BEFORE THE COUNCIL OF THE
METROPOLITAN SERVICE DISTRICT

FOR THE PURPOSE OF ESTABLISHING ECONOMIC INCENTIVES THAT ENCOURAGE GREATER WASTE REDUCTION AND RECYCLING	))))	RESOLUTION NO. 90-1337 Introduced by Rena Cusma, Executive Officer

WHEREAS, Environmental Quality Commission Order SW-WR-89-01 paragraph 4M(a) requires that Metro "conduct a study of the effectiveness of present rate incentives at reducing waste, and possible modifications to the rate structure that would further encourage the recovery of paper products, yard debris, metals, lumber, other salvageable building materials, asphalt, and other materials"; and

WHEREAS, The Metro Council adopted Ordinance No. 89-290 which amended the Waste Reduction Program to include a plan for accomplishing the EQC Order SW-WR-89-01; and

WHEREAS, Metro conducted a study of existing rate incentives and submitted a report to the Department of Environmental Quality (DEQ) in January 1990; and

WHEREAS, Both the DEQ and Metro Council requested that additional analysis of rate incentives be conducted by October 1, 1990; and Metro has completed such analysis with review by the Waste Reduction Subcommittee and the Solid Waste Policy Committee; and

WHEREAS, The Metro Council has adopted Ordinance No. 88-266, the Regional Solid Waste Management Plan, which established the policy that Metro shall provide financial support

for source separation programs, to produce high-grade select loads and to carry out other waste reduction programs; and

WHEREAS, The Waste Reduction Chapter of the Regional Solid Waste Management Plan, adopted by Ordinance No. 89-315, states that Metro shall utilize rate incentives to encourage source separation of yard debris and recovery of recyclable materials at material recovery facilities; and

WHEREAS, the transition in February 1991 to a completely weight-based fee system at Metro facilities presents an opportunity to improve the current rate incentive related to self-haul delivery of recyclables to transfer stations; and

WHEREAS, the installation of scales and conversion to weight-based rates at one of the major yard debris processors and the potential for scales at the other major processor presents an opportunity to maximize the use of tip fees at transfer stations to encourage diversion of yard debris to processors; and

WHEREAS, The resolution was submitted to the Executive Officer for consideration and was forwarded to the Council for approval; now therefore,

BE IT RESOLVED:

That the Metro Council approves the following recommendations arrived at in the Analysis of Economic Incentives to Increase Recycling:

1. That transfer and material processing stations be designed to provide convenient drop-off of recyclables outside the weigh scales for non-commercial haulers at no charge.

2. That solid waste disposal rates at Metro transfer stations consider the following:

   A. (5.02.025) By February 1, 1991, a recycling credit of a minimum of $3.00 per load at existing transfer stations for public haulers in cars and pickups, and

   B. (5.02.070) By February 1, 1991, a special yard debris rate at transfer stations, that is expected to be less than the fee for waste but more than the fee charged at private yard debris processors, and

   C. (5.02.045(d)) By July 1, 1991, high grade material recovery centers must market 30% of their delivery

tonnage on an annual basis in order to be eligible for the User Fee waiver, and

D. (5.02.080) By July 1, 1991, the post-collection recycling incentive shall be eliminated.

3. In order to minimize the residual waste from the Mass Compost Facility, Metro and Riedel shall discuss means to identify and encourage haulers to establish special collection methods that enable more food waste to be delivered to the Compost Facility.

4. Solid Waste Department staff shall develop a proposal for a loan program to be jointly administered by Metro and the Portland Development Commission that would fund recycling businesses unable to get 100% conventional financing.

5. The Local Government Waste Reduction Program shall be modified as shown in Attachment A to include levelized collection rates (the per-can charge for each additional can is constant).

6. Metro staff shall conduct <u>yearly</u> reviews of economic incentives in order to evaluate the

effectiveness of current incentives and opportunities for new incentives.

ADOPTED by the Council of the Metropolitan Service District this 27th day of December, 1990.

Tanya Collier, Presiding Officer

TP:jc
November 27, 1990
INCENT\SW901337.RES

SOLID WASTE COMMITTEE REPORT

CONSIDERATION OF RESOLUTION NO. 90-1337, FOR THE PURPOSE OF ESTABLISHING ECONOMIC INCENTIVES THAT ENCOURAGE GREATER WASTE REDUCTION AND RECYCLING

Date: December 20, 1990 Presented by: Councilor Saucy

Committee Recommendation: At the December 18, 1990 meeting, the Committee voted unanimously to recommend Council adoption of Resolution No. 90-1337. Voting in favor were: Councilors Buchanan, Collier, DeJardin, Saucy and Wyers.

