that under the current contract, the rate is based on the total tons that Metro delivers under its disposal contract, but primarily from Metro transfer stations. In the

new contract, any of the tons delivered to any other general purpose landfill and owned by Waste Management, and any of the residual coming from its material recovery facilities, will be used to calculate the price to Metro. Mr. Petersen said this is significant because Waste Management is a very large presence in our region and this protects the price regardless of where the tonnage shifts between the facilities.

He said the term of the contract has been extended, with a provision for a further extension that is tied to the market checks. He said the market checks will occur every five years, which will entail looking at Waste Management's other large contracts (defined as public contracts with at least 200,000 tons) compared the prices and make appropriate adjustments if Metro's price is higher than those in Oregon, Washington or Idaho. He said a further protection against future price increases is the CIP adjustment, which was dropped from 90% to 70% during the first 10 year; after 2009, it reverts back to 90%.

He said that another area that Metro Council has shown an interest in is being able to look at alternative transportation modes. A clause has been included in the new contract allowing Waste Management to propose alternative transportation if it is able to buy Metro's current STS transportation contract and if Waste Management can demonstrate the transportation charges would be no higher than our current trucking contract.

Mr. Petersen said that, lastly, the contract waste flow guaranty language has been changed to reflect that 90% of the region's putrescible waste can go to any appropriate Waste Management landfill, as opposed to only Columbia Ridge. Mr. Petersen said there were still many unanswered questions, such as what about Riverbend, how are we going to manage the 10%, and whether the current franchises are affected. REM will work on those questions over the next couple of months.

There were no questions,

ACTION ITEM: SWAC MEMBERSHIP & ORGANIZATION
Mr. Anderson began the discussion about changes to SWAC membership and organization. Mr. Anderson distributed a two-sided discussion paper (attached as Exhibit B). Mr. Anderson said that at the last SWAC, several changes to the membership were discussed. He said the handout just distributed attempts to incorporate those recommendations into Options 1, 2, 3 and 4. Mr. Anderson said he has attempted to create more balance to the committee by taking the "Multnomah County" inactive position and one of the disposal industry positions and converting those into recycling interests. The Multnomah County citizen representative and the City of Portland citizen representative position have been combined, and the freed-up position converted to a business representative. Plus, two more business interest positions were added. He said if the Committee concurs with incorporating these changes into the bylaws, we will focus our attention next month on reviewing the membership.

Mr. Anderson said that under the designation of "recycling interests," the "facility" refers to a "clean MRF," while "dirty MRFs" are under solid waste facilities.

Mr. Irvine asked what the rationale was for dropping the solid waste facilities from four to three and keeping the status quo for the other designations?

Mr. Anderson said a number of comments were heard about the solid waste facilities interests being represented in the facilities designation and in the hauling industry, offering a non-balanced field.

Mr. White asked why the Committee was being asked to phase in the changes?

Mr. Anderson replied that Chair Washington requested that the changes be made as they became vacant, as did various Committee members at the March meeting.

Mr. Anderson asked if it was better to keep the facilities positions flexible or is there a compelling interest to have, for instance, specific landfills and specific facility representation on the committee?

Mr. Irvine replied that if representation stayed as spread out as it is currently, that is fine, but he wouldn't like to see the representation be all landfills, all processing centers, etc.

Ms. Chaplen said she was not clear whether the category of business representative would have to be someone involved in that business or could it be someone who uses those businesses.

Mr. Anderson replied that the intent was to have persons involved in those businesses.

Ms. Storz commented that she felt it was important to have representatives from both franchised and unfranchised areas.

Ms. Chaplen asked if would satisfy SWAC needs to get an industry representative, i.e., from the hotel or restaurant industry? Mr. Anderson said that sounded like a very good idea.

Mr. Anderson continued that both the number of haulers on SWAC and who they represent is unchanged. He said there are currently four representatives, one from each county and one that is traditionally an at-large member. He specifically asked the hauler representatives if it was important to continue with geographical definitions for hauler representatives.

Mr. Leichner said he felt geographic area was important in choosing a hauler representative. Mr. White said he agreed that geographic area was important. Mr. White said that when the Tri-County Council makes a recommendation, they also take hauler size into consideration as well as vertical integration considerations.

Mr. Schwab said he agrees with the previous comments. He said he does have a problem with the comment at the bottom of the page indicating no more than one regular voting

member of the committee may be employed by the same company. He said that currently his "alternate" was Sally Fender, who is employed with United Disposal, and there is already one representative from that company in a different capacity. He said he did favor a large range of diversity on the committee, he is not sure he agrees with that change.

Mr. Anderson asked the haulers if they were okay with leaving representation as it currently is and they replied affirmatively.

Ms. Driscoll noted it was great that SWAC include citizen representatives, but we should move quickly to replace or eliminate them as the bylaws state rather than to continue their membership if they are inactive.

Ms. Herrigel said that if we looked to associations that are run on behalf of businesses we would be more likely to have good attendance and participation.

Mr. Murray commented he would also like to see those individuals not showing up at meetings be dropped from the membership list.

Chair Washington asked for the committee's thoughts as to removing representatives who do not regularly attend as the rules allow, not to punish anyone, but because attendance is very important for balanced representation.

The committee concurred it would like to see the rules on attendance enforced.

There was considerable discussion on whether the representative from Clark County should remain as a non-voting member or change the status to voting.

Mr. Guttridge commented that he live in Clackamas County, but works in Clark County, so he has first-hand knowledge that citizens in Clark County are very affected by Metro decisions, and he realizes that Portland is equally affected by decisions made by Clark County. He would like to see the representation changed to a voting member.

Ms. Herrigel inquired as to whether the Metro region is represented in Clark County. Mr. Guttridge replied it is not, but that they also do not have a regional government in Clark County. Mr. Large commented (from the gallery) that Mr. Gilbert lives in Camas and serves as a voting member on the Committee. It was noted, however, that Mr. Gilbert's recycling business exists in the Metro region.

Chair Washington noted there is a regional transportation committee in Clark County, and the chair of Metro's Transportation Committee sits on that committee, albeit a non-voting member. This allows a representative from the Metro region to be at the table to hear, listen and understand the issues that might impact our region as they are discussed. He noted that works quite well.

Mr. Guttridge emphasized his feelings that Clark County felt very much a part of the region that much the decisions made in the region affect Clark County.

Mr. White noted that his perusal of the voting and non-voting members of the SWAC indicate that Clark County fits more into the non-voting list along with DEQ, Marion and Yamhill Counties.

Mr. Murray asked if there was any legal reason for or against Clark County's being a voting or non-voting member of SWAC.

Chair Washington noted it could probably be challenged and perhaps a case could be made in favor of making them a voting member, but he believes as long as the representative from Clark County is allowed to have the opportunity to discuss the issues, this should not be a problem.

Mr. Winterhalter believes they should remain nonvoting.

Mr. Leichner is of the opinion the Clark County representative should have the opportunity to vote. He believes Clark County is directly affected by Metro's decisions.

Chair Washington suggested that we submit the issue to our legal counsel in terms of voting across state lines. He said that is the clearest way to get an answer for precedents on this issue.

Mr. Anderson said, getting back to Mr. Schwab's comments with regard to only one representative per company: The proposed changes to the bylaws would allow a regular member and an alternate to be from the same company, so Mr. Schwab would not be caught in the situation he described above.

Councilor Park asked for a clarification: When you say company, I assume you mean corporate identity.

Mr. Anderson said that was correct, and that in fact he has already consulted with legal counsel and it was felt this issue might require a legal interpretation down the road.

Mr. Bradley commented that he is involved in all of the operations of Waste Management and that its position will be brought forth to the Committee no matter who the messenger is. He noted he has no problem about who their representative is.

MOTION ON DRAFT BYLAWS
Option 1: For now, leave the disposal site representatives undesignated. General nods **yes**, no one opposed.
Option 2: Business representatives, noted general comfort with the three groups proposed to be represented, with the addition that there be an attempted balance between businesses in franchised and nonfranchised areas: **Yes**

Option 3: Haulers, fine as is, representatives picked by geographic area, plus one at-large. **Yes**
Option 4: Mr. Schwab made a motion to continue Clark County representative as non-voting member. Mr. Misovetz seconded the motion. Majority **Yes**, Mr. Leichner opposed.
Restriction of one member representative from any company, but excluding alternates from that designation. Yes, unanimous.
Mr. Misovetz made a motion on the revised bylaws, including the recommended option for committee membership as amended by the further definition of business representatives. Mr. Irvine seconded the motion. The Committee passed the motion by unanimous vote.

Chair Washington noted that the bylaws currently state that either the Executive Officer or the Committee Chair may request a member to resign on the basis of non-attendance. Mr. Washington will speak to the Executive Officer about amending the bylaws so that the wording states that the request would rest with one or the other party, not that both partiescould make such a request.

TRANSFER STATION SERVICE PLAN
Mr. Metzler distributed a handout with a revised project timeline for the Transfer Station Service Provision Plan to be completed. Mr. Metzler gave a quick summary of the new time frame.

Mr. Metzler said the team had previously targeted July as a possible completion date for the project, but it soon became apparent that more time was needed to more carefully define some of the problems, needs and criteria for the services being reviewed and to assure adequate stakeholder input.

Mr. Metzler said there are three major parts to the project. He said we are currently in Phase I, where we verify, define and detail the problem. He said they will then move to a stage where needs through interviews, surveys and technical fact-finding. He said next will come identifying public objectives and constraints related to service provision planning, and at the end of this phase, an assessment report will be prepared.

Mr. Metzler said that in Part II and Part III, the team will be developing the evaluation criteria on how we will measure the success of any solutions that may come of the project, develop and review the service options, refine those options and evaluate them. He said this is scheduled to happen in the months of June and July.

Mr. Metzler said that in Part III, the team will develop some recommendations, present a draft report in early August, and after discussion of the draft from stakeholders and decisionmakers we will finalize the report. He said this will be accomplished in mid-September.

Mr. Petersen commented that Councilor Washington pointed out to him that in September, what Mr. Metzler is suggesting is that there be a draft report with

recommendations, hopefully on behalf of the SWAC, that can be taken to the Council. He said there may then be some code changes required and a formal adoption of a new Solid Waste Management Plan chapter that would need to go to the Council for formal adoption which would take place in October. So, the process goes one more step beyond that which Mr. Metzler pointed out today.

Chair Washington also noted there will be updates to the REM Committee and the Council when appropriate throughout the entire process.

Mr. Irvine pointed out that when SWAC previously had such important projects, the Committee met in the form of a subcommittee and met more frequently in order to review information more thoroughly.

Chair Washington asked the Committee if it wanted to meet more often as a whole or make a subcommittee that meets more frequently. The group unanimously responded they would like to form a subcommittee.

There were no further questions.

ACTION ITEM: WASTE REDUCTION PROGRAM FOR LOCAL GOVERNMENTS
Ms. Erickson and Mr. Jacobson are requesting SWAC approval and recommendation to the Council for the Adoption of Year 10 Waste Reduction Work Program.

Ms. Ericksen noted a copy of the plan was included in today's agenda packet. She said these activities help with the implementation of the RSWMP. She said this plan was originally established in 1990 to provide local governments with funding assistance needed to implement recycling and waste reduction activities in their jurisdictions. She noted they are an important part in meeting the objectives in the RSWMP and also State law. Ms. Ericksen said that through this and other programs, local government and Metro work together to provide single and multi-family recycling services, yard debris collection, home composting programs, waste reduction consultations to businesses, in-school programs for students and teachers, public outreach, education and other programs. She said there is a new competitive portion to this plan that was implemented two years ago, and it adds a separate piece to the revenue sharing program that is targeted towards commercial recycling programs.

Ms. Erickson said the framework is very brief, and local governments fill in the pieces according to their particular needs due to jurisdictional differences. The plan has been through a public comment period and no comments were received. This plan comes directly from the RSWMP process; in addition, there are other supporting programs that are not specifically listed in the RSWMP but will be listed in the plan.

Ms. Erickson said the discussion today will be limited to the per-capita revenue sharing piece of the program. She said each local government submits a description on how each element in this program will be completed, and the work plans are due to Metro June 1, 1999, where they are reviewed by the Waste Reduction staff and the Metro

Council staff. Ms. Erickson said the review committee is charged with granting administrative approval to the work plans.

Mr. Jacobson discussed issues that shape what the current document looks like. Mr. Jacobson said ultimately the team will request SWAC to review and approve the 1999-00 (Year 10) annual framework for local government waste reduction and recycling activities. He said these activities assist with the implementation of the Regional Solid Waste Management Plan (RSWMP).

Mr. Jacobson said the Plan is broken down into three major parts as follows: He said Phase I (where we are right now) the annual plan process, is one of the primary mechanisms for Metro and local governments to achieve the region's recycling and waste reduction goals set forth by the RSWMP. Number 2: The framework creates a regional standard to ensure that coordinated and cohesive programs are offered to the region's residents, Number 3, the Annual Work Plan lists the tasks to be completed by local jurisdictions under the program in order to receive funding assistance.

Mr. Jacobson listed some of the issues: Year 10 (1999-00) will be the final year for this particular plan framework format. There are several reasons for this: the recent State of the Plan Report states that we need to shift focus towards improving commercial, construction and demolition and organic waste programs in order to reach our regional waste reduction and recycling goals. The planning window was too narrow to make radical changes for this current planning cycle; however, some small format and focus area changes have been made to the framework.

In addition, local government and Metro solid waste managers have began meeting to create a stronger and more narrowed focus for future waste reduction and recycling programs, and these changes will be reflected in future planning cycles. Even though the format for Year 10 is very similar to Year 9, Metro solicited public comment by mailing drafts to approximately 50 persons who have expressed interest in the past. As of the closing of the comment period on April 11, no comments were received.

Mr. Jacobson said the total budget/financial impact to the agency is $784,000 divided into two separate efforts. He said $600,000 will be allocated on a per-capita basis, which equates to $0.45 per citizen per year for maintenance of existing programs, and the remaining $184,200 will be made available as competitive grants for commercial recycling programs.

Mr. Jacobson said the team would like to have the Resolution and Staff Report for approval of the framework plan before the Council REM Committee on May 5.

Ms. Storz asked what the chances are of increasing the challenge grant portion (the per capita allocation) allowed to local governments. The justification is that the lower tip fee means we will have to put more effort into recovering materials.

Ms. Erickson stated that REM's budget has already begun its approval process, but the budget may be revisited once the decisions on the contract change savings are made, and perhaps that is the most appropriate time to discuss where those savings are applied.

Chair Washington asked Ms. Storz to send him a note on what she would like to see done for local governments with regard to the challenge grant. Chair Washington noted that he always asks for what he really wants, so don't undervalue what you are asking for.

Mr. Schwab moved to accept the Resolution and forward to the Council. Ms. Herrigel seconded the motion. The Committee passed the motion unanimously.

Chair Washington thanked the Committee for the honest conversation, their concerns and their thoughts. He said he is normally at Metro in the afternoons and said he was the point person for dealing with issues on the contract, and any of the REM issues. Councilor Washington can be reached by his assistant, Pat at 797-1537; directly at 797-1546; at Portland State University, 725-2543; or at home, 284-1743 (please note only until 11:00 p.m. Councilor Washington stated that he would consider such conversations as private.

The meeting was adjourned.

Respectfully submitted:
Connie L. Kinney, Clerk to the Committee

SWAC Membership
and
Organizational Representation
March 17, 1999

Membership

Periodic review of membership is past due

Representation

Metro wants:

- Representation on the committee more balanced to reflect constituency
- Representation from the composting industry
- Business ratepayer representation

Metro is:

- Seeking comment on the committee's representative make-up
- Asking SWAC to amend the Bylaws at the next meeting (April 21)
- Soliciting options for phasing-in the changes

During last year's code revision, SWAC identified a number of facility-related issues and problems related to the need for additional regional transfer station services.

The purpose of this meeting is to solicit feedback and allow SWAC to further explore those issues and concerns. Information received from SWAC will be used to help further define the project scope and assessment of need.

Meeting Outcome

Identify and record perceptions of "need" from the group (SWAC).

Discussion Topics

The following is a summary of the issues identified last year by SWAC that may be related to the need for more regional transfer stations or those services typically provided:

- Ability of haulers to compete (with larger companies) with/without a "transfer" facility.
- Travel Time / Access: Cost to ratepayers ?
- Need for non-vertically integrated haulers to have options (not at the mercy of monopolies).
- Policy toward serving the public customer? How to best serve the public?
- Effects of Metro's declining disposal rates on a facility's ability to continue operations?

Service Provision Plan for Regional Transfer Station Services
SWAC Agenda Item No. 6 (Work Session)

The Service Plan project team is currently scoping out the question:

Does the Metro region need more transfer stations (or those services typically provided*)?

IF YES, then:

Work with stakeholder groups and decision makers to:

1. Establish criteria for evaluating alternatives
2. Develop alternatives
3. Summarize impacts of each alternative (pros and cons)
4. Develop conclusions and recommendations

IF NO, then:

- **Stop**, *or*
- Refocus project

  Identify other regional solid waste management issues that need to be addressed.

***Note:** Traditional regional transfer station services include, but are not limited to: access to MSW disposal services, services to public customers, hazardous waste services.*

MetroNews

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Recycled paper

For immediate release – March 12, 1999
Contact: Jan O'Dell, 797-1599

Metro renegotiates garbage contract; landfill disposal rates would be lowest in Northwest

Metro has successfully negotiated new contract terms with its garbage disposal contractor, Waste Management Inc. If approved by the Metro Council, the renegotiated contract would reduce costs to the region by approximately $60 million during the next 10 years.

"This is good business," said Metro Executive Officer Mike Burton. "While garbage rates are going up in other parts of the country, Metro is reducing its rate to one of the lowest, if not the lowest, in the Pacific Northwest. I am pleased to forward this contract to the Council with my recommendation for approval."

The new contract will bring disposal rates down from an average $23.94 to $17.37 per ton effective Jan. 1, 2000. Other landfill rates in the Northwest range from $18 to $21 per ton.

The new contract will keep rates at market level by requiring market checks every five years. If the rate charged to Metro exceeds the market rate by more than 5 percent, the contract requires a reduction.

"I'm pleased that Metro and Waste Management were able to come to an agreement that allows us to continue our long-standing business partnership," said Metro Council Presiding Officer Rod Monroe. "This contract will bring us in line with market rates and keep us there." The contract will be considered first by the Regional Environmental Committee chaired by Councilor Ed Washington; then the full Council will take up the issue. The committee could consider the new contract as early as April 7.