Committee Issues/Discussion: The Resolution was before the Committee for the second time, after the full Council at the request of Councilor Wyers referred it back to the Committee for more in-depth discussion.

Debbie Gorham, Waste Reduction Manager, presented an overview of the impact of market forces on recycling, and summarized arguments against subsidizing recycling of old corrugated cardboard through hauler rebates and recycling mixed paper through processor rebates.

Councilor Wyers asked whether staff had reviewed incentives elsewhere in the country before making its recommendations. Ms. Gorham said staff had obtained some information at the time it surveyed other localities about credits for nonprofit charitable rehabilitation organizations, and had conductd a small literature search.

In response to Councilor Wyers' questions about the process used to develop the recommendations, Ms. Gorham described a series of meetings with the recycling community, the haulers, and the industry.

Eleven citizens spoke at the public hearing. Eight citizens said they supported an amendment which Councilor Wyers had introduced when the Resolution was before the Council on November 29, 1990. The proposed amendment provided that by February 15, 1991, Waste Reduction staff shall develop specific proposals for economic incentives to encourage: 1. processors who recycle 50 to 79 percent high-grade paper loads; 2. haulers to collect cardboard from commercial customers; and 3. the private sector to accept and market reusable building materials. Three of these citizens focused on the need to encourage recycling of building materials; two citizens focused on recycling of cardboard. One citizen specifically favored rebates as an incentive, and said there should be more analysis of available options. One citizen said that although a high tipping fee serves as an incentive, it is not enough, and said that Metro's role should be to develop economic incentives to promote behaviorial changes.

Three citizens favored Resolution No. 90-1337 as proposed. These citizens said that the high tipping fee is the most effective waste reduction incentive, that strong standards for commercial recycling are needed, and stressed the need for market development. Other ideas mentioned which do not involve a direct payment included providing containers, and changing design review criteria for facilities. One citizen voiced a concern that haulers are environmentalists, yet are not perceived this way, and also expressed concerns about the process for considering the proposed amendment.

Bob Martin, Solid Waste Director, said Solid Waste Department staff has consulted the community and tried to reflect opinions expressed. Staff has traveled throughout the country, and has been consulted by others. He said he believes there is a consensus of understanding about the role of incentives, both in this community and worldwide, and he believes the issue has been thoroughly studied. Additional study would be timeconsuming, and funds have not been budgeted.

Councilor Wyers moved adoption of a revised amendment, which called for deleting from the Resolution paragraph 2.D. which provides that by July 1, 1991, the post-collection recycling incentive shall be eliminated. The amendment also provided that by February 15, 1991, Waste Reduction staff shall: a. conduct a survey to ascertain economic incentives which have been implemented elsewhere in the nation for the purpose of encouraging processors to recycle 50 to 79 percent high-grade paper loads, haulers to collect cardboard from commercial customers, and businesses to accept and market reusable building materials; b. provide a written report to the Solid Waste Committee summarizing the information obtained; c. based on survey results and other relevant information, including information from affected parties, provide a written outline to the Solid Waste Committee of steps which Metro could take to implement similar incentive programs. The proposed amendment also provided that number 3 of attachment A to the resolution be replaced with language stating that a disposal rate based on container volume for other than a single 32-gallon can, shall be at least as high as the rate per gallon for a single 32-gallon can.

Councilor Wyers expressed her view that the impact of the resolution is a step backward for economic incentives. She reviewed the ten proposals incorporated in the Waste Reduction staff study, and noted that in her view almost all of the incentives are diminished, with one abolished. One new incentive is vaguely worded, and one current incentive has been retained.

Mr. Martin disagreed with Councilor Wyers' characterization, stating he believes Resolution No. 90-1337 strengthens the incentives.

Councilor Buchanan indicated that he was confused by the various arguments presented, and asked whether action should be postponed to give Mr. Martin more time to respond. Councilor Buchanan moved to table the motion to adopt the resolution; the motion to table failed by a vote of 1 - 4.

Councilor Wyers moved adoption of her proposed amendment. The motion failed by a vote of 2 - 3.

The Committee then voted unanimously to recommend adoption of Resolution No. 90-1337.

AMENDMENT PROPOSED BY STAFF: Prior to the Solid Waste Committee meeting, Ms. Gorham provided Committee members with revised copies of Resolution No. 90-1337, incorporating two changes to Paragraph 2.C. The changes would delete the word "franchised", and insert the words "on an annual basis", so that the paragraph would read: "By July 1, 1991, high grade material recovery centers must market 30% of their delivery tonnage on an annual basis in order to be eligible for the User Fee Waiver".

If the Council wishes to adopt these changes proposed by Solid Waste Department staff, Council staff recommends incorporating the changes into the Resolution by motion.

ATTACHMENT A

ANNUAL WASTE REDUCTION PROGRAM FOR LOCAL GOVERNMENT

Year 1 of A Five Year Plan (1990-1995)

Regional Reduce, Reuce, Recycle, Recover Standards

II. Residential Curbside

K. Each local government shall develop a rate structure that provides an incentive to reduce waste. The rate structure shall specify that the per unit disposal charge for high-volume service is equal to or greater than the per-unit charge for low-volume service ~~higher per unti disposal charges for higher volume setouts~~. This includes:

1. a mini-can option for which the disposal charge per unit volume for a mini-can is equal to or less than the disposal charge per unit volume for a standard 32 gallan can, or

2. a weight based disposal rate that makes use of a sliding rate scale such that the disposal charge per unit of weight for garbage setouts of greater weight is equal to or greater than the per unit charge for setouts of of lesser weight ~~is less for garbage setouts of lesser weight than for garbage setouts of greater weight~~.

~~3. The disposal rate for two 32 gallon cans or a single 60 gallon can shall be at a higher charge per unit volume than for one 32 gallon can. The disposal rate for a third can or for a single 90 gallon can shall be at a higher charge per unit volume than for two cans or a single 60 gallon can.~~

3. Local governments that establish rate structures with the same per unit charge regardless of level of service shall evaluate the potential for switching to variable rates after curbside collection is weekly with containers.

METRO

2000 S.W. First Avenue
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503/221-1646

Memorandum

DATE: December 12, 1990

TO: Councilor Judy Wyers

FROM: Bob Martin, Director of Solid Waste

RE: Your Memo of November 15, 1990

The following reiterates each of your six questions before answering them:

1. **"I would like for staff to review Metro's past and present practice with regard to incentives, and for staff to explain how and why the proposed incentives differ".**

   Incentive #1. Self-haul delivery of recyclables to transfer stations.

   Current Status: Metro charges a flat fee of $15 for the disposal of self-haul loads. A discount is given to self-haulers who bring in source-separated recyclables with their waste. The discount is given for a minimum of 1/2 cubic yard (3 grocery bags) of recyclables.

   Proposed: The proposed incentive has three parts: (1) new transfer stations will provide areas for drop off of recyclables prior to crossing the scales, (2) a $3 discount in the tip fee at Metro South and Metro Northwest if the hauler has recyclables, (3) haulers have the option of making two trips through the facility to drop off recyclables prior to being weighed for waste if they have more than $3 worth of recyclables.

   Explanation: The proposal provides a free drop-off opportunity without Metro paying or charging for recyclables. Paying for recyclables would discourage use of established collection programs.

   Incentive #2. Volume-based collection rates with mini-can service.

   Current: Exists locally within the region.

   Proposed: Local governments implement volume-based rates in two steps. Levelized rates (constant per-unit volume fee) are first established. Once curbside collection is well established, opportunities for variable rates (increasing per-unit volume fees) would be examined further.

Explanation: Local government representatives and haulers believe that implementation of volume-based rates should start with levelized rates. They think that variable rates may not increase recycling, would discriminate against larger families, and could result in greater illegal dumping.

Incentive #3. Diversion of source-separated yard debris from Metro facilities.

Current: At Metro South there is no discount for clean yard debris. At St. Johns, commercial loads are charged $25/ton for clean yard debris rather than the garbage fee of $48/ton. Self-haul loads at St. Johns are charged $10/trip rather than $15/trip.

Proposed: All haulers will be weighed. There will be a discounted fee for clean yard debris that will be lower than the garbage tip fee, but more than the fee currently charged at private yard debris processors. This fee structure would be: $35/ton for clean yard debris at processors, $45/ton for clean yard debris at transfer stations, and $55/ton for waste at transfer stations.

Explanation: An intermediate rate for clean yard debris provides incentive for haulers to separate it from their waste without diverting a significant amount from the processors.

Incentive #4. Recycling rebates for haulers.

Current: Does not exist in the Metro region.

Proposed: Do not implement.