If the Metro Council approves the contract, the next step will be a public process to consider and debate how best to use the cost savings to assist the region. Burton is recommending the funds go to reducing the Metro tipping fee at its transfer stations for the third time in three years, and to support planning throughout the region. "Our cities and counties need planning dollars to keep this region a great place to live. And Metro itself has no general fund dollars for this purpose," he said.

- more -

Background information
Metro signed a 20-year contract with Waste Management in 1989 for disposal of the region's waste at the Columbia Ridge Landfill near Arlington, Ore. Metro currently disposes of approximately 750,000 tons of solid waste annually at an average per-ton rate of $23.94.

In July 1998 Waste Management merged USA Waste, Inc. The merger triggered a default of Waste Management's contract with Metro because Waste Management did not seek or receive from Metro the contractually required approval of the merger. Shortly thereafter, Waste Management requested that Metro meet to discuss negotiation of its contract to resolve the dispute with Metro without arbitration.

Metro, the regional government that serves 1.3 million people who live in Clackamas, Multnomah and Washington counties and the 24 cities in the Portland metropolitan area, provides regional services that guide growth and help ensure that livable communities are created for the future.

# # #

FAST FACTS:
Metro's renegotiated waste disposal contract is good business

New contract reduces rates

Metro has successfully negotiated new contract terms with its garbage disposal contractor, Waste Management Inc., reducing rates to below market and saving the region approximately $60 million over the next ten years. If approved by the Metro Council, the renegotiated contract will lower Metro's landfill disposal rates to the lowest in the Northwest, while providing other benefits and protections beneficial to the region's ratepayers.

New contract lowers rates, provides market checks

Highlights of new waste disposal contract (Change Order No. 8):

- Reduces the average per-ton rate from $23.94 per ton to $17.37 per ton. This makes the Metro disposal rate one of the lowest in the Northwest.
- Establishes a procedure for comparing Metro's rate to "market rates" every five years, and requires a reduction in the average rate charged to Metro if that rate exceeds the "market rate" by more than five percent.
- Freezes Metro's contract current disposal rates until January 1, 2000.
- Reduces the inflation adjustment in the contract from July 1, 2000 through July 1, 2009.
- Extends the term of the contract five years until December 31, 2014.
- Provides the contractor with an additional five-year contract extension if the disposal rate is reduced voluntarily or as a result of the comparison to market rates.
- Modifies the waste delivery guarantees in the existing contract so that up to ten percent of the region's waste can be delivered to general purpose landfills that are not owned or affiliated with the disposal contractor.
- Establishes criteria for the contractor to provide transportation services, using an alternative transport mode at no increase in Metro's cost.

Contract background

In 1989 Metro entered into a 20-year contract with Waste Management for disposal of the region's waste at a new landfill in Gilliam County. The closure of the St. Johns Landfill coupled with unwillingness on the part of the public to site another landfill locally resulted in Metro negotiating a contract with Waste Management for disposal of the region's waste at the Columbia Ridge Landfill in Arlington, Oregon.

In July 1998 Waste Management merged USA Waste, Inc. The merger triggered a default of the Waste Management/Metro contract, since Waste Management did not seek or receive from Metro the contractually required approval of the merger. Shortly thereafter, Waste Management requested that Metro meet to discuss negotiation of its contract to resolve their dispute with Metro without arbitration.

Changing marketplace creates favorable conditions

The marketplace for waste disposal services has changed dramatically since Metro entered into its disposal contract in 1988. Construction of two additional regional landfills created a competitive market that reduced disposal costs in the Northwest. This change, along with other factors such as inflation, caused Metro's disposal costs to remain high while market rates elsewhere in the Pacific Northwest fell.

Metro currently disposes of approximately 750,000 tons of solid waste through its contract with Waste Management at an average per-ton rate of $23.94. Metro's primary objective in negotiating with Waste Management was to obtain a disposal rate at or near market in the Northwest. (The lowest rate in the Northwest is Snohomish County at $17.38/ton; others range from $18 to $21/ton.) Metro felt optimistic that a more favorable rate could be achieved through negotiations with its current contractor rather than canceling and rebidding the disposal contract. By negotiating, Metro also avoided the cost and risk of arbitration and a potentially adverse decision by an arbitrator or court.

New contract supports competition

The newly merged Waste Management is the largest solid waste company in North America. The company has a large vertically integrated solid waste operation in the Metro area and controls enough waste to materially affect the disposal rate based on how it directs its waste. The new contract eliminates the possibility of an increase in Metro's. disposal rate due to diversion of waste by firms owned or operated by Waste Management.

The contract also includes terms that permit up to 10 percent of the region's putrescible solid waste to go to other landfills owned by firms other than Waste Management. This introduces the possibility of more competition than under Metro's current contract terms.

New contract opens door to alternative transportation

While transportation of Metro's waste by truck was the most cost-effective option in 1989 when the transportation contract was bid, there continues to be interest in considering alternatives, such as barge or rail. The new contract includes terms that would allow assignment of Metro's transportation services contract to Waste Management if Waste Management can provide the alternate mode of transportation at no additional cost.

Next steps:

- **Council consideration of Change Order No. 8**

  Metro's Regional Environmental Management Committee could begin consideration of Change Order No. 8 (the negotiated Waste Management contract) on April 7.

- **Public process to discuss use of contract savings**

  Metro will, over the next several months, facilitate discussions about how contract savings can best benefit the region. The issue will be discussed at Metro Council meetings, Metro Solid Waste Advisory Committee meetings, meetings with local government and recycling representatives, REM's Rate Review Committee and the general public.

For more information

Contact Jan O'Dell, Metro REM, 797-1599

REVISED
3/16/99

DRAFT

State-of-the-Plan Report
Regional Solid Waste Management Plan
for
Fiscal Years 1996-97 and 1997-98

PART I
PROGRAM ASSESSMENT

February 1999

PART 1: PROGRAM ASSESSMENT

Table of Contents

EXECUTIVE SUMMARY

The Regional Solid Waste Management Plan (RSWMP) provides the region with direction on how to meet its solid waste needs through 2005. The Plan establishes goals and objectives, including a commitment to a 52% recovery rate by 2000, and serves as a framework for the coordination of regional solid waste practices. In addition, the Plan satisfies state requirements for a regional waste reduction plan.

The State-of-the-Plan Report, the first major evaluation of the RSWMP since it was adopted in January 1996, assesses the region's progress in waste reduction, disposal and recovery facilities, illegal dumping, disaster debris management and system financing. In addition, the Report discusses issues of Plan management, such as annual planning, funding, and monitoring and measurement.

In waste reduction, the region's overall progress has failed to keep pace with growing waste generation rates. Strong economic growth, particularly in the construction and demolition and commercial sectors, fueled the growth in waste generation. Because more waste is being generated at a faster rate, the forecasts for both the generated waste stream and the tonnage needed to meet the region's recovery rate have been revised.

To meet the region's 52% recovery level by 2000, recovery from existing programs and new recommended practices for source-separated recycling must divert 473,500 tons more than the 251,600 tons that are implicit in the RSWMP projections. When we measure the region's progress in the individual sectors, residential recycling is on track at 107% of the recovery that it needed in 1997. Other sectors fare less well. Source-separated commercial sector recovery, for example, is 56% of where it should be for 1997; on-site recovery of construction and demolition debris is 34%; and commercial organics recovery targets are very distant.

Although **residential** recovery as a whole is ahead of the pace necessary to meet its contribution to recovery goals, efforts can be made to improve its efficiency and effectiveness:

- Metro and local government waste prevention messages will be folded into general recycling outreach campaigns.
- Metro will evaluate ways to provide education and information to more people through composting workshops and other outreach efforts, build an additional one or more composting demonstration sites in the region and continue to distribute home composting bins.
- Metro will evaluate ways of educating residents about buying recycled content products.
- Metro and its local government partners will conduct a region-wide outreach campaign in Fall 1999 to reinforce the basics of recycling. To work toward a common outreach message, Metro will assist local governments in assessing the additional of new materials to jurisdictions' list of recyclables and standardizing material preparation requirements.
- Metro will review recovery practices from self-haul loads and evaluate the possibility of requiring processing facilities to serve these customers.

- Metro will continue to provide technical assistance to local governments in evaluating new curbside collection technologies. Metro will work with local governments as they move to new collection practices to educate their residents.

Much work remains to be done in the area of **commercial** recovery:

- In Spring 1999, Metro and local governments will assess the level of commercial recycling by examining qualitative and quantitative factors that affect recovery, with the objective of designing better recovery programs.
- Metro outreach efforts will incorporate waste prevention into its general recycling messages for businesses. A major outreach effort is planned for Spring 2000.
- Metro will evaluate its buy recycled guides for businesses for effectiveness and distribution efficiencies.
- Local governments will continue to provide waste evaluations for waste prevention and recycling to businesses.
- Local governments will examine ways to increase business participation in recycling.
- Metro and local governments will analyze waste composition data to identify potential recyclables remaining in the commercial waste stream.

Recovery still has a long way to go in **commercial organics** before it reaches a significant level:

- Metro will conduct research to identify problems and potential solutions and develop a more comprehensive regional approach.
- Metro will step up to a coordinated approach to implementing organics collection and processing, based on research-based needs assessments.
- Metro will continue to provide financial support to non-profit food recovery programs for the hungry and the needy.

On-site **construction and demolition debris (C&D)** recycling appears to be lagging behind the track to Year 2000 targets, but some recycling may be shifting to post-collection processing and recovery facilities, given the barriers to on-site recovery.

- Metro will analyze waste composition data to identify the amount and source of C&D materials remaining in the waste stream.
- Metro and local governments will design a targeted, comprehensive, regional approach to existing recovery efforts.
- Metro and local governments will target specific sub-sectors of the C&D industry.
- Metro and local governments will promote the availability of existing processing facilities for C&D materials.
- Metro will analyze the transfer station service plan to determine if additional processing capacity is needed in the western part of the Metro region.

Post-collection recovery of commercial dry waste and C&D debris is stronger than required by the Plan, with five major private and two public processing facilities. Nevertheless, some opportunities for action exist:

- Metro will analyze waste composition data to determine if marketable materials are present in recoverable quantities at processing facilities.
- Metro will examine factors that affect post-collection recovery, including System Fee Credits, waste composition and source separation programs.
- Metro will ensure that the transfer station service plan assesses the Metro region's need for additional post-collection processing capacity.

INTRODUCTION

The Regional Solid Waste Management Plan (RSWMP) was developed by the Metro Solid Waste Advisory Committee (SWAC), adopted by Metro Council, and approved by the Oregon Department of Environmental Quality. The Plan provides direction for meeting regional solid waste needs through 2005. In particular, the Plan:

- Establishes regional solid waste goals and objectives, including a commitment to reaching a 52% recovery rate by 2000.
- Serves as a regional framework for the coordination of solid waste practices.
- Satisfies state law requiring implementation of a waste reduction plan for the region.

State-of-the-Plan Reports are "*intended to help determine whether the solid waste system is generally on track with respect to the...Plan's goals, processing and disposal capacity, environmental regulations...[and] to provide a significant amount of the objective feedback for Plan management and steering.*" [RSWMP, page 9-2].

This State-of-the-Plan Report represents the first major assessment of the Plan since it was adopted in January 1996. The recommendations contained herein will begin a dialogue with SWAC and other interested parties about potential Plan amendments.

The following areas are discussed:

- Waste reduction
- Solid waste disposal and recovery facilities
- Illegal dumping
- Disaster debris management
- System financing

In addition, the Report discusses issues of Plan management, such as annual planning, funding, and monitoring and measurement.

Chapter 1
Waste Reduction

"I want to see us reach our goal of over 50% [recovery] by the year 2000."
Rod Monroe, newly-elected Presiding Officer, Metro Council
January 7, 1999

The major portion of the Regional Solid Waste Management Plan is devoted to issues of waste recovery, recycling and reduction. The RSWMP replaced Metro's 1988 waste reduction plan and responded to state legislation requiring wastesheds (which typically conform to county boundaries) to develop waste reduction plans that would describe how to reach their waste reduction goals. The wasteshed for the Portland metropolitan region encompasses 24 cities and three counties.

The RSWMP established a waste recovery goal of 52% (and 48% recycling) by 2000 for the Metro region, significantly higher than the state requirement of 40 percent recovery for 2000. In addition, the RSWMP set a recovery goal of 56% (and 53% recycling) in 2005. These goals will be achieved by reducing the amount of waste disposed (through recycling, composting and energy recovery).

The challenge is a formidable one, because the region's solid waste system is a mixture of the public and private sectors – 24 cities, three counties, the Oregon Department of Environmental Quality (DEQ), Metro, private waste haulers, and public and private owners and operators of waste and recycling facilities. This complex mixture makes regional coordination essential. The RSWMP explicitly recognizes and defines these shared roles and responsibilities for waste reduction.

The RSWMP contains specific waste reduction goals, recommends certain management practices to reach the goals, and establishes a variety of benchmarks to measure the region's progress toward the goals. The recommended practices represent new recovery efforts in various waste generation sectors, which, if implemented as specified and when combined with recovery from programs that existed when the RSWMP was written, would reach the adopted recovery goal for the region.

What's the big picture?
From 1993 to 1995, the annual increase in per capita recovery was more than double the increase in per capita waste generation. As a result, the region's recovery rate increased sharply, from 37% to more than 42%.

However, in the two-year period from 1995 to 1997, waste generation ratcheted up to a higher level and recovery did not keep pace. The jump in waste generation was fueled by strong economic growth, particularly in the construction/demolition and commercial sectors. Per capita recovery continued to grow, averaging an annual increase of 5.1% between 1995 and 1997, but lagged the 6.3% annual increase in per capita waste generation. As a result, the recovery rate declined by one percentage point in this period, to 41.6% for 1997 (see Table 1). Also impacting the system is that many of the recommended practices have been implemented to varying degrees.

By 1997, the region's generated waste topped two million tons, which exceeded the RSWMP forecast for 2000. Because waste is being generated at a faster rate than projected by the RSWMP, the forecasts for both the generated waste stream and the tonnage needed to meet the region's recovery rate have been revised. The revised generated waste stream is forecast at 2.3 million tons by Year 2000, an increase of 35% from the actual 1995 generated waste stream.

Table 1
Progress toward Revised RSWMP System Benchmarks

System Benchmarks	Year 1995 Actual	Year 1997 Target	Year 1997 Actual	Year 2000 Target
Recycling Rate (1)	37.8%	40.9%	35.7%	44.0%
Recovery Rate	42.5%	46.7%	41.6%	52.0%
Per Capita (2)				
Generation (t/cap/yr)	1.33	1.46	1.50	1.36
Recovery (t/cap/yr)	0.56	0.68	0.62	0.71
Disposal (t/cap/yr)	0.76	0.78	0.87	0.65
Solid Waste Hierarchy				
Prevention	N.A.	0.5%	0.2%	1.0%
Recycling	30.9%	32.8%	28.9%	35.0%
Composting	6.9%	7.9%	6.8%	9.0%
Energy/Fuel	4.7%	5.8%	5.9%	7.0%
Disposal	57.5%	53.0%	58.4%	48.0%

NOTES
Columns may not add due to rounding.
t/cap/yr = tons per capita per year.
N.A. = Not applicable.
(1) Recycling Rate includes contribution by recycling and composting.
(2) The Year 2000 per capita benchmarks have been revised to reflect new waste stream projection.
Source: Metro, Regional Solid Waste Management Plan, Table 9.3, November 1997, Metro, February 1999.

To meet the Year 2000 goal of 52% recovery, the region's recovery from existing programs and from new efforts described by the recommended practices must divert 473,769 tons more than in 1995 (see Table 2). The revised requirement of 473,769 tons is a 74% increase over the 251,600 tons of recovery and waste prevention that was implicit in the original RSWMP projection for Year 2000.

Table 2
Revised RSWMP Recovery Requirements (1) (in tons)

Generator	RSWMP Exist. Prog.	RSWMP Rec. Prac.	RSWMP Total	Revised Total
Residential (2)	21,027	34,200	55,227	63,700
Commercial (2)	47,858	75,600	123,458	179,550
Commercial Organics	0	41,700	41,700	52,000
Construction & Demo	20,115	31,400	51,515	153,000
Post-collection	0	0	0	25,519
Total Recovery (2)	**89,000**	**182,900**	**271,900**	**473,769**

NOTES
Exist. Prog. = Existing programs, with additional recovery due to expanded waste stream.
Rec. Prac. = Recommended practices, and resulting new recovery.
(1) Represents the increase in waste prevention and recovery between 1995 and 2000 needed to meet the 2000 solid waste hierarchy benchmarks.
(2) Includes waste prevention.
Source: Metro, February 1999.

Table 3 shows target waste reduction by generator type for 2000 and actual waste reduction achieved through 1997, also by generator type. The region's increased recovery of almost 104,000 tons was 55% of what it should have achieved at the end of 1997 were it to meet its goal for 2000.

Table 3
Progress in Meeting RSWMP Diversion Targets (1)

Practices	Revised 2000	1997 Pro-rated(2)	1997 Actual	Difference	Percent (Actual to Pro-rated)
Waste Prevention					
Home Composting (3)	11,700	4,680	3,350	-1,330	72%
Business Waste Reduction	11,550	4,620	N.A.	-4,620	N.A.
Waste Prevention Subtotal	**23,250**	**9,300**	**3,350**	**-5,950**	**36%**
Recovery					
Expanded Residential Curbside	32,000	12,800	20,062	7,262	157%
Expanded Multi-family Collection	20,000	8,000	3,901	-4,099	49%
Source-Sep. Business Recyclables	168,000	67,200	37,358	-29,842	56%
Commercial Organics	52,000	20,800	N.A.	-20,800	N.A.
On-site Construction & Demo.	153,000	61,200	20,904	-40,296	34%
Post-Collection (4)	25,519	10,208	18,137	7,929	178%
Recovery Subtotal	**450,519**	**180,208**	**100,362**	**-79,846**	**56%**
Total, Prevention & Recovery	**473,769**	**189,508**	**103,712**	**-85,796**	**55%**

NOTES
N.A. = Not available.
(1) All tonnage figures represent increases to the actual baseline tonnage reported in 1995.
(2) Projected 1997 benchmark is prorated to be 40% of Year 2000 benchmark.
(3) Preliminary calculation for diversion from households with home composting bins. Final analysis to be completed in February 1999.
(4) Recovery from mixed waste processing facilities (sometimes called materials recovery facilities) and regional transfer stations, which is mostly construction and demolition materials.
Source: Metro, January 1999.

Progress toward recovery goals for single- and multi-family residential recycling appears to be on track. The combined efforts of recovery programs operating when the RSWMP was adopted and of the recovery practices recommended in the RSWMP are bearing fruit. Recovery in other generation sectors, such as commercial and construction and demolition, however, is not keeping pace. And, although the prospects for recovery of commercial organics have improved, the targets identified in the Plan remain a distant goal.

The RSWMP identifies recommended practices for major generator sectors. The status of the expected contribution of each generator type follows, along with recommendations to boost and enhance recovery from these sectors.

RESIDENTIAL (SINGLE AND MULTI-FAMILY)

In the residential sector, the region appears on track to recover sufficient recyclable materials through single- and multi-family recycling and home composting to reach the expected contribution to recovery. Analysis of recovery data by Metro staff indicates that residential recovery is at 107% of the point at which it should be to reach the Year 2000 recovery goals. Recovery of recyclables from single-family households is particularly vigorous (157% of where

recovery should be for 1997), and less strong from home composting (72%) and multi-family households (49%).

It is difficult in practice to discern whether recovery is attributed to programs that were in existence when the RSWMP took effect or to the results of the recommended practices identified in the Plan. As a result, no attempt has been made to report recovery from either source separately.

Waste Prevention

The RSWMP emphasizes the solid waste hierarchy – reduce, reuse, recycle/compost, energy recovery, disposal – because waste prevention practices, such as reducing or reusing waste, have the potential to conserve the largest amount of energy and natural resources over time, which results in lower levels of pollution.

Among the approaches available to affect waste prevention and promote efficient use of resources, the Plan identifies education in its broadest terms – media, education, purchasing – as the most effective for local and regional governments to implement.

Regional media campaigns were developed and implemented in FY 1996-97 and FY 1997-98 to build awareness of the concept of preventing waste; those campaigns did not fully meet expectations. As a result, Metro conducted research into waste prevention to develop a common theme and approach to its public education efforts and analyzed public understanding of the concept of waste prevention through focus groups and stakeholder surveys.

The research found that although people practice waste prevention behaviors regularly, they overwhelmingly identified their behaviors with recycling and had great difficulty grasping the distinction between waste prevention and recycling. Future regional outreach efforts will provide information to encourage both waste prevention *and* recycling practices together and not treat them as separate outreach campaigns.

Other Metro-area local governments target their residents and businesses to augment regional waste prevention messages by conducting their own specific waste prevention promotions.

An additional public education effort included adding waste prevention elements to region-wide annual neighborhood cleanups, whereby sponsoring local governments could receive a waste prevention financial "bonus" by offering one or more waste prevention activities at their cleanup events. Although a wide variety of waste prevention activities were identified for possible inclusion in the events, relatively few were undertaken. This element of the neighborhood cleanup events is unlikely to continue.

Metro and other local government educators offer a full slate of recycling and waste prevention programs and curricula for region schools. School children are educated about general waste prevention concepts, including home composting and avoiding hazardous waste by using safer substitutes.

Metro continues to update and publish a series of buy recycled guides for households and businesses. The guides are distributed at community events, trade and consumer shows (Yard, Garden & Patio show), and through local government outreach and community events.

Questions exist about the effectiveness of the guides – "What is their value?", "Are people actually using them to make purchasing decisions?", "Is there a way to use technology to deliver the same information more effectively or more inexpensively?" Metro will evaluate the current methods and materials to answer these questions.

Home Composting

Home composting is an important component of RSWMP waste prevention efforts, because it offers the opportunity to divert organics (yard trimmings and food scraps) from the yard debris or garbage collection system. The home composting recommended practices focus on education (composting workshops and demonstration sites) and on a subsidized composting bin distribution program.

The Metro Council deferred a FY 1998-1999 budget request for a home composting bin sale, pending a satisfactory program evaluation. The six-month evaluation of the home composting program began in Spring 1998; the final report will be issued in March 1999. The preliminary evaluation has been completed and indicates the program is exceeding its performance targets.

As part of the evaluation, three surveys were conducted, of workshop attendees, bin owners and the general population. In addition, a cost-benefit analysis was prepared.

Metro conducts about 26 workshops annually, with annual attendance running 200 to 400 people. In a survey conducted for the composting program evaluation, 17% of single-family households, evenly split between composters and non-composters, were interested in composting workshops. Unmet regional demand for workshops is estimated at more than 60,000 households. This demand could be met in part by offering workshops at times other than Saturday mornings. Metro should evaluate the cost-effectiveness of contracting out the composting workshops to dependable and knowledgeable instructors, thereby increasing service, while keeping program costs low. If implemented, contractors should be trained and monitored to ensure a high standard of quality education.

One of the surveys conducted in 1998 found that 56% of composters and 38% of non-composters wanted more information about composting. Metro should evaluate ways other than workshops to deliver the home composting message. In addition, Metro should continue to provide residents promotion and education materials on home composting, grasscycling and yard debris collection.

Four home composting demonstration sites attract a combined 500 to 1,000 visitors annually. (A fifth site, in Washington County, closed when the community college at which it was located needed the space for expansion.) In the survey, about 20% of single-family households expressed interest in visiting a site. Metro should establish one or more composting demonstration sites in Washington County, in order to meet the RSWMP intent of providing demonstration sites that serve all parts of the Metro region.

The program evaluation shows clearly that the home composting and the bin distribution program is working. About 44% of all Metro single-family households participate in home composting, up from 35% in 1995. The bin distribution program is extremely popular with the public – between 1994 and 1998, about 43,000 home composting bins were distributed, to about 9% of single-family households in the Metro region. (The recommended practice's target for

home composting is based on distribution of bins to 15% of Metro single-family households.) Households paid an average of $25 per bin, with Metro subsidizing the actual cost by about $5 per bin in the early years of the program.

More than 90% of bin owners were still using their bins after four years. Both non-composters (29%) and composters (38%) want bins. Composters who use the "Metro" bin are more likely to compost food scraps than are composters who use composting methods other than bins (75% to 50%).

Using the bins diverts organic materials from the solid waste system; when these materials are processed at home, they do not need to be handled through the yard debris or garbage collection system. A preliminary estimate in the program evaluation indicates that 3,400 new tons of food scraps and yard debris are diverted annually by households that have received Metro composting bins. The final report for the composting program assessment will include an estimate of the recovery attributed to composters who are not using Metro bins, but who have benefited from regional composting education programs.

The per-ton cost of the Metro home composting program is estimated at $54 per ton, a figure that includes workshop staff, compost site maintenance, publicity, literature and the capital costs of the bins (based on a conservative five-year depreciation lifetime). This contrasts well with a program cost of $47 per ton estimated in the RSWMP. Home composting is among the most cost-effective management programs when compared to $100 to $150 per ton to collection and dispose or process these materials through the solid waste system.

Based on these strong indicators of success, Metro should continue the home composting bin distribution program and evaluate it every three years. Periodic evaluation will verify whether continued unmet demand for bins remains and whether Metro's educational and technical support is meeting the needs of all composting households, including bin owners.

Specifically, funds should be allocated for a compost bin distribution event in the 1998-99 fiscal year or ensure sufficient funding in FY 1999-2000 so that bin distribution events can be held.

Source-separated Recycling Collection

At the time the RSWMP was adopted, curbside recycling collection was a long-standing practice throughout the Metro region. The recommended practices, therefore, focused on two general areas: improving the performance of existing recycling services (through providing recycling containers for multi-family residences and education and promotion for all residential programs); and adding new materials to collection programs (such as offering weekly yard debris and scrap paper collection for single-family residences and reducing yard debris in drop boxes and self-haul loads).

Weekly curbside collection of recyclables from single-family households in 1997 recovered 20,000 more tons of recyclables than in the baseline year of 1995. This program's recovery is on track to meeting its Year 2000 recovery benchmark. All jurisdictions offer weekly curbside collection (or its equivalent) for yard debris and scrap paper to single-family households.

From the perspective of Metro-area residents, implementation of residential scrap paper collection has been successful. From the perspective of local government, haulers and

processors, however, two concerns exist, First, residents need more education about what "scrap paper" encompasses. This issue can be partially addressed in upcoming local government and Metro residential outreach efforts.

Second, both domestic and export markets for residential scrap paper suffer from ongoing weakness. This market instability has led to cries for help from various groups – local government recycling coordinators, paper industry representatives, paper processors and state recycling market development players – who have approached Metro for help in developing a scrap paper market development study to help diversify markets for residentially generated scrap paper. Metro will conduct a study to investigate alternative markets for residential mixed paper.

Multi-family collection programs recovered 4,000 tons more in 1997 than in the 1995 baseline year. This accounted for about 50% of the increased recovery needed to keep this program on track. However, it is likely that recovery from this sector is understated, because many waste haulers collect from multi-family buildings and commercial establishments on the same route and may be reporting multi-family tonnage as commercial. All jurisdictions except Beaverton provide recycling containers for at least four materials to at least 85% of apartment units. (Beaverton began its own program independent of Washington County in 1997; it has been given an additional year to meet the standard.)

Although recovery from single-family households appears on track, potentially recyclable materials still remain in the waste stream. Preliminary waste composition data from the 1998 DEQ waste composition study indicate that paper and food and beverage containers account for 25% of single-family waste. When final data are available, they should be evaluated to determine whether opportunities exist to add new materials to curbside recycling collection programs and to increase the recovery of materials already collected at curbside.

To evaluate barriers to increased participation, local governments have conducted a study of low-participation neighborhoods. The study's final results should be made available in the first quarter of 1999.

The multi-family waste stream appears even richer in recyclables than single-family waste, with about 30% of discards representing scrap paper and containers. Old corrugated containers, junk mail and scrap metal levels are noticeably higher in this waste stream than in single-family household waste.

In a growing number of local jurisdictions, curbside recycling is moving toward commingled collection, whereby some materials are collected mixed together, such as all food and beverage containers or all paper. One argument in favor of this approach is that increasing the convenience to residents – by eliminating many separation requirements –boosts participation and, hence, recovery.

All jurisdictions promote recycling programs annually and, in most cases, more frequently. Metro provides information about local recycling services through the Recycling Information Center and through regional outreach campaigns. Focus group research conducted by the City of Portland in October 1998 found that residents are confused about (or inconvenienced by) preparation requirements for recyclable materials. They support reducing the preparation

requirements for some materials, such as steel cans (i.e., crushing, washing, removing labels) and glass bottles (i.e., sorting into three colors).

To reduce confusion among residents and to increase participation and recovery, Metro and its local government partners anticipate conducting a region-wide outreach campaign in Fall 1999 that focuses on the awareness of materials collected, preparation requirements and major contaminants. Part of the outreach should provide information that will be accessible to major ethnic groups served by the regional collection programs.

A regional outreach effort will be more effective if all local programs accept the same materials. It is important that local governments review the materials they collect and their preparation requirements before a campaign begins. Review of material preparation requirements will ensure that they reflect current collection practices and market specifications.

The RSWMP had targeted the reduction in the amount of yard debris in drop boxes and self-haul. Given apparent high levels of yard debris recovery and other program priorities, the effort was deferred. Preliminary data from the DEQ waste composition study support that decision. The percentage of yard debris in self-haul loads has been halved in the last five years. The reduction of yard debris in uncompacted drop boxes, however, has been more modest in this period. Final data on the size of these two waste streams and their growth during the last five years will not be available until the second quarter of 1999.

Preliminary data from the DEQ waste composition study indicate that self-haul loads are extremely rich in recyclables and typically mirror the composition of dry waste that is delivered to processing facilities. About 50% by weight of self-haul loads is composed of old corrugated containers, untreated lumber, new gypsum wallboard, roofing, carpet, yard debris and concrete/rock/brick. Wallboard, roofing, carpet and concrete/rock/brick often appeared in concentrations of 20% or more within a single load, rather than being spread out in small increments among many loads.

The current strategy for recovering recyclables from residential self-haul loads should be reviewed. The effectiveness of financial incentives that are currently offered at Metro transfer stations to self-haul customers who also bring source-separated recyclables ($3 discount for up to 100 pounds of recyclables, and $6 discount for over 100 pounds) should be assessed. Metro should evaluate the merits of requiring processing facilities to service these customers because of the similar composition of the residential self-haul and dry waste streams. While the Plan considers the option of landfill bans to increase recovery from commercial and residential loads delivered to transfer and disposal facilities, there is insufficient data to support this approach at this time.

New Curbside Collection Technologies

As elsewhere in the country, local jurisdictions in the region are looking for ways to increase the efficiency and cost-effectiveness of their curbside recycling programs, primarily through new collection technologies. Cost savings from improved collection practices can affect fluctuating market prices for recyclables. The RSWMP recommends that Metro work with local governments to explore the development of such new collection technologies as commingled collection, single-stream collection, co-collection and weight-based systems.

Metro staff has provided technical assistance to three local jurisdictions that are considering a change to commingled collection of recyclables. A pilot project, managed by Metro staff, is currently examining the quality of residential recyclables from different commingled sorting protocols. A final report will be issued in March 1999. Metro staff will disseminate the results to all regional local jurisdictions that did not participate in the study and assist them, if requested, in evaluating potential commingled sorting options for residential recyclables.

To minimize confusion for residents and waste haulers, Metro will work cooperatively with local governments to implement new commingled sorting requirements that local governments select and to inform residents about the changes. A uniform approach to residential recycling setouts across the region, although difficult to achieve, is highly attractive. Benefits include the ease of learning for residents and the ability to leverage mass media in a regional outreach effort for residential collection programs.

With regard to alternative collection approaches, such as co-collection and bulky waste collection, Metro will work in cooperation with local governments to obtain the information and data they need to make collection decisions. These data will help determine whether any new collection technologies offer enough gains in collection efficiency and environmental benefits to merit a more extended research program.

Commercial Waste Prevention and Recycling

The region's recovery of source-separated business recyclables, through existing and new programs, is behind schedule. (Again, recovery from existing programs and from the recommended practices identified in the RSWMP are bundled together, because of the difficulty of separating them.) Data indicates that our progress was 56% of where we should have been in 1997. The commercial sector generates the largest contribution to our disposed waste stream. Unless recovery efforts for business recyclables are boosted, the region will not meet its Year 2000 recovery goals

Waste Prevention

The intent of waste prevention efforts in the commercial sector is to measurably reduce the amount of paper and packaging that businesses use. This objective is to be achieved through education – media, case studies, procurement – and waste evaluations.

No full-fledged regional media campaign has been implemented to date, although Metro staff have undertaken waste prevention education efforts directed at attorney offices and other large-volume users of paper. Local governments have conducted independent outreach, such as advertisements and a recognition program (Business Recycling Awards Group).

To help design an effective media campaign, a business waste reduction study was conducted and found that businesses, like residents, emphasize their desire for a simple approach to waste management. The same study found that although there was some interest on the part of business owners and operators in the concept of waste prevention, the majority of businesses – like the majority of single- and multi-family residents – identify waste prevention behaviors as recycling behaviors. Furthermore, businesses are not willing to engage in recycling or waste prevention unless it contributes to the efficiency of business practices. Outreach efforts in

support of commercial waste prevention should be integrated into a cohesive whole, without attempting to differentiate between waste prevention and recycling.

Since 1995, Metro has developed a targeted generator program and associated materials and outreach for law firms, Realtors, hospitals, hotels, restaurants, grocery wholesale and retail, and construction contractors. Local governments use the materials during waste evaluations and in other outreach efforts.

Metro produces and distributes annual buy recycled guides for businesses. Metro provided buy recycled training workshops for purchasing agents. Targeted generator materials include buy recycled procurement. Local government evaluations provide procurement information and materials. To answer questions about the value and use of the guides in procurement decisions and to identify other potential vehicles for delivering the same information, Metro will evaluate the current methods and materials.

All local governments except Portland developed Waste Evaluation Service Provision Plans to meet a regional standard, and each provides waste evaluations to businesses within their jurisdictions. Portland has implemented an alternative practice which substitutes mandatory business recycling for the Plan's waste evaluation recommended practice. Waste evaluations are provided by City staff and contractors as technical assistance to businesses requesting the service. Therefore, waste evaluations are provided to businesses, but not to the level set forth in the regional standard. Gresham performed 568 waste evaluations, which represented 76% of its targeted businesses. Metro has provided funds to local governments, awarded on a competitive basis, to focus on and enhance waste evaluation services.

Source-separated Recycling

Because significant amounts of paper (e.g., office paper, low-grade scrap paper, magazines and packaging) remained in the waste stream when the RSWMP was developed, the foundation for source-separated business recycling efforts was increasing the collection of paper by businesses. Non-bottle bill food and beverage containers (e.g., glass, steel, aluminum and plastic containers) were also targeted for recovery because it was determined that the additional costs of collection were negligible and the potential to recover significant tonnage was high.

Recommended practices to achieve RSWMP commercial recovery goals include recycling collection for businesses for paper and non-bottle bill containers (or for other materials generated in large volumes), provision of external recycling collection containers to smaller businesses, waste evaluations for targeted businesses and recognition programs for business recycling efforts.

With the exception of Portland, which requires businesses to recycle, local governments use an "opportunity" model for business recycling collection service. Under the opportunity model local jurisdictions require haulers to offer recycling services to businesses for the collection of principal recyclable materials; it is up to the generators to participate. All jurisdictions require haulers to provide appropriate outdoor containers to all businesses that want to recycle. All local jurisdictions, with assistance from Metro, have developed and implemented the Business Recycling Awards Group program. Local jurisdictions conduct outreach to all businesses annually via direct mail, industry associations, chambers of commerce and/or on-site visits.

Is the opportunity model working? Several recently conducted studies shed some light on the extent of commercial recycling services and business participation in them. A 1998 Washington County survey of 599 businesses with three or more employees found that 98% were recycling at least one item, with old corrugated containers being the most common item. Fifty-eight percent of businesses generating white office paper and 52% generating colored glossy office paper were setting out these items for recycling collection. With food and beverage containers, only half of businesses were setting out steel cans; participation was much higher for plastic bottles (66%), glass containers (70%), and aluminum cans (94%). On average, businesses were separating out five items, with medical offices and restaurants separating fewer than four items.

A business survey by the City of Gresham in 1997 and 1998 found that about one-quarter of its businesses reported recycling four or more materials, one-quarter were recovering two to three materials, one-quarter were doing one material and one-quarter were not recycling.