Explanation: This incentive could not be administered equitably by Metro. Though it is attractive to push the supply side through subsidies to realize short-term gains, a more efficient market will be established through technical assistance in collection and increased demand. Local governments are establishing recycling standards as part of the Local Government Waste Reduction Programs. They will develop plans to cover hauler costs, such as including the cost of collecting recyclables as a part of the franchise rates.

Incentive #5. Routing of food waste to the MSW Compost facility.

Current: Does not exist in the Metro region.

Proposed: Metro and Riedel discuss opportunities for this type of incentive.

Explanation: The cost of landfilling residue from the Compost Facility could be reduced if high-organic loads are delivered to the facility. This incentive would encourage haulers to create special collection routes or make other changes that might be need to deliver such loads to the facility.

Incentive #6. Recovery of Construction/Demolition Debris.

Current: Does not exist in the Metro region.

Proposed: Defer consideration of this incentive to the procurement of the special waste facilities.

Explanation: There are no construction/demolition debris recovery facilities currently in the region. It is impossible to evaluate the need for incentives without knowing what kind of facilities will exist and what the tip fee would be without special incentives. Therefore, the recommendation is to defer the evaluation of this incentive to procurement of the special waste management system.

Incentive #7. Support of Mixed Waste Paper Collection Programs.

Current: Metro currently offers a $2/ton payment to processors for mixed paper recovered from loads of 50% to 79% mixed paper. Mixed paper is defined as "uncontaminated, recyclable paper exclusive of newspaper and cardboard". The incentive has been totally ineffective.

Proposed: Do not increase the payment to the level that would be required to subsidize the mixed waste paper market.

Explanation: In the short-term, this could divert more waste paper. Long-term market efficiency will result from strong demand for waste as feedstock, not artificial supports. Such interference may cause undesirable market impacts as low value material approaches the value of higher value material. Could reduce incentive to source-separated material.

Incentive #8. User-fee Waivers

Current: Metro Code Chapter 5.02 states that "The User Fee shall be waived at material recovery facilities that accomplish recycling as a primary operation".

Proposed: Facilities must recover 30% of incoming waste in order to be eligible for the user fee waiver.

Explanation: The proposed incentive should encourage facilities to increase recovery levels in order to be eligible for the waiver.

Incentive #9. Recycling Credits for Non-Profit Charitable Organizations

Current: Implemented (Ordinance No. 90-362).

Proposed: No Change.

Incentive #10. Metro Recycling Business Development Revolving Loan Fund

Current: Does not exist in the Metro region.

Proposed: Metro research opportunities for creating a loan program to fund recycling businesses unable to get 100% conventional financing. The program would be jointly administered by the Portland Development Commission and Metro.

2. **"What would be the advantages and disadvantages of (Metro) providing a straight rebate for commercial source-separated loads?"**

Advantages:

1. Haulers who market commercial recyclables would receive money to help pay for collection costs and/or to market low value material.

Disadvantages:

1. The money for the program would come from higher tip fees charged on commercial and residential waste. There is no feasible way for a higher fee to be charged just on commercial waste. Therefore, residential haulers would pay for the incentive but not be eligible for the rebate.

2. The recycling potential of waste varies among different types of commercial generators. Some commercial haulers would pay higher tip fees and not get the rebate because of differences in the recycling potential of their accounts, regardless of the effort they make to collect recyclables.

3. **"What are the pros, cons, and cost impacts of significantly increasing the per ton rebate for mixed paper loads as a means of encouraging this type of recycling?"**

Pros:

1. Profitability of handling low or no value material could be guaranteed regardless of market conditions. Processors could continue to attract mixed waste paper when prices drop.

Cons:

1. An artificial per-ton payment or price support ignores market conditions. Undesirable market impacts could result, such as displacement of market niche for a higher value commodity.

2. In general, government rebates like this could accentuate poor market conditions. However, the mixed waste paper market is an

international market and the impact of the Metro region may be minimal.

3. Such a rebate does little to improve the poor market conditions that are the cause of low recovery rates for mixed waste paper.

4. If one commodity is subsidized, and one collection point subsidized (mixed paper at high-grade material recovery facilities), why should not <u>all</u> secondary materials and all collection points be subsidized?

5. Impact on the region's tip fee would be small for one material at one facility; much greater for more materials at more locations.

<u>Cost Impacts</u>

The market price for mixed waste paper was about $25/ton in 1987 and 1988 and fell to $0 during 1989. At the same time OPRC stopped accepting mixed waste paper. Based on 1987-1989 market prices, the rebate would have been as high as $25/ton.