In FY 1997-98, Metro conducted a substantial study of commercial generators, which measured recycling and disposal during a year-long effort. The study found a wide range of recycling rates in different businesses. A number of businesses, such as building materials stores, convenience stores and print shops, had recovery rates that exceeded 70%. The high recovery rates were primarily due to the presence of recyclables in high volumes, such as wood, old corrugated containers or ledger paper. Recycling rates of 40% and lower were obtained by business sectors (such as offices, restaurants, hotels and institutions) with more diverse waste streams.

To get more recyclables out of the commercial waste stream, local governments need to increase business participation in recycling. For example, local governments could set a goal for waste haulers to provide recycling collection service for at least two materials to 75% of their customers.

In terms of what's still left in the commercial waste stream that's recoverable, preliminary data from the DEQ waste characterization shows that of recyclables currently collected, recyclable paper, containers and yard trimmings comprise one-third of the landfilled commercial waste.

In Spring 1999, Metro and local governments will assess the level of commercial recycling. In this monitoring and measurement study, researchers will examine qualitative and quantitative factors that affect recovery, such as business size, business sector, materials, commercial recycling policies and strategies (from financial incentives to material disposal bans), collection approaches and processing strategies. Part of the measurement process should determine the extent to which commercial recovery is derived from multi-family generators. The study will be designed with local government representatives and private haulers.

It appears that waste evaluations work and should be continued and expanded. For example, after Gresham performed 568 waste evaluations, about 40% of the contacted businesses either implemented a recycling program or increased the types of materials they collected for recycling. Waste evaluations should be conducted for 80% of targeted businesses, i.e., ones that have been identified as generating recycling-rich discards. Local governments could document the number of businesses that started recycling or added recyclables to an existing collection service.

A major commercial regional outreach effort is planned for Spring 2000, focusing on increasing participation by businesses and reminding them of the full range of recyclable materials that can

be recovered for recycling. Part of the message will be to inform businesses that processing facilities are increasingly able to handle commingled materials. This will accommodate businesses that may want to increase the number of materials they set out for recycling collection, but may have limited their recovery efforts due to constraints, such as lack of space.

COMMERCIAL ORGANICS

When we assess our progress toward our Year 2000 recovery, commercially generated organics is clearly the weakest point. Metro staff estimate that, at the most, perhaps 1,000 tons per year of commercial organics are being collected and processed through two pilot projects, sponsored by Metro to evaluate processing technologies. If progress between 1995 and 2000 were linear, we would have recovered nearly 21,000 tons during 1997. However, progress in this sector is more likely to be realized in a series of "jumps" as collection and processing come on line.

Because of the large size of the organics waste stream, commercial organics, are essential for meeting our overall recovery goal of 52 percent by 2000. (Preliminary DEQ waste composition data indicates that around 20% of the region's commercial waste stream as disposed is food scraps.) Success will depend on the establishment of generator programs, collection systems and processing capacity.

Source-separated Commercial Food and Non-recyclable Paper

The collection and off-site recovery of source-separated food and non-recyclable paper as recommended in the RSWMP is predicated on a high level of organics in the waste stream and is contingent on a significant qualifier: *"...if costs do not substantially exceed the current cost to collect and landfill organics...."*

Although the RSWMP calls for siting and developing processing capacity for regional organic waste, responsibility for this activity lies with the private sector, not the public sector. Few facilities yet exist to process commercial organics, nor have collection systems developed. This could be a strong example of the chicken-or-egg syndrome, wherein processors are reluctant to site a facility without an operating collection system, and collectors are reluctant to collect food waste without a facility to which to deliver them.

It has become clear that, to overcome these barriers, Metro must help leverage and coordinate the development of collection and processing systems. This will entail a higher level of public sector involvement than originally established in the RSWMP. A economic feasibility study of commercial organics collection was completed in January 1999. Study results indicate that the economic feasibility for organics collection is limited (3% to 10% under garbage collection and disposal) and relies on dense collection routes, local processing options and low processing fees.

Furthermore, as the Metro-area tipping fee continues to decline, recovering commercial organics will become more of a challenge without some kind of government assistance. On the bright side, the economic feasibility study indicates that the cost of an organics collection and processing program, at least for high-volume generators ($80 to $120 per ton), appears to be considerably less than the $385 per ton estimated in the RSWMP.

Metro has spearheaded two commercial food waste collection and processing pilot projects in the region, demonstrating two different collection and processing scenarios and technologies. Phase II pilot studies are in the pre-planning stage. Staff is examining providing organics delivery and processing services at Metro transfer stations.

Two private sector processing facilities are on line, with a third set to open by mid-1999. One facility receives clean vegetative food waste and has reached its three-ton-per-day capacity. A second facility, at the Columbia Ridge Landfill, is permitted by DEQ to accept all food waste, soiled paper, yard debris and biosolids on a temporary basis. Capacity is estimated at 20,000 tons per year. The facility currently accepts 50 to 100 tons per month of organics as part of the Metro organics pilot project. A third facility, located in Washington County, is expected to come on line by mid-year 1999, with a capacity of 30,000 tons per year. The operator has not yet indicated whether this facility will accept only food processing residuals or if it will accept all organic wastes from commercial haulers.

The region's lack of progress toward organics recovery argues for additional research, pilot projects and a coordinated logistical approach, with a goal of identifying problems and potential solutions and developing a more comprehensive regional program. Areas for research and pilot projects include waste characterization, generator issues, material standards, promotion and education, collection/logistics, processing alternatives and capacity, animal feed, end-use markets and, of course, costs.

The research will help determine whether collection and processing of organics in the region is economically feasible in light of added collection and infrastructure costs, collection industry consolidation, declining solid waste tip fees and minimal local processing options. If the research and pilot projects find organics collection unfeasible at this time, the Plan should be amended to modify the recommended practice of collection and processing of organics.

In addition, Metro should provide technical and other support to assist local governments with their organics recovery efforts, including the City of Portland in the implementation of its mandatory recovery ordinance affecting organics-generating businesses. (The City's ordinance is planned to go into effect in July 2001.)

To evaluate the feasibility of collection and processing post-consumer food scraps, Metro should expand the current organics pilot. To help improve the economics of food scrap recovery, Metro should develop a regional regulatory framework for organics and establish tip fees at Metro facilities for the receipt of source-separated organics for delivery to approved processors or for on-site processing at Metro facilities.

In addition, Metro, local governments and area haulers should work together to develop organic waste generator education programs and collection routes throughout the region. Pilot collection routes and generator programs would begin in FY 1999-2000.

Organics Waste Prevention (an alternative practice)
The alternative recommended practice for organics focuses on keeping organics out of the solid waste system, by emphasizing waste prevention practices and on-site composting at schools and other large institutions, as appropriate.

Metro has provided start-up funding and continuing support to the Oregon Food Bank's Harvest Share program, which recovers produce from wholesalers that would have been disposed and distributes the produce to the region's hungry. Between November 1996 and September 1998, over two million pounds of produce have been recovered and redistributed.

Metro also provided funding and technical assistance to St. Vincent de Paul's FoodTrain program, which collects prepared foods from hospital cafeterias, caterers, hotels and other institutional kitchens. This food is repackaged into meal-sized portions, frozen and distributed to congregate feeding sites and food box programs for the needy. The program recovered 300,000 pounds in 1997 and plans to increase recovery to 900,000 pounds in 1998.

Metro will continue to support non-profit and private sector food recovery efforts to reduce the amount of edible food entering the waste stream and will investigate and develop new partnerships to expand recovery.

Beginning in 1995, Metro developed a grocery waste reduction program, with waste reduction guidebooks and food donation guides that were distributed by Metro and local governments to area grocers and other food distributors. Local governments also used the guides in waste evaluations. Metro developed a restaurant waste reduction guide, which was published and distributed to local governments for use in waste evaluations and provided directly to restaurants that requested information from the Recycling Information Center.

Metro assisted Washington County Solid Waste and Washington County Sheriff's Office in developing on-site vermiprocessing at the new Washington County Jail. Twelve worm bins were installed in 1998 to handle the jail's food waste stream. Other Oregon corrections facilities have expressed interest in developing similar systems. Metro will continue to research and assist in the development of on-site institutional organics processing capabilities throughout the region.

CONSTRUCTION & DEMOLITION WASTE PREVENTION AND RECYCLING

To meet the Year 2000 target for on-site construction and demolition debris (C&D) recovery, annual recovery tonnage for 1997 needed to increase by 60,000 tons over the 1995 baseline. Estimating progress is difficult, however; because specific information about recovery levels is not available. Based on DEQ recovery survey data and Metro information on processing facilities, we estimate that the growth in on-site recovery was at least 20,000 tons over 1995. Because more processing facilities now accept C&D materials and because actual post-collection recovery (see below) is about 8,000 tons over the projection, many C&D projects may be choosing processing facilities in lieu of on-site recovery.

Source-separated recovery from the building industries focuses on waste prevention, recycling and post-collection recovery through education and promotion, technical assistance, on-site recovery, off-site processing facilities, and salvage programs.

Metro and local governments provide (or require their haulers to provide) a variety of services in support of building industries recovery programs: technical assistance on environmental building; promotion and provision of on-site audits at construction and demolition sites; on-site source separation at construction and demolition sites; provision of technical and educational materials, including an annual construction site recycling guide and case studies of

deconstruction and salvage; demonstration projects showcasing the feasibility of building salvage practices; and provision of grant support to nonprofit construction salvage operations.

In 1998, Metro conducted a C&D debris generator survey, which examined how industry sectors differ in handling materials on the job site and in sending materials for processing or disposal. In addition, actual diversion levels for several types of projects were determined. A complex set of factors influence the decision to recycle C&D materials, including cost, site limitations and knowledge of and experience with recycling services.

The study found that current diversion at new residential construction sites is relatively high, driven by the high level of new, clean dimensional lumber. Diversion at commercial construction sites is high on large, new projects where company backing, adequate space and well-defined construction stages exist; diversion at remodel and tenant improvement projects poses problems because space is limited, responsibility is difficult to assign, and C&D materials are easily mixed with other commercial waste. Diversion at residential remodeling projects is low – subcontractors are usually responsible for their own waste, space is limited and end-of-day cleanup requires waste to be moved off site quickly, rather than stored for recycling.

Although factors such as cost and site limitations are difficult for public programs to affect, opportunities to increase the level of knowledge about recycling services were identified. The study encountered significant problems in using available permit data to make estimates of aggregate levels of C&D recycling and disposal. DEQ's current waste sorting study should provide additional information on how much C&D materials are still in the waste stream:

Efforts to increase C&D recovery should start by taking a hard look at what we know about existing recovery and developing a targeted, comprehensive, regional approach based on barriers, opportunities and anticipated recovery levels. Technical and education programs, as well as recognition programs such as BRAG, should be targeted to specific sub-sectors and be focused on getting information into the hands of decision-makers. Although technical assistance programs can help some sectors of the building industries remove barriers to on-site recycling, the C&D Generator Survey also showed the need to promote the availability of existing facilities that process C&D materials.

In addition, although the amount of C&D materials going to processing facilities continues to grow, the mid and far west side of the Metro region appears to lack processing capacity. The DEQ waste characterization study and the regional transfer station service plan, both of which will be completed in May 1999, should shed some light on this capacity issue.

POST-COLLECTION RECOVERY

To process both dry waste from businesses and C&D debris from sites where on-site processing is not feasible, the RSWMP recommends regional processing facilities within the following parameters: sufficient processing capacity for the region; reasonable access for all haulers; Metro fees on residuals only; and assistance such as market development to processors and end users of recovered materials.

As of mid-year 1998, five major private processing facilities were operating in the region – Willamette Resources, Inc. (in the southern part of the region), Recycle America (east), and

Energy Resources, Inc. and Wastech (north-central) and East County Recycling (mid-Multnomah County). Post-collection processing was also occurring at Metro transfer stations and the Pride reload and processing facility in Sherwood. To improve data collection, better understand waste flows and obtain better recovery information, Metro should add automated keypads to the scales at the Metro Central and South transfer stations. The keypads would prompt drivers to answer two or three questions about load characteristics.

Between 1995 and 1997, the amount of material received by the five major processing facilities grew from 87,000 to 137,000 tons per year; meanwhile, recovery from all post-collection processing grew by over 18,000 tons – almost twice the projected increase necessary to make Year 2000 RSWMP targets. Based on conversations with operators, it is likely that processing facilities are receiving loads from construction and demolition sites in increasing numbers.

Preliminary results from the 1998 DEQ waste characterization study show that residuals from processing facilities in the region still contain significant amounts of recyclable materials. Five potentially marketable materials – OCC, untreated wood, carpet, ferrous metals and new gypsum wallboard – make up about 20% of the residual of some processing facilities. Other less valuable, but potentially recoverable materials (roofing, inerts, low-grade paper and paper packaging) make up another 20% of the residual.

Metro should examine the factors that influence post-collection recovery in the region, including Metro's program that provides financial incentives for recovery (System Fee Credits), the results of the DEQ waste composition study, and the effects of upstream source separation programs.

Although access to processing facilities has been enhanced by regulatory reforms, the western portion of the region may be undeserved. (Regulatory issues will be discussed in a section of this report to be released later.). The two limited-purpose landfills (Hillsboro and Lakeside), located just outside the Metro boundary in Washington County, continue to receive large amounts of unprocessed materials, although a limited amount of recovery occurs at Lakeside – up to 8% of incoming material.

Solid waste delivered to these landfills (excluding processing residuals and special waste) rose by about 70,000 tons between 1995 and 1997, from 138,000 to 208,000 tons. (Figures for 1998 show a decline of 37,000 tons from the 1997 peak. This decline may reflect both a cooling local economy and a shifting of some waste deliveries to processing facilities.) Metro should determine whether additional recovery opportunities are needed in the western portion of the region; the regional transfer station services plan, which should be completed by May 1999, should shed light on this question.

Metro continues to implement its fee system in a manner than encourages recovery. Revisions to the Metro Code, adopted in 1998, reaffirmed the policy of applying Metro fees only to residuals from processing facilities, rather than to the tipping fee on waste deliveries. The revision also established Regional System Fee Credits to provide further recovery incentives. In addition, the revised regulatory system simplified and streamlined the entry of new processing facilities into the regional solid waste system. The regulatory burden on operations was also eased, and operational options were expanded (for example, by allowing outright use of a facility by multiple haulers, rather than by variance,).

CHAPTER 2
SOLID WASTE FACILITIES AND SERVICES

The region has met success in other areas of the RSWMP, where both regulation and siting of yard debris and organics processing, and transfer and disposal system practices have been accomplished. The transfer station service study will recommend any changes. Work still remains to be completed, however, on a long-term plan for managing household hazardous waste for the region.

REGULATION AND SITING
(Yard Debris and Organics Processing Regulatory System)

To lower barriers to siting and operation of yard debris and organics processing facilities, the RSWMP recommended practices to focus on standards, licensing and zoning. The recommended practices include performance standards for franchising facilities; a licensing program for yard debris processors; franchised yard debris collectors use of Metro- and DEQ-authorized facilities; and local government zoning codes that do not effectively prohibit the siting of facilities.

Metro and DEQ entered into an Intergovernmental Agreement for the licensing, franchising and oversight of regional yard debris processing facilities, with DEQ overseeing the remainder of the state's facilities. All yard debris processors must now acquire a Metro franchise to operate in the region. The franchise agreements for processors include facility performance standards. Metro will continue to implement franchise and licensing program and provide facility oversight.

Local governments require their franchised haulers to use Metro franchised facilities only.

Metro has been working with local government planning officials to develop siting standards that will allow composting facilities. Metro staff recently completed work with Clackamas County, which adopted new siting standards. Metro will continue to assist and participate actively in local government siting and zoning code development and revision process.

TRANSFER AND DISPOSAL SYSTEM

The recommended practices for the regional transfer and disposal system depend on growth forecasts and successful implementation of the recommended waste reduction practices: Construct no new transfer stations, and no redirection of haulers from Metro South to Metro Central; maintain existing system of private general and limited-purpose landfills; use existing disposal alternatives; allow reload facilities sited, owned and operated by haulers to consolidate loads for hauling to Metro transfer stations (to serve areas distant from transfer stations).

A regional transfer station service plan is currently being developed that will review and assess the region's current facilities and future needs. The plan will be completed by May 1999. Specific recommendations for any changes in the transfer and disposal system will be developed after the service plan has been completed in May 1999.

HAZARDOUS WASTE MANAGEMENT

The recommended practices for managing the region's household hazardous waste focus on collection, disposal and recycling services; education and promotion efforts; and funding sources.

Metro provides hazardous waste collection, recycling and disposal services for the region's households and conditionally exempt commercial generators at Metro South and Metro Central transfer stations. During the 1996-97 and 1997-98 fiscal years, Metro provided hazardous waste service to the region consistent with the Plan's recommendations. In FY 1996-97, the two permanent facilities at Metro South and Metro Central transfer stations received 17,884 customers, diverting an estimated 1,340,000 pounds of material. In FY 1997-98, customers received at the facilities increased by 14% over the previous year, to 20,366, diverting an estimated 1,530,000 pounds of material.

Metro and other local governments promote behavior change (i.e., buying fewer toxic products) through Alternatives to Pesticides/Natural Gardening workshops for adults and classroom presentations on household hazardous waste for primary and secondary school children.

Metro provides service to outlying areas not conveniently served by permanent household hazardous waste collection facilities through satellite collection events. An additional 5,391 customers were served at collection events during FY 1996-97 diverting an estimated 350,000 pounds; in FY 1997-98, collection events served another 7,740 customers and diverted an estimated 503,000 pounds of material.

Because the minimum handling and processing fees at the hazardous waste facilities cover only a small portion of the actual cost of services, Metro needs to plan for alternative funding sources for household hazardous waste collection services, possibly including an advance disposal fee for designated hazardous waste products.

The current RSWMP recommendations were acknowledged to be short term when the Plan was adopted. A regional household hazardous waste service plan is currently being developed that will review and assess the region's current facilities, funding sources and future needs. The assessment will be completed by May 1999. The planning effort will determine what mix of programs, services and funding best achieves the RSWMP's waste prevention and environmental protection goals. Programs and services to be examined will include both adult and school educational programs and direct collection services, including regional collection events, permanent facilities and other options.

CHAPTER 3
SYSTEM FINANCING

BACKGROUND

The system financing problem in Chapter 8 of the Regional Solid Waste Management Plan is described as: *"Metro's solid waste activities are currently financed almost entirely by per-ton tip fees and surcharges on disposal. This approach to system financing should be re-examined if the system is to achieve equity, maintain fiscal stability and achieve policy goals such as waste reduction."*

This statement and recommendation was written at a time when Metro was absorbing inflationary increases in costs in order to hold the tip fee constant, after several years when the tip fee had been increased sharply. Metro had been regularly receiving comments that rates were inequitable: Some ratepayers claimed they were not getting value for their money. Metro had also just adopted an aggressive new waste reduction plan that, if successful, would have significantly eroded the revenue tonnage base.

ACTIONS TAKEN SINCE PLAN ADOPTION

Pursuant to the Plan's objectives and recommendations on system financing, the Metro's Regional Environmental Management Department (REM) undertook three major projects and activities: 1) The System Financing Options Project; 2) budget initiatives aimed at reducing (or at least containing) increases in the tip fee; and 3) rate restructuring involving fee credits for material recovery and a two-part fee at Metro transfer stations.

System Financing Options Project

As called for in the Plan, the System Financing Options Project was a major study that re-examined Metro's approach to system financing, as called for by the Plan. This project was completed during 1996, and involved an extensive and representative stakeholder process. The study was conducted in three phases.

Phase 1 was designed to develop consensus on the definition of the problem, and criteria for evaluating options. The process began by re-examining the objectives and design principles as set out on pages 8.1—8.2 of the Plan. Stakeholders were asked to affirm, modify or reject these elements. However, without having the opportunity to comment on either REM's mission or its budget, stakeholders expressed a reluctance to make firm recommendations on a rate structure.

Phase 2 was designed to generate and evaluate options. The list of proposals in Chapter 8 of the Plan were modified, with some options added and others deleted. By the end of this phase, the principal surviving option was the status quo. Additionally, the stakeholders agreed that a type of rate—differentiated by type of generator, type of waste, or mode of delivery—could be implemented if the rate were related to cost of service and could be administered equitably and efficiently.

Phase 3 developed a specific recommendation and implementation path for the Metro Council. As the favored option was the status quo, no detailed implementation path was required.

Cost Reductions

Subsequent to the completion of the System Financing Options Project, REM implemented two actions which led to reductions in Metro's revenue requirements: An explicit hold-the-line policy on departmental growth and re-negotiation of the major contracts for transfer, transport and disposal. Both efforts were designed to reduce the disposal rate in response to the financing issues laid out in the Plan.

In the fiscal year following the System Financing Options Project, REM was reorganized, and five positions were eliminated. Metro also rebid its transfer station operating contracts, renegotiated its fuel purchasing policies with its transport operator, and made significant changes to its disposal contract ("Contract Change Order 7"). As a result of these changes (together with continued regional growth, which increases the rate base), REM has been able to reduce its disposal rates for the last two consecutive years. Furthermore, as of this writing, REM has concluded a second round of negotiations with its disposal contractor (Contract Change Order No. 8) which, if approved by both parties, will result in further cost reductions.

Tip Fee Re-structuring

The System Financing Options Project left open the option for differentiated rates, if the cost of administering these rates outweighs neither the equity nor efficiency goals. In FY 1997-98, REM implemented a two-part fee at Metro transfer stations: A flat fee per transaction that covers the fixed costs of Metro scalehouse operations, plus a rate per ton that covers the variable costs of transferring, transporting and disposing waste. This rate structure was designed to rectify a long-standing inequity: The charge for small, self-haul loads (when based on a per-ton rate) did not recover the cost of service; while large, automated loads more than paid for the cost of service.

Regional System Fee Credits

Since the late 1980s, Metro had been signaling to the solid waste industry that there would be continuing upward pressure on disposal rates. This message, when joined with Metro's stated policies favoring recycling, induced considerable private sector investment in solid waste recovery facilities throughout the 1990s. Beginning in 1997, Metro's new opportunities to reverse course on disposal costs had the undesirable effect of undermining the financial stability of the privately-owned material recovery facilities (MRFs). In response, in FY 1998-99 Metro simultaneously implemented a program of Regional System Fee Credits and a second round of rate reductions. The purpose of this program was to support the private investment in recovery capacity that had been made in good faith on Metro's previously-announced fee policies.

Regional System Fee Credits effectively reduce the per-ton Regional System Fee that solid waste facilities pay on waste that is landfilled. The credits are designed to restore the facility's margin between revenues and costs at least to the level that prevailed when the investment decisions were made (that is, prior to Metro's rate reductions). With financial margins intact, private operators would have the revenues to maintain their recovery efforts. In order to encourage additional recovery, the Regional System Fee Credits increase with the facility recovery rate.

By adopting this program, the Metro Council included a one-year "sunset clause" which will require action on an annual basis by the Council in order for the credits to continue. The purpose of this clause was to show the solid waste industry that this program is intended to cushion the short-term impacts of Metro's reversal of tip fee trends: There is no guarantee that future rate reductions will include subsidies to the recycling industry.

REM is tracking this program closely to determine if the principal objective—preserving solid waste recovery capacity—is being met. As of this writing, the amount of credits are closely matching projected expenditures, and throughput appears to remain at pre-reduction levels: At present, the program is "working."

CHAPTER 4
PLAN MANAGEMENT

INTRODUCTION

The Plan sets forth certain processes to ensure that recommended practices are supported, implemented, monitored, measured and, if necessary, corrected in a manner that provides structure as well as flexibility. The plan relies heavily on a Metro/local government cooperative annual work plan development process with funding allocated to help maintain existing programs as well as to encourage the development of new approaches to waste reduction, recycling and recovery.

ANNUAL PLANNING PROCESS

Metro and local governments coordinate their annual work plans to ensure that planning is both regional and local, resources are shared and duplication is avoided. The joint planning process is intended to identify the existing programs and recommended practices on which work will be undertaken for the upcoming year. To help local governments to carry out their work plans, Metro has provided grant funds since 1990. While these annual work plans have proven effective in the past, the breadth of programs now in place and the diluted efforts spread over these wide program areas will need to be narrowed in order for tangible future progress to be made.

The annual planning process has operated with differences of opinion about how funds should be allocated (i.e., to existing programs or new endeavors) and how to measure the effectiveness of Metro and local government efforts. In the main, the majority of grant funds has been used to provide support to ongoing efforts (program basics) and less to address the waste sectors where recovery is lagging. The current process is focused on the details of existing programs; as a result, little time or funds are available to plan and execute innovative activities. The area of focus in the annual plans should be narrowed and intensified to enable real gains towards regional recycling and recovery goals.

A modest degree of planning and reporting should be required for local governments to obtain the basic support they need rather than the time-consuming and detailed system currently in use. Areas or sectors of the system that need special attention – commercial recycling, commercial organics and construction and demolition debris recovery, for example – should be eligible for an additional, sizable level of funding. Those areas would receive needed planning attention, rather than areas where programs are established, mature and progress is steady.

MEASUREMENT AND MONITORING

Several revisions and corrections are proposed to the original system benchmarks and recommended practices listed in the RSWMP. These changes provide consistency to the document and allow for easier monitoring of the progress toward meeting the benchmarks and the recovery levels assigned to the recommended practices.

The proposed changes reduce neither the recovery rate goals nor the level of effort to reach the goals. Specifically, Metro is committed to achieving a 52% recovery rate in the Year 2000, as measured by DEQ, and to meeting a 56% recovery rate by the Year 2005.

Technical Changes to the Recommended Practices

A review of the recovery levels of the recommended practices for the Year 2000 outlined in the RSWMP (Tables 9.2a) found small corrections that should be noted.

- For the Year 2000 recommended practices, the actual contribution for on-site construction and demolition (C&D) materials collection should be 31,400 tons (Table 4). A typographical error assigned 41,200 tons of recovery to on-site C&D collection.
- With the correction to the C&D recovered tonnage for Year 2000, the facility benchmark for landfilled solid waste should be increased to 936,200 tons.
- The recovered tonnage assigned to the Year 2005 recommended practices should be changed to reflect a growth rate for waste generation that is higher than projected. The revised projection will be made in the next State-of-the-Plan Report, which will be published by September 30, 1999.

Proposed Amendments to the RSWMP

No changes are proposed for the solid waste hierarchy benchmarks. The following four changes to the other system benchmarks, however, are proposed to be adopted as amendments to the RSWMP.

The RSWMP benchmark "recycling level" should be renamed "recycling rate" and it should be defined to be equivalent to the recycling rate calculated by DEQ. The recycling level benchmark, as currently defined, has limited utility because it measures recycling using as the denominator the total waste stream generated *before* energy recovery. The "recycling rate" would use a denominator of total waste generation, which is commonly cited by the media, DEQ and recycling professionals. Using DEQ's definition of the recycling rate, the benchmark baseline and indicators for Year 2000 and Year 2005 have been recalculated (Table 5).

Using DEQ's recycling rate as the region's benchmark should not cause any hardship. DEQ's calculated recycling rate for Metro in 1995 exceeded the recycling rate projected by the RSWMP for the plan's baseline year of 1995.

The RSWMP benchmark "recovery level" should be renamed "recovery rate" and it should be defined to be consistent with DEQ's calculation. Metro is already committed to meeting a 52% recovery goal for the Year 2000 that is calculated using the state's definition of recovery. And, DEQ's calculation of a 1995 recovery rate for Metro met the projected baseline

recovery rate for 1995 set in the RSWMP. Finally, it appears that using a state-defined recovery rate would not cause any undue hardship in meeting future recovery rate benchmarks.

Metro's calculation of its recovery tonnage has generally averaged about 120,000 tons per year of recovery more than what DEQ has allowed in its calculation. Scrap metal has accounted for almost two-thirds of this difference. However, the RSWMP did not include scrap metal recovery in either existing or new collection programs. The balance comes from two activities that Metro included, but DEQ did not.

First, Metro took a recovery credit for a fraction of the waste it shipped to Marion County's waste-to-energy (WTE) incinerator. Second, Metro included the production of fiber-based fuel from non-recyclable paper and film plastic at Metro Central. Third, Metro's definition of energy recovery from source-separated materials was much looser than DEQ's, which allows a recovery credit only when no "viable recycling market" exists.

The effect on the recovery rate of changing these definitions to conform to DEQ definitions is negligible – less than 0.1%. (The 6% in waste prevention credits awarded by DEQ to the Metro wasteshed is not included in the recovery rate calculated for Metro.)

The per capita "recycling" benchmark should be redefined as a "recovery" benchmark. The difference between generation and disposal is recovery, not recycling. The magnitude of the per capita recovery benchmark when added to the disposal benchmark magnitude equals per capita generation, which would not be the case if recycling was being measured instead of recovery.

The baseline per capita measures have been recalculated to be consistent with the solid waste hierarchy and disposal benchmarks.

Table 4
Effect of Recommended Practices on RSWMP Disposal Benchmarks, Year 2000

Practices	Prevention Single-Family	Prevention Commercial	Recovery Single-Family	Recovery Multi-Family	Recovery Commercial	Recovery C&D	Total	Percent
Prevention								
Home Composting	11,100						11,100	55%
Business Waste Reduction		9,200					9,200	45%
Total Prevention	*11,100*	*9,200*					*20,300*	100%
Recovery								
Expanded Residential Curbside			10,500				10,500	6%
Expanded Multi-family Collection				12,600			12,600	8%
Source-Sep. Business Recyclables					66,400		66,400	41%
Commercial Organics					41,700		41,700	26%
On-site Construction & Demolition						31,400	31,400	19%
Total Recovery	*0*	*0*	*10,500*	*12,600*	*108,100*	*31,400*	*162,600*	100%
Total Prevention and Recovery	*11,100*	*9,200*	*10,500*	*12,600*	*108,100*	*31,400*	*182,900*	
Percent	6%	5%	6%	7%	59%	17%	100%	

(1) Assumes a waste stream (generation plus prevention) of 1.93 million tons.
(2) Multi-generator material sources, primarily commercial and construction/demolition materials.
Source: Metro, RSWMP, Table 9.2a, November 1997.

Table 5
Revised Regional Solid Waste Management Plan Benchmarks

System Benchmarks	Year 1995 Baseline	Year 2000 Indicators	Year 2005 Indicators
Recycling Rate	*34%*	*44%*	*50%*
Recovery Rate	42%	52%	56%
Per Capita			
Generation (t/cap/yr)	*1.36*	1.36	1.38
Recovery (t/cap/yr)	0.58	0.71	0.78
Disposal (t/cap/yr)	*0.79*	0.65	0.60
Solid Waste Hierarchy			
Prevention	N.A.	1%	1%
Recycling	28%	35%	37%
Composting	6%	9%	12%
Energy/Fuel	8%	7%	7%
Disposal	58%	48%	43%

Note: Italics are changes from original RSWMP Table 9.3.
t/cap/yr = tons per capita per year.
N.A. = Not applicable.
Source: Metro, January 1999.

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State-of-the-Plan Report
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PART II
TECHNICAL APPENDICES

February 1999

Part II: Technical Appendices

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APPENDIX A
METHODOLOGICAL OVERVIEW

To analyze the region's progress toward meeting the goals and benchmarks as set out in the Regional Solid Waste Management Plan (RSWMP), staff examined existing benchmarks, verified baseline measurements for 1995, examined system performance between 1995 and 1997, reviewed the impact of economic activity on the waste stream, revised projections and recovery levels, and determined the region's progress toward meeting the benchmarks identified for Year 2000.

BENCHMARKS

Regional benchmarks are designed to give precise and reliable indicators of system trends that reflect the net effects of all factors that influence the system, including the recommended practices identified in the RSWMP (RSWMP, page 9-2). The regional benchmarks focus on three areas: the system's progress within the solid waste hierarchy, service levels at transfer stations and generator-based per capita disposal. The RSWMP projected certain baseline levels for 1995, along with indicators or goals for 2000 and 2005.

In this update, only the system regional benchmarks will be discussed. The Oregon Department of Environmental Quality's (DEQ) waste sorting study and Metro's regional transfer station services plan should be completed by May 1999. These two studies will provide the necessary information for evaluating the progress of the facility and disposal benchmarks (RSWMP, Table 9.3) and will be examined in the State of the Plan Report for the 1998-99 Fiscal Year.

RSWMP Table 9.3 lists 10 system benchmarks divided into four main areas: recycling level, recovery level, per capita measures (generation, recycling and disposal) and the solid waste hierarchy indicators (prevention, recycling, composting, energy/fuel and disposal).

Chapter 6 in Part 1 (Program Assessment: Measurement and Monitoring) contains several corrections (due to typographical errors) and recommended changes to the system benchmark definitions, which are proposed for two reasons. First, they provide greater consistency between benchmarks and practices. Second, they allow easier corroboration between the RSWMP benchmarks and published measures of recycling and recovery rates by the Oregon Department of Environmental Quality. They do not reduce the level of commitment or goals previously outlined in the RSWMP.

VERIFYING 1995 BASELINE MEASURES

RSWMP 1995 baseline and targets for 2000 and 2005, as well as the recovery tonnage assigned to the various recommended practices, were projections developed during 1993 and 1994. So, how do the RSWMP projections of the 1995 baseline waste stream and benchmarks compare with the actual 1995 data?

RSWMP projections for the 1995 baseline year closely matched the two most important system measures: the size of the generated waste stream and the total recovery rate (Table 1). The actual waste stream volume of 1.73 million tons generated in 1995 differed by less than 3% from the

1.78 million tons predicted for the RSWMP baseline benchmark. Also, the actual 42.5% Metro recovery rate as calculated by DEQ for 1995 mirrors the baseline recovery measure of 42.0% set out in the RSWMP. (The recovery rate is the sum of the recycling and energy recovery rates.)

The main difference between the projected baseline scenario and the actual 1995 performance was a higher 1995 recycling rate of 38%, up almost four percentage points from the projected rate. The greater recycling activity was caused by robust markets, which registered all-time high prices for scrap paper and plastics. The increase in the recycling rate was offset by a lower recovery rate for materials sent to fuel applications. The net result, however, left the total recovery rate for 1995 on target compared to the baseline.

The per capita generation, recovery and disposal rates for 1995 also fell within the range of the baseline measures predicted by the RSWMP (Table 2).

Because the actual system performance for 1995 is consistent with the RSWMP baseline projections, the actual 1995 system measures will be adopted as the actual baseline benchmarks.

HOW DID THE SYSTEM PERFORM BETWEEN 1995 AND 1997?

From 42.5% in 1995, Metro's recovery rate fell almost two percentage points in 1996, to 40.7%, but regained nearly one point to reach 41.6% in 1997, still one percentage point below the 1995 rate (Table 3). The region's recycling rate (which includes composting) eroded, too, dropping two percentage points over the two years, from 37.8% in 1995 to 35.7% in 1997

Recycling fell in 1996 because of lower demand by end-use markets, which had stockpiled materials in 1995 as scrap prices skyrocketed. The mills worked off their inventory of recovered materials, causing prices for scrap paper and plastics to tumble into the basement. Composting's contribution, by percent, remained constant in this two-year period. Although recovery and recycling both rebounded in 1997, they did not bring the region back to its baseline 1995 benchmarks.

Between 1995 and 1997, Metro's total recovery increased by 100,362 tons, of which two-thirds was from materials recovery (i.e., recycling and composting) and one-third from energy recovery. However, the amount of source-separated materials marketed for fuel jumped 44% in this period, while the tonnage of recyclables going into new products increased by only 10% (Table 3).

HOW DID ECONOMIC ACTIVITY AFFECT THE WASTE STREAM?

The RSWMP assumed that the generated waste stream would grow about 10% from 1995 to 2000, to nearly two million tons in 2000. In fact, however, the actual generated waste stream has been growing at almost *8% per year* since 1995 (Table 4). By 1997, total waste stream generation had already exceeded two million tons. On a per-capita basis, waste generation is increasing more than 6% per year (Table 5).

A robust economy offers the simplest explanation for the bigger waste stream in 1997. According to Dennis Yee, Senior Economist for Metro's Data Resource Center, large investments by the high-tech industry and increased demand for multi-family housing have

spurred the region's growth. Strong construction activity is reflected by the 12% annual rate of increase in construction worker employment (Table 6). Low interest rates have also fueled remodeling activity by the self-employed and do-it-yourselfers, although this factor is not reflected in the construction employment numbers.

Total employment figures for the region show an annual rate of growth of 3.7% between 1995 and 1997, which has outpaced both the U.S. and the Oregon rates of growth. About 65,000 new workers found jobs in the Metro region between 1995 and 1997.