4. **"How can we revise the process for establishing the special yard debris rate referenced in Paragraph 2B of the resolution to clearly establish an incentive for the public?".**

Your revision to eliminate "based on disposal costs" accomplished this. This means that haulers who do not bring clean yard debris to the transfer stations (including those who choose to home compost or use yard debris depots) pay a higher tip fee on mixed waste to subsidize the cost of assuring that source-separated yard debris is recycled at transfer stations.

5. **"What types of incentives can be developed to encourage businesses or projects which focus on reuse of building materials?".**

Please see Incentive #6.

6. **"What steps can we take to ensure that drop-off is available outside the weigh scale at <u>all</u> facilities?"**

Available space at Metro South and Metro Northwest will be used for weigh scales and household hazardous waste collection. Creating new space would require major investment. Given the cost and the alternatives that the public has for recycling, the proposed recommendation of providing free drop-off through a tip fee discount appears to be the best alternative.

BM:TP:gbc
J:\TERRY\INCENT\WYERS.DOC

METRO

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Memorandum

SOLID WASTE COMMITTEE REPORT
Resolution 90-1337
Attachment No. 1

TO: Debbie Gorham, Waste Reduction Manager

FROM: Judy Wyers, Councilor JW

DATE: November 15, 1990

SUBJ: Waste reduction and recycling incentives

I wanted to give you advance notice of some issues and concerns I will be raising when the Solid Waste Committee considers this agenda item next Tuesday.

First, I would like for staff to review Metro's past and present practice with regard to incentives, and for staff to explain how and why the proposed incentives differ.

Second, in my view it is important for Metro to encourage recycling by commercial businesses. It seems to me that we need a way to encourage concerted collection efforts. What would be the advantages and disadvantages of providing a straight rebate for commercial source-separated loads?

Third, what are the pros, cons, and cost impacts of significantly increasing the per ton rebate for mixed paper loads as a means of encouraging this type of recycling?

Fourth, how can we revise the process for establishing the special yard debris rate referenced in Paragraph 2B of the resolution to clearly establish an incentive for the public?

Fifth, what types of incentives can be developed to encourage businesses or projects which focus on reuse of building materials?

Sixth, the proposed resolution states that transfer and processing stations should be designed to the maximum extent feasible to provide convenient drop-off of recyclables for non-commercial haulers at no charge. What steps can we take to ensure that drop-off is available outside the weigh scale at <u>all</u> facilities?

I'm looking forward to your presentation on this important subject, and I'll be interested to hear from the department about facts and policy considerations which impact resolution of the issues highlighted in this memorandum.

JW:KF:pa
K1:1115JUDY

cc: Council Solid Waste Committee
Bob Martin

STAFF REPORT

CONSIDERATION OF RESOLUTION NO. 90-1337 FOR THE PURPOSE OF ESTABLISHING INCENTIVES THAT ENCOURAGE GREATER WASTE REDUCTION AND RECYCLING

December 18, 1990 Presented by: Debbie Gorham
Terry Petersen

Metro staff has completed an evaluation of economic incentives that could be used to reduce waste. The types of incentives included in the analysis are those that are related to collection rates or disposal fees. Incentives that local governments, as well as Metro, are responsible for are included.

Resolution No. 90-1337 includes economic incentives that staff recommends for adoption. A summary that includes all incentives examined and action required for implementation is shown on the reverse side.

BACKGROUND

Environmental Quality Commission Order SW-WR-89-01 required that by January 1, 1990, Metro "conduct a study of the effectiveness of present rate incentives at reducing waste, and possible modifications to the rate structure that would further encourage the recovery of paper products, yard debris, metals, lumber, other salvageable building materials, asphalt, and other materials". A report was submitted to the DEQ that described the effectiveness of existing incentives and Metro's options for possible future incentives.

The DEQ and the Metro Council Solid Waste Committee requested that staff complete a more in-depth analysis of alternative incentives by October 1, 1990. To accomplish this, a series of meetings have been held to get ideas and reviews from haulers, processors, local governments, and recycling advocates. A draft report and update was presented to the Solid Waste Technical Committee on August 31. An oral status report was delivered to the Council Solid Waste Committee on September 4. The draft was reviewed by the Waste Reduction Subcommittee on September 5 and the Solid Waste Policy Committee on September 14. In October, meetings were held with members of the Association of Oregon Recyclers, Recycling Advocates, and the Oregon Environmental Council.