Today, the Metro region's exceptionally strong decade of economic expansion appears to be cooling. The recent economic malaise in Asia has dampened the region's international exports and generally slowed economic growth in the U.S. The Asian crisis has had a particularly chilling impact on the highly cyclical technology industry, a major sector of the region's economy in recent years. The most likely outlook for the next five years is for slower growth, with only moderate increases in construction jobs.

REVISING WASTE STREAM PROJECTIONS AND RECOVERY LEVELS

Although waste disposal grew almost 9% per year between 1995 and 1997, preliminary estimates for waste disposal in 1998 show an increase of only 1% over 1997. A more moderate rate of economic growth and greater success in recovery could account for this leveling off in disposal.

This report presents a revised projection for waste generation in 2000, which reflects the forecast for moderate economic growth and the leveling off of waste disposal in 1998. The recalculation of projected waste generation assumes annual increases of 5% from 1998 to 2000, compared to the 8% annual increases between 1995 and 1997. The result is a generated waste stream of 2.33 million tons in 2000 (Table 7). To meet the same waste prevention and recovery benchmarks for the Year 2000 for a larger generated waste stream, total waste prevention and recovery must increase by 473,769 tons from the system's actual baseline tonnage in 1995.

This increase in waste prevention and recovery will be met through the growth in recovery from existing recovery programs in place in 1995 and through new collection efforts resulting from revised recommended practices (Table 6). The RSWMP model assumed that the recovered tonnage by existing programs would grow at the same rate as waste generation, which means these programs will account for the same 42.3% of generated waste in 1995 and 2000. For example, a curbside recycling collection program with a 30% recovery rate would expect to see its recovered tonnage increase due to a larger waste stream that results from annual population growth; the 30% recovery rate, however, would remain unchanged.

In this revised projection, the recovery levels assigned to each recommended practice were scaled up using assumptions that varied by sector (Table 9). Those practices that are more closely tied to population, such as residential recycling and commercial organics generation, increased less, because of the relatively modest annual growth in population. In contrast, much higher recovery levels were assigned to recommended practices that target waste streams that are more directly influenced by economic activity, such as commercial waste and construction & demolition (C&D) debris.

ARE WE MAKING PROGRESS?

By the end of 1997, Metro's recovery had increased by slightly more than 100,000 tons from 1995, according to DEQ. In addition, Metro estimated that its home composting bin program diverted more than 3,000 tons during that time. Therefore, total waste prevention and recovery totaled an increase of 103,712 tons from 1995, which represented about 22% of the 473,769 tons needed to meet our Year 2000 benchmarks.

Based on revised recovery goals, if Metro's progress in meeting its recovery goal for 2000 was prorated linearly over the five-year period, then the region should have recovered 40% of its Year 2000 benchmark by 1997, or 180,000 tons (Table 10). Thus, the region's increased recovery of almost 104,000 tons was 55% of what it should have achieved at the end of 1997, were it on track to meet its goal for 2000. If organics recovery were excluded (because the organics recommended practice is still in the pilot project phase and thus not fully implemented), existing programs and recommended practices would have met 61% of their prorated 1997 benchmark.

In waste prevention, Metro met an estimated 36% of its target for 1997. A preliminary assessment of the home composting bin program indicates that diversion of food scraps and yard trimmings by households reached 72% of its 1997 target. A more complete determination of diversion by compost bin owners will be finished in February 1999. The program evaluation will also look at the additional recovery from households that have started home composting, but do not use Metro bins. No assessment has yet been made of the level of waste prevention by businesses.

Table 1
1995 Projected Baseline and Actual Year RSWMP Solid Waste Hierarchy Benchmarks

	Projected Baseline Tons	Projected Baseline Percent	Actual Year Tons	Actual Year Percent
Solid Waste Hierarchy				
Waste Prevention [A] (1)	0	0%	0	0
Recycling [B]	495,804	28.0%	534,583	30.9%
Composting [C]	+115,496	+6.0%	+118,948	+6.9%
Total Recycling [D=B+C]	611,300	34.0%	653,540	37.8%
Energy/Fuel [E]	+142,000	+8.0%	+81,691	+4.7%
Recovery [F=D+E]	753,300	42.0%	735,231	42.5%
Disposal [G]	+1,026,300	+58.0%	+995,035	+57.5%
Generation [H=F+G]	1,779,600	100.0%	1,730,266	100.0%
Generation and Prevention [I=A+H]	1,779,600	100.0%	1,730,266	100.0%

Columns may not add due to rounding.
(1) The absolute level of waste prevention for 1995 was not measured, but was set at 0 for the purposes of future measurement.
Source: Oregon Department of Environmental Quality, November 1998; Metro, RSWMP, Table 9.3, November 1997.

Table 2
1995 Projected Baseline and Actual Year RSWMP Per Capita Benchmarks

Benchmarks	Baseline (1) (tons per capita per year)	Actual (tons per capita per year)
Generation	1.36	1.33
Recovery (2)	0.58	0.56
Disposal	0.79	0.76

Columns may not add due to rounding.
(1) Generation and disposal baseline numbers revised to be consistent with hierarchy benchmarks.
(2) Formerly named "recycling." Includes recycling, composting and energy recovery activities.
Source: Oregon Department of Environmental Quality, November 1998; Metro, RSWMP, Table 9.3, November 1997.

Table 3
Metro's Annual Recovery (1)

Solid Waste Hierarchy	1995 Tons	1995 Percent	1996 Tons	1996 Percent	1997 Tons	1997 Percent	1995-97 Tons	1995-97 Percent Change
Recycling	534,583	30.9%	478,022	25.8%	580,712	28.9%	46,129	9%
Composting	118,948	6.9%	144,862	7.8%	136,994	6.8%	18,046	15%
Stock (2)	+9	+0.0%	+25	+0.0%	+1	+0.0%	-8	-87%
Td Recycling	653,540	37.8%	622,909	33.7%	717,707	35.7%	64,168	10%
Energy/Fuel	+81,691	+4.7%	+129,561	+7.0%	+117,886	+5.9%	+36,195	44%
Recovery	735,231	42.5%	752,470	40.7%	835,593	41.6%	100,362	14%
Disposal	+995,035	+57.5%	+1,097,246	+59.3%	+1,173,593	+58.4%	+178,558	18%
Generation	1,730,266	100.0%	1,849,716	100.0%	2,009,186	100.0%	278,920	16%

Columns may not add due to rounding.
(1) Waste prevention is not measured by DEQ, so the recycling and recovery rates will vary slightly from actual solid waste hierarchy benchmarks in the RSWMP.
(2) Represents change in inventory of materials to be marketed.
Source: Oregon Department of Environmental Quality, November 1998.

Table 4
Aggregate Changes in Metro's Waste Stream, In Tons

Activity	Actual 1993	Actual 1995	Actual 1997	Annual Rate 1993-1995	Annual Rate 1995-1997	Annual Rate 1993-1997
Recovery	575,819	735,231	835,593	13.0%	6.6%	9.8%
Waste Disposal	960,691	995,035	1,173,593	1.8%	8.6%	5.1%
Waste Generation	1,536,510	1,730,266	2,009,186	6.1%	7.8%	6.9%

Source: Oregon Department of Environmental Quality, November 1998.

Table 5
Metro's Per Capita Waste Stream Measures

Activity	1993	1995	1997	Annual Rate 1993-1995	Annual Rate 1995-1997	Annual Rate 1993-1997
Tons/capita/year						
Recovery	0.45	0.56	0.62	11.4%	5.1%	8.2%
Waste Disposal	0.76	0.76	0.87	0.3%	7.1%	3.7%
Waste Generation	1.21	1.33	1.50	4.6%	6.3%	5.4%
Pounds/capita/day						
Recovery	2.49	3.09	3.41	11.4%	5.1%	8.2%
Waste Disposal	4.15	4.18	4.79	0.3%	7.1%	3.7%
Waste Generation	6.64	7.26	8.21	4.6%	6.3%	5.4%

Source: Oregon Department of Environmental Quality, November 1998; Metro Regional Data Book, 1998.

Table 6
Economic Indicators for Metro Region (1)

Indicator	1993	1995	1997	Projected 2000	Annual Rate 1993-1995	Annual Rate 1995-1997	Annual Rate 1993-1997	Annual Rate 1997-2000
Population	1,268,000	1,305,100	1,341,700	1,400,000	1.5%	1.4%	1.4%	1.4%
Employment	799,889	877,959	943,978	1,008,500	4.8%	3.7%	4.2%	2.2%
Construction Employment	28,454	35,600	44,444	47,777	11.9%	11.7%	11.8%	2.4%

(1) Data are for the three-county region.
Source: Metro Regional Data Center, January 1999.

Table 7
Increased Recovery Needed to Meet RSWMP Year 2000 Benchmarks

Solid Waste Hierarchy	1995 Tons	1995 Percent	1997 Tons	1997 Percent	2000P Tons	2000P Percent	1995-2000* Tons	1997-2000* Tons
Waste Prevention[A](1)	N.A.	N.A.	N.A.	N.A.	23,250	1%	23,250	23,250
Recycling [B]	534,583	30.9%	580,712	28.9%	813,750	35%	279,167	233,038
Composting [C]	118,948	6.9%	136,994	6.8%	209,250	9%	90,302	72,256
Total Recycling [D=B+C]	653,540	37.8%	717,707	35.7%	1,023,000	44%	369,460	305,293
Energy/Fuel [E]	81,691	4.7%	117,886	5.9%	162,750	7%	81,059	44,864
Recovery [F=D+E]	735,231	42.5%	835,593	41.6%	1,185,750	51%	450,519	350,157
Disposal [G]	995,035	57.5%	1,173,593	58.4%	1,116,000	48%	120,965	-57,593
Generation [H=F+G]	1,730,266	100.0%	2,009,186	100.0%	2,301,750	99%	571,484	292,564
Generation and Prevention [I=A+H]	1,730,266		2,009,186		2,325,000	100%	594,734	315,814

* = Projected.
N.A. = Not applicable.
Columns may not add due to rounding.
(1) The baseline level of waste prevention in 1995 is set at 0.
Source: Oregon Department of Environmental Quality, November 1998; Metro, January 1999.

Table 8
Original RSWMP Recovery Efforts Compared with Revised Model

SOLID WASTE HIERARCHY	1995 Projected TONS	Percent	2000 Projected Tons	Percent	Change 1995-2000 Tons	Percent
Original RSWMP Projected Contributions						
Waste Prevention	N.A.	N.A.	20,300	1.0%	20,300	N.A.
Recovery						
Existing Programs	*753,300*	*42.3%*	*842,300*	*43.3%*	*89,000*	*11.8%*
Recommended Practices	*N.A.*	*N.A.*	*162,600*	*8.4%*	*162,600*	*N.A.*
Total Recovery	753,300	42.3%	1,004,900	51.7%	251,600	33.4%
Disposal	1,026,300	57.7%	939,400	48.3%	-86,900	-8.5%
Generation	1,779,600	100.0%	1,944,300	100.0%	164,700	9.3%
Generation + Prevention	1,779,600		1,964,600		185,000	
Revised Contributions						
Waste Prevention	N.A.	N.A.	23,250	1.0%	23,250	N.A.
Recovery						
Existing Programs	*735,231*	*42.5%*	*988,125*	*42.9%*	*252,894*	*34.4%*
Recommended Practices	*N.A.*	*N.A.*	*197,625*	*8.6%*	*197,625*	*N.A.*
Total Recovery	735,231	42.5%	1,185,750	51.5%	450,519	61.3%
Disposal	995,035	57.5%	1,116,000	48.5%	120,965	12.2%
Generation	1,730,266	100.0%	2,301,750	100.0%	571,484	33.0%
Generation + Prevention	1,730,266		2,325,000		594,734	

N.A. = Not applicable.
Source: Metro, RSWMP, Table 9.2a; Metro, February 1999.

Table 9
Revised Practices Needed to Meet RSWMP Year 2000 Benchmarks

Practices	Prevention Single-Family	Prevention Commercial	Recovery Single-Family	Recovery Multi-Family	Recovery Commercial	Recovery C&D	Recovery Mixed (1)	Total	Percent
Waste Prevention									
Home Composting	11,700							11,700	50%
Business Waste Reduction		11,550						11,550	50%
Total Waste Prevention	*11,700*	*11,550*						23,250	100%
Recovery									
Expanded Residential Curbside			32,000					32,000	7%
Expanded Multi-family Collection				20,000				20,000	4%
Source-Sep. Business Recyclables					168,000			168,000	37%
Commercial Organics					52,000			52,000	12%
On Site C&D						153,000		153,000	34%
Post-Collection (2)							25,519	25,519	6%
Total Recovery			*32,000*	*20,000*	*220,000*	*153,000*	*25,519*	450,519	100%
Total Waste Prevention and Recovery	*11,700*	*11,550*	*32,000*	*20,000*	*220,000*	*153,000*	*25,519*	473,769	
Percent	*2%*	*2%*	*7%*	*4%*	*46%*	*32%*	*5%*	*100%*	

(1) Multi-generator sources, primarily construction and demolition materials.
(2) Recovery at mixed waste processing plants, sometimes called materials recovery facilities.
Source: Metro, January 1999.

Table 10
Progress in Meeting RSWMP Benchmarks (1)

Practices	Projected Increase 1995-2000 Tons	Projected Increase 1995-1997 Tons (2)	Actual Increase 1995-1997 Tons	Actual-Projected 1995-97 Tons	Actual/Projected 1995-97 Percent
Waste Prevention					
Home Composting (3)	11,700	4,680	3,350	-1,330	72%
Business Waste Reduction	11,550	4,620	N.A.	-4,620	N.A.
Total Waste Prevention	23,250	9,300	3,350	-5,950	36%
Recovery					
Expanded Residential Curbside	32,000	12,800	20,062	7,262	157%
Expanded Multi-family Collection	20,000	8,000	3,901	-4,099	49%
Source-Separated Business Recyclables	168,000	67,200	37,358	-29,842	56%
Commercial Organics	52,000	20,800	N.A.	-20,800	N.A.
On-site Construction & Demolition	153,000	61,200	20,904	-40,296	34%
Post-Collection (4)	25,519	10,208	18,137	7,929	178%
Total Recovery	450,519	180,208	100,362	-79,846	56%
Total Waste Prevention and Recovery	473,769	189,508	103,712	-85,796	55%

N.A. = Not available.
(1) All tonnage represent increases to the actual baseline tonnage reported in 1995.
(2) Projected 1997 benchmark is prorated to be 40% of Year 2000 benchmark.
(3) Preliminary calculation for diversion from households with home composting bins. Final analysis to be completed in February 1999.
(4) Recovery from mixed waste processing facilities (sometimes called materials recovery facilities) and regional transfer stations, which is mostly construction and demolition materials.
Source: Metro, January 1999.

APPENDIX B
IMPLEMENTATION STATUS OF RECOMMENDED PRACTICES

The RSWMP identified "recommended practices," or activities, to achieve recovery goals. If the recommended practices are implemented as specified and perform as expected, the quantitative waste reduction objectives of the RSWMP will be met. This section reviews the level of implementation of the recommended practices set forth in the RSWMP.

The tables in this section present detailed information on each recommended practice, its implementation and the programs that have been initiated to meet the requirements of the practices. For the most part, recommended practices are implemented by the cooperative efforts of local governments and Metro; however, the RSWMP does assign primary and secondary levels of responsibility among Metro, local governments, haulers and the private sector for each recommended practice.

The majority of the recommended practices have been implemented to some degree. Other practices and implementation dates have been modified in light of changes in the overall solid waste system. Amendments made to the RSWMP are discussed in Appendix A to this report.

Implementation Status

Each entry in the table lists an implementation status. These status levels are defined as follows:

Post-Implementation Assessment: This program has been implemented and is currently being assessed for effectiveness.

Implemented:

- Ongoing: This program has been fully implemented, in accordance with the RSWMP, and is an established ongoing program.
- Annually: This program or task is annual in nature and may change from year to year.
- Phased: This program is phased in over time and implementation is targeted for completion in a future year.

Partially Implemented: This program has been fully planned, but is in the beginning stages of implementation or differs significantly from the recommended practice.

Program Design Planning: This program is in the design stage, with implementation expected within the next six to nine months.

Pre-Planning: This program is still in a pre-planning research, and design phase and implementation dates have not been established.

Not Implemented: This program either has not been implemented or implementation has been delayed due to contingent conditions not being met.

Recommended Practice or Key Element	Implementation Status	Comments
RESIDENTIAL WASTE PREVENTION AND RECYCLING:		
1. Waste Prevention Education and Information		
a) Regional media campaigns that emphasize waste prevention.	Implemented (annually)	1997 "Thinker" campaign was pilot for subsequent campaigns; 1998 "How Low Can You Go?" waste prevention campaign.
b) Expand local education programs and shift to greater emphasis on waste prevention.	Implemented (ongoing)	RIC calls (over 100,000 annually), school education programs.
c) "Earth-Wise" purchasing and waste prevention programs targeted to households.	Implemented (ongoing)	Guides to Buying Recycled produced and distributed, BR training workshops, Greener Cleaner Project, Alternatives to Pesticides.
2. Home Composting		
a) Home composting workshops will be held semi-annually (Spring and Fall).	Implemented (ongoing)	26 Spring and Fall workshops held at 4 permanent sites in the region as well as other locations.
b) Metro home compost demonstration sites will be developed to serve all parts of the region.	Implemented (phased)	Five current sites, two Washington County sites to be constructed in 1999. Metro working with Beaverton and Lake Oswego to consider two additional new site developments.
c) Five-year (1995-2000) bin distribution program based on results of current programs.	Post-Implementation Assessment	Study completed 9/1998 proving the sales are effective. 42,000 bins sold since 1994. (See Attachment A: composting assessment fact sheet.)
d) Promotion and education will be provided on how home composting complements, but does not replace, curbside yard debris program.	Implemented (ongoing)	Grasscycling education and outreach, composting education and outreach, local government program promotion at least annually of both composting and curbside programs.
3. Expand Existing Residential Curbside Recycling Programs		
a) Weekly curbside collection (or equivalent) of yard debris and scrap paper for single-family households.	Implemented (ongoing) (post-implementation assessment complete)	All jurisdictions meet yard debris collection standard. (See Attachment B.) All curbside programs except King City, Banks, Johnson City and Maywood Park collect scrap paper weekly.
b) Provide recycling containers for at least 4 materials at all multifamily complexes (at least 85% of units).	Implemented* (ongoing) (post-implementation assessment complete)	All jurisdictions meet standard, *(except Beaverton, which has a newly independent program). (See Attachment C.)

Task/Program/Key Concept	Implementation Status	Comments
c) Regional education and promotion campaigns to support single-family and multifamily curbside recycling.	Implemented (ongoing)	All local jurisdictions promote recycling programs at least annually and, in most cases, more frequently. Metro augments efforts and provides Recycling Information Center services. Comprehensive residential outreach campaign planned for Fall 1999.
d) Target low-participation neighborhoods with special education and promotion efforts.	Partially Implemented	Local governments initiated and implemented a study to determine best methods of outreach. Program planning/recommendations to follow assessment of study.
e) Target reduction of yard debris in drop box and self-haul.	Not Implemented	Not implemented due to low priority and high yard debris recovery rates.
4. New Collection, Transfer and Disposal Technologies		
▪ Continue cooperative development of promising new technologies. (e.g., co-collection) ▪ Alternative collection pickups for different materials (i.e., recycling and waste) ▪ Selective commingling of compatible materials. ▪ Weight-based collection rates (e.g., household refuse cans weighed at curbside and charges made "by the lb.").	Program Design Planning (residential commingling)	A residential commingling pilot project has begun. Routes are being run in Portland, Clackamas County and Washington County. Pilot is expected to be completed by January 1999. Final report to be issued in February 1999. While this pilot focuses primarily on commingling, it is also examining some other key concepts. Work in this area has and will continue to include research and exploration of co-collection and weight-based rates as well as commingling.
5. Curbside Collection and Processing of Residential Food Wastes		
a) Site and develop regional processing capacity for business food waste prior to development of residential programs.	Implemented (Commercial Phase I) Pre-Planning (Residential)	Pilot projects to test commercial collection and processing implemented. Residential pilots in pre-planning stage. No permanent regional organic waste processing capacity yet available.
b) Residential programs phased in and dependent on results of pilot (implement 2000-05).	*Implementation contingent upon success of commercial efforts.*	No permanent regional organic waste processing capacity yet available.
c) Collect residential food wastes together with yard debris (implement 2000-05).	*Implementation contingent upon success of commercial efforts.*	Commercial collection route modeling study complete. Planning for residential route collection system has not yet begun.
COMMERCIAL WASTE PREVENTION AND RECYCLING:		
1. Education, Information and Market Development		
a) Waste prevention, diversion and procurement evaluations with goal of reaching 80% of targeted businesses by 2000.	Implemented* (ongoing)	All jurisdictions *(except Portland) provide waste evaluations. Three have hired temporary staff to do so. (See Attachment D for status.)

Task/Program/Key Concept	Implementation Status	Comment
b) Model waste prevention programs for different types of businesses.	Implemented (ongoing)	Metro has developed a targeted generator program and associated materials and outreach for law firms, Realtors, hospitals, hotels, restaurants, grocery wholesale and retail, and construction contractors. These are used by local governments during waste evaluations and in Metro outreach. Metro is assessing the program and determining how to integrate results into future planning and program implementation.
c) Coordinated regional media campaigns emphasizing waste prevention.	Partially implemented.	Local jurisdictions have implemented independent outreach, such as ads and the BRAG recognition program. No full-fledged regional media campaign aside from BRAG has been implemented to date. Primarily local government initiatives to date. Regional outreach effort/media campaign focusing on business recycling budgeted and planned for Spring 2000.
d) Earth-Wise programs, including promotion campaigns, model procurement policies for targeted generators and recycled product guides to assist with the development of markets for recycled materials.	Implemented (ongoing)	Metro produces comprehensive Buy Recycled guides for businesses and residences annually. Metro provided buy recycled training workshops for purchasing agents. Targeted generator materials include buy recycled procurement. Local government waste evaluations provide procurement information and materials. Metro provides business development grants.
e) Analysis of how businesses can substitute recycled feedstock in manufacturing processes.	Partially implemented	Metro has not implemented a formal analysis, but does provide grant funds to businesses that use recycled feedstocks. Recycling business development grant program implemented.
2. Expand Source-Separated Recycling		
a) Collection of paper (ONP, OCC, HG, MWP) and containers (glass, tin, aluminum, PET and HDPE) from businesses. For businesses that do not dispose of significant quantities of paper and containers, the most prevalently disposed recyclable materials will be collected.	Partially implemented	Portland has a mandatory program. All other local governments utilize a non-mandatory opportunity model for collection service. (Opportunity model means that local jurisdictions *offer* recycling services to businesses for the collection of principal recyclable materials. It is up to the generator to choose to implement.) (see Attachment D for status.)
b) Appropriate recycling containers provided to all small businesses.	Partially implemented	All jurisdictions require haulers to provide appropriate outdoor containers to all businesses that want to recycle (opportunity model). Portland has provided signature blue bins for small businesses as part of its mandatory program.
c) Education and promotion of recycling services, including waste evaluations of targeted businesses.	Implemented (ongoing)	All local jurisdictions conduct outreach to all businesses annually via direct mail, industry associations, chambers of commerce and/or on-site visits. Regional outreach campaign focused on recycling budgeted and planned for Spring 2000.
d) Business recycling recognition programs.	Implemented (ongoing)	All local jurisdictions, with assistance from Metro, have developed and implemented the BRAG (Business Recycling Awards Group) program. Annual awards ceremonies are conducted to recognize business efforts.

Task/Program/Key Concept	Implementation Status	Comments
ORGANICS		
3. Collection and Off-site Recovery of Commercial Organics		
a) Site and develop processing capacity for regional organic waste.	Program design planning	Two Metro pilot organics collection and processing programs initiated and near completion. Collection scenario model completed January 1999.
b) Collection from larger food generators within three to five years.	*Implementation contingent upon processing capacity.*	Collection scenario study implemented and near completion. Local processing capacity not yet available.
c) Small generators will be provided service after the processing facilities are well-established.	*Implementation contingent upon processing capacity.*	Contingent upon processing capacity and collection economics.
BUILDING INDUSTRIES WASTE PREVENTION AND RECYCLING		
1. Develop Targeted Technical and Educational Programs		
a) Earth-Wise building programs to train builders about salvage, waste reduction, recycling and buying recycled, along with other environmental building practices.	Partially implemented	Private and non-profit programs that educate builders on environmental building practices continue to grow in the Metro region. Metro staff provide technical assistance to these groups as requested and host several workshops and seminars sponsored by sustainable building organizations. The Metro C&D Study (1999) will provide insights into better education methods.
b) On-site audits at construction and demolition sites to promote waste prevention practices.	Partially implemented	Both Metro and local governments promote and provide this service upon request. Demand has been low. C&D study (1999) to provide insights into better outreach methods.
c) Technical assistance and educational information for builders and others on waste prevention practices for building trade waste.	Implemented (ongoing)	Metro and local governments produce educational materials that are distributed through local government building permit offices and other outreach methods.
2. On-site Source Separation at Construction and Demolition Sites		
a) Local governments assure the availability of on-site services for two or more materials.	Partially implemented	Local governments require franchised haulers to offer services. Construction and demolition generator survey being conducted and will be complete in 1999. This will guide much of the future work in this area.
b) Promotion of and education about on-site recycling collection services.	Implemented (ongoing)	Metro produces construction site recycling guides updated on an annual basis. Local governments and Metro distribute these and other informational pieces through permit offices and other venues.
c) Develop educational materials that target new recoverable materials for source separation when markets are available.	Implemented (ongoing)	Metro updates construction and demolition recycling and recovery educational materials annually.

Task/Program/Key Concept	Implementation Status	Comments
3. Develop Markets to Support Reuse and Recycling Rather than Energy Recovery		
a) Support salvage practices and markets for reused building materials.	Implemented (ongoing)	Metro has provided grant funds to non-profit construction salvage operations and continues to promote deconstruction and salvage over demolition. Metro has produced case studies illustrating economic benefits.
b) Support development of industries using recycled C&D materials.	Implemented (ongoing)	Metro staff provide technical assistance to the private sector as requested.
SOLID WASTE FACILITIES REGULATION AND SITING		
1. Yard Debris Processing System		
a) Establish facility performance standards for franchising or otherwise authorizing yard debris processors.	Implemented (ongoing)	Metro now licenses and franchises all yard debris processors in the region and implements DEQ's compost rules.
b) Metro system for franchising or otherwise authorizing yard debris processors.	Implemented (ongoing)	See above.
c) Local governments require use of Metro and Oregon DEQ authorized facilities by their franchised curbside yard debris collectors.	Implemented (ongoing)	Local governments all require use of "approved facility" by franchised haulers.
d) Local governments adopt clear and objective siting standards that do not effectively prohibit the siting of facilities.	Partially implemented (in most areas of the region)	Metro has been working to ensure local government compliance. Staff have just completed work with Clackamas County planning officials.
2. Organic Waste Regulatory System		
a) Develop a Metro regulation system for processors of food and other organic waste.	Program design planning	In development. Two facilities already franchised to accept certain limited food wastes. Metro Solid Waste Code update and adoption process will influence further action.
b) Local governments adopt clear and objective siting standards that do not effectively prohibit the siting of facilities.	Program design planning (implementation in some areas of the region)	In development. Most jurisdictions don't prohibit siting, but many standards depend on the nature of the facility and the existing zoning ordinances in place. Metro staff is actively working with local government land use planners.
POST-COLLECTION RECOVERY		
(Note: this section brings together post-collection recovery practices from commercial and C&D programs previously listed.)		Please refer to Section III for review and discussion of post-collection recovery.
SOLID WASTE FACILITIES AND SERVICES		
a) Regulation and Siting. b) Transfer and Disposal. c) Household Hazardous Waste Management.		Please refer to Section III for review and discussion of solid waste facilities and services.

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ATTACHMENT A
HOME COMPOSTING PROGRAM EVALUATION

In July 1998, Metro conducted surveys of home composting behavior that targeted attendees of home composting workshops, purchasers of home composting bins and the general population. The results of these surveys were combined with a previous survey in January 1996 that interviewed purchasers of compost bins and the general population. The results show that home composting activity in the region continues to increase, and there is still unmet demand for this service.

What's the level of participation in home composting?

- For households with yard debris that live in single-family through four-plex dwellings, 51 percent were composting some fraction of their yard trimmings in 1998. This was up significantly from the 44 percent who reported composting yard trimmings in 1996.
- Food scrap composting participation increased from 26 percent in 1996 to 30 percent in 1998.

Who is more likely to compost?

- Residents who generate more yard debris (those with larger lawns, more trees and vegetable gardens).
- Four-year college graduates.
- Homeowners (53%) are somewhat more likely than renters (44%).
- Households with no or minimal garbage collection service.
- Households without yard debris collection.

What's the best way to tell people about composting?

- Almost half of the general population (47%) indicated an interest in more composting information.
- For general events, direct mail was preferred, followed by notices in the home and garden section of the newspaper.
- For detailed information on how to compost, direct mail came out on top, with newsletters and free home composting videos also popular.
- For Metro bin owners, 30% have used the Metro Recycling Information Hotline for answers to home composting questions.

How do households compost?

- One in five composters uses more than one method.
- Respondents used the following compost techniques:

Pile it up	44%
Homemade bin/enclosure	31%
Metro plastic bin	17%
Store-bought bin	13%
Bury	10%
Worm bin	3%
Other	3%

Are Metro's plastic home composting bins still being used?

- Metro has sold 42,000 home composting bins in five annual truckload sales, starting in 1994.
- More than 90 percent of compost bin purchasers from each sale year still use their bin for composting.
- Of the 10 percent of bin owners that stopped using their bin, most (80%) are composting using another method.

What's happened to grass clippings, leaves and brush when residents bought Metro compost bins?

- Grass composting increased from 35% of households before the bin to 65% after its purchase.
  For these households, usage declined for curbside yard debris pickup (-11%), self-haul (-4%), garbage (-4%) and mulching (-6%).
- Leaf composting increased from 43% of households to 66% after getting a bin.
  These households reported less use of curbside (-6%), self-haul (-6%), garbage (-3%).
- The increase in brush composting was more modest, going up from 15% to 27%.
  For these households, curbside collection increased 2%, while declines were seen in self-haul (-6%), burning (-3%) and garbage (-2%).

How did households handle their food scraps after getting a bin?

- Disposal in garbage (40%) and down the drain (40%) was cut in half, to 20% for each option.
- Composting tripled from 20% before the bin purchase to 60% after the bin.

How frequently are problems, such as odor, flies and rats, associated with home composting activity?

- Small numbers of composters (6.2%) and non-composters (6.6%) reported these problems from their *neighbor's composting activity*.

How many people try composting and stop?

- Seven percent of respondents have tried composting of yard debris or food scraps and stopped.
- Frequent reasons for stopping were too much work, not enough space in the yard and curbside pickup is easier.

How much demand is there for Metro's home composting bins?

- About 9% of all respondents in single-family/mobile homes reported composting with a Metro bin.
- Both non-composters (29%) and composters (38%) were interested in purchasing bins.

Of those who want a bin, how attractive is Metro's annual Saturday sale of bins priced at $25?

- The price was right for 94%.
- Most households (69%) thought the annual Saturday sale was convenient. More frequent sales, closer locations and weekday hours were desired by about one-third of respondents.

How much demand is there for worm bins?

- Twenty-nine percent of Metro bin owners would be interested in a discount sale of worm bins to be able to compost vegetative food scraps.

What is the level of interest in self-guided compost demonstration sites?

- Metro operates four demonstration sites, which were established in 1990-1991.
- An estimated 500 to 1,000 visitors tour the sites annually, based on literature taken from the sites.
- More than 2% of surveyed households and 11% of those with Metro compost bins have visited the sites.
- Twenty-seven percent of composters and 20% of non-composters expressed interest in visiting a site.

How popular are home composting workshops?

- Metro conducts about 26 workshops annually, in the spring and fall, with annual attendance running between 200 and 400 people.
- About 1 percent of surveyed households and 8% of Metro compost bin owners have taken a workshop.
- Composters (18%) and non-composters (17%) were equally interested in a workshop.
- Half (49%) of the workshop attendees reported helping between one and five other households to start or troubleshoot their composting operation.

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ATTACHMENT B
METRO REGION YARD DEBRIS COLLECTION PROGRAMS

JURISDICTION	WEEKLY SERVICE	E/O WEEK SERVICE	OTHER	EXEMPTION PROGRAM	HAULER CONTAINER	CUSTOMER CONTAINER	IMPLEMENTED	LEAF PROGRAM
Unin. Clackamas, Happy Valley	X			X (annual fee)	X (60 gal)	X (32 gal)	1/92	
Canby	X			X	X (60 gal)		7/97	
Lake Oswego	X			X (no fee)	X (60 gal)	X (32 gal)	10/92	
Milwaukie	X				X (60 gal)	X (32 gal)	4/92	
Gladstone	X[5]				X (60 gal)	X (32 gal)	7/83	X
Oregon City	X				X (60 gal)	X	1/80	
West Linn	X			X(no fee)	X	X	6/95	
Gresham‡	X			X (one-time fee)	X (60 gal)	X (32 gal)	9/92	X
Troutdale†	X			X (one-time fee)	X (60 gal)	X (32 gal)	9/92	
Fairview†	X			X (one-time fee)	X (60 gal)	X (32 gal)	9/92	
Wood Village†	X			X (one-time fee)	X (60 gal)	X (32 gal)	9/92	
Banks			depots (outside Metro)					
Beaverton[4]		X			X (60 gal)		10/94	
Cornelius†[4]		X	depots/compost bin distribution			X (2-30 gal)	11/97	
Durham[4]		X			X (60 gal)		7/94**	
Forest Grove†[4]			depots/home composting					X
Hillsboro†[4]		X				X(60 gal)	10/94	X
King City[2,4]			depots					
North Plains			depots (outside Metro)					
Sherwood†[4]		X[3]			X (60 gal)		7/94	
Tigard[4]		X			X (60 gal)		7/94	
Tualatin	X				X (90 gal)		10/91	
Wilsonville*	X*		X*	X (no fee)*	X (60 gal)*	X (35 gal)*	3/94	
Uninc. Washington County[4]		X				X (32 gal)	1/94	
Johnson City	X					X (32 gal)	4/89	
Portland (USB)[4]		X			carts offered	X (32 gal)	7/93	X
Maywood Park	X[6]				carts offered	X (32 gal)	Yes	

[2]Two collection events yearly.
[3]Every-other-week curbside pickup or compost bins provided.
[4]Alternative to weekly collection meets regional equivalency standards.
[5]Fees for yard debris collection service are included in the property tax base and are not reflected in garbage bills or rates. Residents may place up to four containers of yard debris by the curb per week for collection.
[6]The City of Maywood Park has weekly curbside collection seven months of the year. For the remaining five months, on-call service and one or two community collection events are available.
*Charbonneau area has 3 programs: small lots = 35 gallon roll carts collected monthly on the first garbage day of the month; larger lots = 60 gallon carts collected weekly; and a no-fee exemption program for those residents with approved landscape service. All other city residents receive 60 gallon roll carts serviced weekly.
†These cities are located outside the metropolitan burn ban area. They may burn their yard waste.
‡A large percentage of the City of Gresham is located outside the metropolitan burn ban.
**Durham has had a collection program since 1990. Significant changes were made in July of 1994.

ATTACHMENT C
1998 MULTI-FAMILY RECYCLING COMPLETION LEVELS

Local Jurisdiction	Total Number of Units	Percent Recycling	Goal Attained? (Y/N)
Beaverton	14,218	82%	N*
Clackamas County	18,153	85%	Y
Gresham	14,850	89%	Y
Lake Oswego	4,537	89%	Y
Milwaukie	2,781	93%	Y
Portland	65,801	87%	Y
Troutdale	277	91%	Y
Washington County	51,940	86%	Y

*The City of Beaverton began their own program independent of the Washington County Cooperative in 1997. They have been given an additional year to meet the standard, which is 85%.

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ATTACHMENT D
LOCAL GOVERNMENT COMMERCIAL RECYCLING PROGRAM STATUS

Table 1
Percent of Commercial Customers Recycling Through their Regulated Solid Waste Hauler*

JURISDICTION	1998 Goal	1998 Actual	Difference
Beaverton	N.A.**	65%	N.A.
Clackamas County	60%	57%	-3%
Gresham	60%	61%†	+1%
Milwaukie	68%	59%	-9%
Portland	100%‡		
Troutdale	30%	64%	+34%
Washington County	60%††	77%	+17%

*This table does not take into account the significant amount of recyclables that may be collected by independent recyclers.