EXECUTIVE OFFICER'S RECOMMENDATION

The Executive Officer recommends adoption of Resolution No. 90-1337, approving recommendations for economic incentives.

TP:jc
December 11, 1990
INCENT\STAF1218.RPT

SUMMARY: IMPLEMENTATION

	TARGET DATE	ACTION REQUIRED
GENERATOR INCENTIVES		
1. Self-Haul Recycling at Transfer Stations		
a. Provide drop-off of recyclables at no charge. Weight-based fee system provides incentive to separate recyclables. Recycling credit of $3.00 is given to all customers who bring recyclables to existing facilities .	FY90/91	DO NOT IMPLEMENT
b. Same as a. but at Metro South and Metro East haulers have option of crossing scales twice in order to drop off heavy recyclables prior to weighing of waste.		AMEND METRO CODE CHAPTER 5.02 (SOLID WASTE DISPOSAL FEES)
c. Do not provide free drop off. Apply full tip fee on all material delivered to transfer stations to encourage use of curbside and private depots.		DO NOT IMPLEMENT
2. Volume-Based Collection Rates With Mini-Can Service		
a. Charge for each additional can is constant (levelized rates).	FY90/91	MODIFY LOCAL GOVERNMENT WORK PLAN
b. Per-can charge increases with each additional can (variable rates). Exemptions are provided for large families.		DO NOT IMPLEMENT
HAULER INCENTIVES		
3. Diversion of Source-Separated Yard Debris from Metro Facilities		
a. Apply full tip fee at Metro facilities to provide maximum incentive for delivery to private yard debris processors. Transfer stations recover clean yard debris for delivery to processors.	FY91/92	DO NOT IMPLEMENT
b. A "three-tier" rate structure in which the yard debris fee at transfer stations is less than the fee for waste but more than the yard debris fee at private processors.		AMEND METRO CODE CHAPTER 5.02 (SOLID WASTE DISPOSAL FEES)
4. Recycling "Rebates" for Haulers		
Metro increases the tip fee to create a fund to pay haulers on a per ton basis for material collected and marketed.		DO NOT IMPLEMENT
5. Routing of food Waste to the MSW Compost Facility		
Metro and Riedel establish a tip fee incentive that encourages haulers to create special collection routes for high-organic loads.	FY91/92	METRO AND RIEDEL DISCUSSIONS
6. Recovery of Construction/Demolition Debris		
a. Local governments increase disposal fees at out-of-region limited-purpose landfills to levelize fees with recovery facilities.	FY94/95	DEFER TO PROCUREMENT OF SPECIAL WASTE SYSTEM
b. Utilize Metro's flow control authority and franchises to divert material from landfills to recovery facilities.	FY94/95	DEFER TO PROCUREMENT OF SPECIAL WASTE SYSTEM
PROCESSOR INCENTIVES		
7. Support of Commercial Mixed-Waste Paper Collection Programs		
a. Increase the per ton payment of the existing $2 per ton incentive.		DO NOT IMPLEMENT
b. Eliminate existing $2 per ton incentive because it is not effective.	FY91/92	AMEND METRO CODE CHAPTER 5.02 (SOLID WASTE DISPOSAL FEES)
c. Financial support is provided to private processors so that collection programs are not interrupted during market downturns. Payments are based on tonnage marketed. Payments decrease as the market improves.		DO NOT IMPLEMENT
8. User Fee Waiver		
a. Maintain current fee waiver but establish a minimum recovery level to determine eligibility for waivers.	FY91/92	AMEND METRO CODE CHAPTER 5.02 (SOLID WASTE DISPOSAL FEES)
b. Make the current user fee waiver at high-grade facilities dependant on the facility's recovery level.		DO NOT IMPLEMENT
9. Recycling Credits for Non-Profit Charitable Organizations	FY90/91	IMPLEMENTED (ORDINANCE No. 90-362)
10. Loan Program		
Loan program to fund recycling businesses unable to get 100% conventional financing. Ten-year program administered jointly by Portland Development Commission and Metro.		LOAN PROGRAM PROPOSAL

SOLID WASTE COMMITTEE REPORT

RESOLUTION NO. 90-1337, FOR THE PURPOSE OF ESTABLISHING INCENTIVES THAT ENCOURAGE GREATER WASTE REDUCTION AND RECYCLING

Date: November 21, 1990 Presented by: Councilor Judy Wyers

Committee Recommendation: At the November 20, 1990 Solid Waste Committee meeting, Councilors Collier, DeJardin, Saucy and Wyers voted unanimously (Wyers; 4/0 vote) to recommend Council adoption of Resolution No. 90-1337 as amended. Councilor Buchanan was excused.