**N.A.: not applicable/available. This is the first year data were collected for Beaverton as a separate jurisdiction and independent program. Beaverton's goal is to increase the number of businesses recycling to 75% by the end of FY 1998-99.

†Estimate. Inventory not yet complete.

‡Portland has a mandatory program that requires 100% of businesses to recycle.

††Washington County did not set a goal. The 60% number reflects the participation level as measured in May 1997.

Table 2
Waste Evaluations Performed

JURISDICTION	Number Performed FY 1997-98	Percent of targeted businesses reached
Beaverton	N.A.‡	N.A.
Clackamas County	692	25% or 57%*
Gresham	636	76%**
Portland	N.A.***	N.A.
Troutdale	76	44%
Washington County	310	††

‡ FY 1997-98 was the first year Beaverton had an independent waste reduction program and staff. The developed their waste evaluation program and strategies in FY 1997-98 and will implement in FY 1998-99.

* The 25% number reflects on-site evaluations performed between 1995-1998. It does not include self-evaluations or evaluations performed by independent recyclers. The 57% number reflects the number of targeted businesses that currently recycle and therefore have had some contact with a hauler or local government staff.

** 80% of the targeted businesses were contacted and were offered waste evaluations. 4% rejected the service.

*** N.A.: City of Portland has a mandatory program that requires 100% of businesses to recycle. It does not have a formal waste evaluation program, but it offers on-site assistance when requested and makes random visits to businesses to ensure compliance with the ordinance.

†† 217 of the 310 waste evaluations performed were for targeted generators. A new baseline is being developed to reflect Beaverton's move to an independent program.

ATTACHMENT E
MATERIALS COLLECTED IN CURBSIDE RECYCLING PROGRAMS, FY 1997-98

JURISDICTION	ONP	OCC	OMG	GL	TC	AL	PL	MCDB	YD[1]	MWP	UO	AER	FER	OTD
Washington County (unincorporated areas)	X	X	X	X	X	X	X*		X	X**	X	X	X	X
-Banks *(monthly)*	X	X	X	X	X	X				X	X	X	X	X
-Beaverton	X	X	X	X	X	X	X		X	X	X	X	X	
-Cornelius	X	X	X	X	X	X	X		X	X	X	X	X	X
-Durham	X	X	X	X	X	X	X		X	X	X	X	X	X
-Forest Grove	X	X	X	X	X	X	X			X	X	X	X	X
-Hillsboro	X	X	X	X	X	X	X		X	X	X	X	X	X
-King City	X	X	X	X	X	X	X*				X	X	X	X
-North Plains	X	X	X	X	X	X	X			X	X	X	X	X
-Sherwood	X	X	X	X	X	X	X		X	X	X	X	X	X
-Tigard	X	X	X	X	X	X	X		X	X	X	X	X	X
-Tualatin	X	X	X	X	X	X	X	X	X	X	X	X	X	X
-Wilsonville	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Clackamas County (unincorporated areas)	X	X	X	X	X	X	X	X	X	X	X	X	X	
-Canby	X	X	X	X	X	X	X	X	X	X	X	X	X	
-Gladstone	X	X	X	X	X	X	X	X	X	X	X	X	X	
-Lake Oswego	X	X	X	X	X	X	X	X	X	X	X	X	X	
-Molalla	X	X	X	X	X	X	X	X		X	X	X	X	
-Oregon City	X	X	X	X	X	X	X	X	X	X	X	X	X	
-Sandy	X	X	X	X	X	X	X	X	X	X	X	X	X	
-West Linn	X	X	X	X	X	X	X	X	X	X	X	X	X	
East Multnomah Cty.														
-Gresham	X	X	X	X	X	X	X		X	X	X	X	X	
-Fairview	X	X	X	X	X	X	X		X	X	X	X	X	
-Wood Village	X	X	X	X	X	X	X		X	X	X	X	X	
Portland	X	X	X	X	X	X	X	X	X	X	X	X	X	
Milwaukie	X	X	X	X	X	X	X	X	X	X	X	X	X	
Troutdale	X	X	X	X	X	X	X		X	X	X	X	X	
Johnson City	X	X		X	X	X			X		X	X		
Maywood Park	X	X		X	X	X			X		X		X	
Rivergrove	X	X	X	X	X	X	X		X	X	X	X	X	

Jurisdictions are arranged according to cooperatives and independent programs. Boldface indicates independent program, or cooperative program lead. Washington County, Clackamas County and East Multnomah County (Gresham) are cooperative leads. All jurisdictions listed in regular font below these leads are the respective cooperative members.

ONP = Old newspapers
OCC = Old corrugated containers
OMG = Old magazines
GL = Glass
TC = Tinned steel cans
AL = Aluminum
PL = All plastic bottles
MCDB = Milk cartons and drink boxes
YD = Yard debris
MWP = Mixed waste paper
UO = Used oil
AER = Aerosol cans
FER = Ferrous metals
OTD = Old telephone directories

*Milk jugs only.

[1]Most yard debris programs are weekly with the exception of Portland, Unincorporated Multnomah County, Maywood Park, Unincorporated Washington County, Beaverton, Cornelius, Durham, Hillsboro, Sherwood and Tigard. See yard debris collection program table for complete information.

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APPENDIX C
REGIONAL SOLID WASTE MANAGEMENT PLAN AMENDMENTS

The Regional Solid Waste Management Plan was adopted in November 1995. Since that time, four sets of amendments have been added to the Plan.

- February 1997, Illegal Dumping Plan

  A task force was appointed by the Solid Waste Advisory Committee to address the problem of illegal dumping in the region. The resulting plan is the product of a collaborative effort among government, waste haulers and other private sector stakeholders. The plan recommends a set of management practices to improve illegal dumping planning and program implementation in the region. Recommended practices address communication and coordination; public education; dump site cleanup; enforcement and prosecution; unauthorized use of disposal containers; and program progress measurement.

- May 1997, Disaster Debris Management Plan

  The Disaster Debris Management Plan was developed by a task force that coordinated with both Metro's Solid Waste Advisory Committee and the intergovernmental work group responsible for emergency planning in the region. The adopted plan includes recommendations regarding strategies for the early or "response" phase of a disaster including life-saving measures, preliminary damage assessment and clearing roadways, and the later or "recovery" phase, where more intense management practices are required. Recovery phase strategies address issues such as mobilizing and coordinating use of local resources, restoring normal refuse collection services and ensuring accurate tracking of expenses. The plan directs that management of debris be done in accord with the state waste management hierarchy.

- August 1997, Review Process Amendments

  In January 1997, a task force was appointed by SWAC to review proposed amendments to the RSWMP. The most notable of these amendments clarified the process for the review and approval of local government proposals to implement alternative practices. A related amendment was intended to ensure that the review process for alternative practices was coordinated with the development of local government annual work plans. Over a dozen other smaller amendments were also adopted. These amendments were primarily intended to keep the Plan current and relevant by updating project timelines and revising roles and responsibilities based on the first year of experience with the Plan.

  A set of amendments relating to facilities was proposed and adopted by SWAC, but not submitted to the Metro Council. Included in the set was a proposal to clarify the Plan to ensure that direct haul of putrescible waste from private reload facilities to Metro's disposal contractor was consistent with the RSWMP. A number of implementation issues were raised by that amendment that required further discussion.

- July 1998, Facility Plan Amendments

  During the first half of 1998, Metro's Solid Waste Advisory Committee conducted extended discussions on the implementation issues raised by allowing direct-haul from reloads to Metro's disposal contractor. These issues included performance standards for hauling waste in the Columbia Gorge and other limitations and obligations for facilities engaging in direct-haul. Consensus was reached on these issues with the understanding that they would be addressed through revisions to Metro Code's facility regulation chapter. The facility plan amendments and Code revisions went to Council as a package and were adopted in July 1998.

APPENDIX D
REVISIONS TO THE METRO CODE AFFECTING THE REGIONAL SOLID WASTE MANAGEMENT PLAN

Until 1998, Metro's solid waste code had not been comprehensively revised since 1981. Although successful revisions were made over the years – the licensing of yard debris processors, for example – regulation of other facilities still required use of outdated and administratively complex franchise procedures.

The code revision was the culmination of work conducted by Metro's Regional Environmental Management Department, Solid Waste Advisory Committee and Office of General Counsel.

Although there are were many reasons for the Code revision, there was a general agreement during the development of the proposed code on at least three reasons:

- *The previous code was outdated; a revised code was needed to position the region for the future.*

  The previous code was written under the assumption that Metro would either procure (or at a minimum, franchise) all significant solid waste facilities in the region. The code did not have the flexibility to manage an emerging system of diverse private and often multiple-purpose processing, recovery and disposal facilities.

- *The code should reflect the management goals and objectives of the adopted Regional Solid Waste Management Plan.*

  The code had not been updated to reflect the goals and objectives contained in the Plan that was adopted in 1995. The Plan relies on private initiative to achieve many regional goals. The code revision provides regulatory instruments and incentives necessary to implement the adopted Plan.

- *The previous code's approach to regulation focused on entry requirements and was unclear on an operator's obligations after entering the system.*

  The regulated community perceived that requirements were inappropriate or arbitrary and that similar facilities were treated differently. Under the old code, many obligations of regulated facilities were set out only in individual franchises. The code revision clarifies both entry requirements and specifies the performance standards a facility must meet. This improves both the efficiency and effectiveness with which the code can be administered and provides a level playing field for the regulated community.

SWAC Recommendations Regarding Solid Waste Facilities

During the first half of 1998, Metro's Solid Waste Advisory Committee conducted extended discussions on the implementation issues raised by allowing direct-haul from reloads to Metro's disposal contractor. These issues included performance standards for hauling waste in the Columbia Gorge and other limitations and obligations for facilities engaging in direct-haul. Consensus was reached on these issues with the understanding that they would be addressed

through revisions to Metro Code's facility regulation chapter. The facility plan amendments and Code revisions went to Council as a package and were adopted in July 1998.

OVERVIEW OF THE CHANGES

In drafting the revised code, the Department and the Office of General Counsel focused on the following objectives:

- Improving Metro's ability to accommodate a changing regulatory environment.
- Reflecting the system management policies of the Regional Solid Waste Management Plan (RSWMP).
- Improving and clarifying Metro's regulatory structure.
- Providing a level playing field for the solid waste industry.
- Streamlining administration.
- Implementing recommendations of the Regional Solid Waste Advisory Committee (SWAC) relating to solid waste facilities.
- To implement Metro's new rate structure.

To achieve the above objectives, the revised code is structured along the four following lines:

- *A Tiered Regulatory System of Franchises, Licenses, Certificates and Exemptions – Regulation Based on Activities*
  Under the revised code, the standard regulatory instrument is a license - to which certain conditions may be attached - consistent with the concept that Metro is granting permission to operate, rather than awarding exclusive rights to certain solid waste enterprises.

  The revised code remains consistent with the 1995 Regional Solid Waste Management Plan, which relies on public initiatives and franchises for the major components of the region's solid waste system(e.g., regional transfer stations and landfills), and looks to private initiatives for other facilities (materials recovery facilities, reloads, processors).

  Regulation or exemption is based on activities (examples: transfer, resource recovery, composting, recycling), wastes received at the facility (putrescibles, non-putrescibles waste, source-separated organics), and scale of operation (tonnage levels).

- *Revised Entry Requirements*
  The revised code recognizes and provides for a much larger role for private initiative than the current code. Accordingly, the revised code de-emphasizes the requirements for entry into the system, and puts greater emphasis on obligations of solid waste facility operators - once they are in the system. The shift from high entry requirements to the establishment of eligibility for entry is carried out through:
  1. A pre-application conference, which establishes the intentions and responsibilities of both Metro and the potential applicant.
  2. Commitment by the applicant to specific activities and receipt of specific waste streams. These determine the specific obligations of the facility, and become the basis for inspection to determine whether the obligations are being met.

3. Demonstration of compliance with the regulations of all local, state, federal and other jurisdictions having authority over the activity. Metro will grant permission to operate only if the facility is in compliance with other agency's regulations.
4. Demonstration of a closure plan and solvency (consistent with DEQ). Metro wants to assure that there will not be a health or safety risk, or public liability in the event of a temporary or permanent closure.

- *Obligations and Performance Standards*
  Although entry conditions may be lower, there remains a public interest in the manner in which solid waste facilities are operated - waste reduction goals and nuisance control, for example. In the revised code, obligations, limits and responsibilities of solid waste facilities are clearly laid out.

  To determine whether facilities are meeting their obligations, the revised code lays out a uniform approach to measurement, inspection and enforcement. This uniform approach is also designed to provide a level playing field for all operators.

  The obligations of the facility operator are determined by the specific activities and wastes received at the facility. These become the basis for inspection and performance. Examples of facility obligations include:

  1. Safe receipt, handling, storage and shipment of solid waste.
  2. Shipment of solid waste from the site to appropriate destinations.
  3. Access for inspection and audits.
  4. To ensure that nuisances remain on site to the extent necessary to meet local land use regulations.
  5. Compliance with all applicable local (e.g., land use), state (e.g., DEQ), and federal (e.g., EPA, OSHA) requirements and regulations.

- *Administrative Procedures*
  To allow Metro to remain flexible and able to respond to changing conditions, the revised code also directs the development of administrative procedures for implementing the policies articulated in the code, including but not limited to application, inspection and enforcement procedures.

  The code sets parameters for administrative procedures that will:

  1. Establish procedures for submitting, reviewing and acting on certificates, licenses, and franchise application. Examples include:
     - Application forms and instructions.
     - Departmental review procedures and schedules.
     - Procedures for public notice and comment periods.
     - Notice of results.

2. State clearly the rules and methods for inspection:
   - Physical inspection.
   - Audit access.
   - Status of complaints from third parties.
3. Provide clear, unambiguous and escalating penalties for non-compliance:
   - Immediate notice when non-compliant, plus reasonable time to correct.
   - Escalating penalties for non-compliance.
   - Appeal procedure.

CONSISTENCY WITH REGIONAL SOLID WASTE MANAGEMENT PLAN

The revised code incorporates important goals and objectives contained in the adopted Regional Solid Waste Management Plan. Foremost amongst these are:

Goal 4 - Adaptability -
"A flexible solid waste system exists that can respond to rapidly changing technologies, fluctuating market conditions, major natural disasters and local conditions and needs."

The revised code provides more appropriate levels of regulation for the new types of solid waste facilities emerging in the region. The code provides regulatory instruments that can be adapted to facilities that receive waste types or conduct processing activities not strictly defined in the code.

Goal 3 - Economics -
"The costs and benefits to the solid waste system as a whole are the basis for assessing and implementing alternative management practices."

Objective 3.1 - System Cost –
"System cost (the sum of collection, hauling, processing, transfer and disposal) is the primary criterion used when evaluating the direct costs of alternative solid waste practices rather than only considering the effects on individual parts of the system."

The proposed code requires facilities of regional importance (for example, landfills and regional transfer stations) to demonstrate that they are of benefit to the regional system as a whole.

APPENDIX E
STATE LEGISLATION AFFECTING THE REGIONAL SOLID WASTE MANAGEMENT PLAN

In 1997, two pieces of legislation relating to the calculation of recycling and recovery rates were enacted by the Oregon legislature and signed into law by the governor. The first concerned how waste burned for energy should be treated in calculating recovery rates; the second concerned how to recognize waste reduction efforts not being measured by the DEQ's Recovery Rate Survey.

ENERGY RECOVERY

During the 1997 session, legislation was proposed to change how waste burned for energy was credited by DEQ when it calculates a wasteshed's recovery rate. The proposed legislation generated considerable controversy. In an effort to develop a consensus solution, the governor's office convened a work group to examine the issue.

The work group met each month from February 1998 to July 1998. The group discussed the objectives that recycling and recovery rates were designed to achieve, and which method of calculating a rate would meet those objectives. The draft work group report proposes to move from a recovery rate approach that includes some materials burned for energy recovery (if there is no viable recycling market for the material), to a recycling rate approach that includes only materials recycled or composted.

The work group recognized that switching to a recycling rate would require revisiting the "recovery" goals adopted by the state and wastesheds. The work group agreed that wastesheds should be "held harmless" (that is, not required to implement additional program requirements), if the change to the new rate methodology dropped them from above to below their required goals.

In addition, the draft report acknowledges the desirability of a measuring the broad range of waste reduction efforts that divert materials from the landfill, including: energy recovery, waste prevention and reuse. The report notes that the Recovery Rate credits adopted under HB 3456 (see below) will also need to be taken into account.

The work group's proposal is being translated into a legislative proposal and will be submitted for consideration the 1999 legislative session.

Potential Impact on Metro

The RSWMP already sets both recycling and recovery goals. Adoption by the state of a recycling-only rate would not require any significant changes in how Metro calculates and reports its waste reduction progress. The change to a recycling rate, however, would result in a drop of several percent points in the publicized "rate," which may then need to be explained to the public. (For example, DEQ has calculated that Metro's 1996 recycling rate under the work groups proposed methodology would have been 37%. Metro's official DEQ 1996 *recovery rate* was 41%.)

Metro's would remain in compliance with state wasteshed requirements because Metro met its required recovery rate of 40% in 1995, and so would fall under the work group's "hold harmless" provision.

HB 3456

In 1997, the legislature passed and the governor signed HB 3456. Among the most significant parts of the bill are provisions allowing a wasteshed to receive "credits" toward its recovery rate for implementing programs in three areas: waste prevention, reuse and residential composting. The provisions were intended to acknowledge efforts not counted by the existing DEQ Recovery Rate Survey. The statute specifies the program elements that are necessary to receive the credits. For each year a wasteshed implements a qualifying program, it receives a 2% "credit" on its annual Recovery Rate. A wasteshed can receive a total of 6% in credits if all three programs are implemented.

In addition, HB 3456 amended statute to ensure that wastesheds are required not just to reach but to maintain, their 1995 wasteshed recovery rates. The bill also requires wastesheds to set a recovery goal at or above their required rate.

Impact on Metro

DEQ has certified that for 1997 the Metro wasteshed earned the 2 % recovery rate credits for all three program areas. The DEQ's 1997 Recovery Rate Survey calculated that Metro recovery rate was 42%. With the addition of the 6% credits, the total recovery rate for 1997 was therefore 48%.

Regarding the requirement to set a wasteshed recovery rate, DEQ concurred with Metro that the recovery goals, as set out in the adopted RSWMP and approved by DEQ, satisfy the requirements of HB3456.

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