Committee Discussion/Issues: Bob Martin, Director of Solid Waste; Debbie Gorham, Waste Reduction Manager; and Terry Peterson, Associate Solid Waste Planner; gave staff's report.

Ms. Gorham noted the resolution was in response to EQC's Order SW-WR-89-01 directing Metro conduct a study of the effectiveness of present rate incentives at reducing waste...

Mr. Petersen listed and explained the 10 incentives. With regard to Incentive No. 1 and said the current procedure for "Self-haul" was a discounted tip fee and said staff proposed a $3/credit. He said there would be no significant impact on regional recycling levels but tip fees on remaining waste could be decreased because Metro would no longer pay for recyclables.

Regarding Incentive No. 2, Mr. Petersen pointed out that Metro has no authority to set collection rates since this is a local function. Metro can establish region-wide standards for waste reduction and staff proposes the curb can charge for higher volume service be at least equal to per can charge for low volume service and could significantly increase recycling from the residential waste stream and would not impact state or Metro tip fees. Mr. Petersen said the issue could be viewed as unfair to large households and could result in illegal dumping if the per can charge is too high.

Regarding Incentive No. 3, Mr. Petersen said the current charge for yard debris was $25/ton at St. Johns and staff proposed the three tier rate and assisting processors. He said the rate would eventually be $45 per ton.

In discussing Incentive No. 4, Mr. Petersen said there was no current procedure for hauler rebates and staff proposed local government responsibility. Staff's concept was to pay haulers for the material they marketed, similar to Lane County practice. He said haulers were paid as much as $175 per ton there. He said it was an alternative method of funding collection programs. He said an alternative to this rebate would be to establish standards and ensure the cost of implementing those standards was covered through collection rates.

Mr. Petersen said Incentive No. 5 related to directing routes to the Riedel Composter facility to ensure it got the proper solid waste.

In regard to Incentive No. 6, Mr. Petersen said there was no current procedure for construction/demolition debris and proposed a procedure be dealt with as part of the procurement process for select waste.

Regarding the incentive for mixed waste paper collection (No. 7), Mr. Petersen said the current procedure was to offer a $2 payment per ton for mixed waste paper recovered. He said that payment was made regardless of market price, but said the payment has had no impact on the recovery of mixed waste paper. He said staff proposed, instead of market subsidies, that market development be depended upon to increase the recycling level for that material and eliminate the $2 payment.

Regarding user fee waivers (Incentive No. 8), Mr. Petersen said the Metro Code stated user fee shall be waived at facilities which accomplished recycling as a primary operation. He said there were no standards for "primary" and therefore no incentives for facilities to improve their standards and become eligible for the user fee waivers. Staff proposed minimum recovery levels facilities had to meet to be eligible for the user fee waiver.

In regard to Incentive No. 9, Mr. Petersen said the non-profit recycling credits listed were already implemented.

Regarding Incentive No. 10, Ms. Gorham explained the Metro Recycling Business Development Revolving Loan Fund would assist market development through a revolving loan program. Councilor Wyers referred to her November 15, 1990 memorandum (see Attachment No. 1 to this report) "Waste Reduction and Recycling Incentives." Ms. Gorham explained Metro and other entities would match funds. Councilor Wyers asked how the revolving loan fund differed from tax credits.

The Committee opened a public hearing and heard testimony on the issues.

Kip Childs, Oregon Environmental Council (OEC), said the OEC strongly supported, regarding the self-haul incentive, making recycling depots and drop boxes centers available before the transfer stations. With regard to the volume-based collection rates, the OEC supported a sliding scale that would result in an increased fee for additional cans to provide an incentive to encourage customers to reduce waste. The OEC supports the

source-separated yard debris and think it appropriate the fee be in between the normal tipping fee and the fee charged for dropping off at the processor. He said the OEC also supported rebates for collection and the marketing of recyclables. He said they knew it was controversial, but the OEC did support it. He said they believed it should be supported by increased tipping fees. Mr. Childs said one incentive that had been dropped was the possibility of increasing the collection and recycling of construction/demolition materials. The OEC believed that was an important issue which required further study because approximately 17 percent of transfer station waste was construction/demolition material. He said that incentive deserved further study. The OEC also supported continued payments to processors for accepting mixed waste. He noted staff said $2 did not result in significant recycling. He said a higher incentive rate should be looked at.

Jeanne Roy, Recycling Advocates, recommended a rate be set for yard debris lower than mixed waste but higher than the processor's fee. Recycling Advocates recommended the fee be no higher than $45 per ton. Recycling Advocates recommend the payment to processors of 50-79 percent high graded paper be increased to $18 per ton and given only for the tonnage of paper recycled. She said if the market price rose, the amount of the rise could be subtracted from the $18. She said Metro could estimate the extra amount of paper which would be recycled and budget a certain amount so that the incentive would not be open-ended. Recycling Advocates recommended an incentive be established for commercial haulers of cardboard. She said they could be paid for the extra they recycled over a based amount. She said if they were paid $25 per ton, and the amount recycled increase from 41 to 50 percent, Metro would pay $523,175. Metro would then be paying less per ton than what they paid the non-profit recycling agencies and 21,000 additional tons of cardboard would be recycled. Recycling Advocates recommended Metro establish an incentive for accepting and marketing of reusable building materials using the same formula for non-profit recycling agencies. Ms. Roy said building materials were included in DEQ's order to Metro, but not addressed by staff. Ms. Roy distributed recommended amendments to the resolution based on Recycling Advocate's recommendations.

Ms. Roy additionally commented that Recycling Advocates would rather see free drop-off of recyclables outside Metro South and Metro Northwest Stations than implementation of the $3 credit. They encouraged the increase flow of food waste to the composting facility. They did not want a business loan program administered by Metro because Metro had difficulty administering the 1% for

Recycling grants. Recycling Advocates also recommended the Economic Incentives report include a tip fee impact for each incentive and explain the assumptions.

Estle Harlan, Tri-County Council, noted she had served on the Waste Reduction and Yard Debris Committees from their inception. Tri-County advocates, regarding Incentive No. 1, separate recyclable drop off points and said if not possible, then the $3 discount was the most simple and effective method. Tri-County Council recommended with regard to Incentive No. 2, to continue the mini-can and the level can rate. Tri-County Council agreed with the recommendation for Incentive No. 3 on yard debris and noted processors planned to install scales also. Ms. Harlan said Incentive No. 4 presented the most concern. She said the issue should be simple and it seemed that the haulers themselves should push for rebates. She said it presented difficulties because haulers had no way of collecting their tip fees in some areas. She said if the incentive were attached to the commercial rates, the small haulers would be adversely affected because he/she would pay high tip fees but have very little chance for rebate. Tri-County Council asked that Metro not collect from the haulers and then try to give money back. Tri-County Council said if Incentive No. 5 could be implemented, it was an acceptable incentive. Ms. Harlan said the haulers were trying very hard and would introduce new programs on multi-family and office paper collection.

Dave Phillips, Clackamas County, recommend drop off facilities before the gate house also. He supported the mini-can collection rate incentive and said Clackamas County had had real success with a similar measure. He said Incentive No. 4, Recycling Rebates, had real problems and said it did not make sense to raise disposal fees and then immediately back to the haulers. He said there were no markets for materials recovery. He said recovery of construction/demolition was not being ignored but would come before the Committee in the Special Waste Chapter. He concurred with directing special loads to the composter facility. He concurred over all on staff's incentives recommendations.

Merle Irvine, Wastech, Inc., said the incentive to recycle was Metro's disposal fee especially as it increased. He concurred with Ms. Roy that the $2 incentive be made larger. He supported composter routing. He recommended staff research the controversial issues further and incorporate the incentives into next year's work program. Mr. Irvine supported Incentive No. 8 to increase recycling center's accountability.

The Committee amended BE IT RESOLVED, Section 1 to read: "That transfer and material processing stations be designed [to the maximum extent feasible] to provide convenient drop-off of recyclables outside the weigh scales for non-commercial haulers at no charge."

The Committee amended BE IT RESOLVED, Section 2(B) to read: "(5.02.070) by February 1, 1991, a special yard debris rate at transfer stations [based on disposal costs,] that is expected to be less than the fee for waste but more than the fee charged at private yard debris processors, and." Councilor Wyers said incentives do not have to relate to disposal costs.

The Committee amended BE IT RESOLVED, Section 6 with the deletion of the word "periodic" to be replaced by "yearly."

Councilor Wyers said the issues were complicated. She said she would take the issues raised tonight and fashion some sort of a work program and come back and address some of the questions raised in her memorandum as well as those raised in testimony at this meeting. The Committee concurred with Councilor Wyers' plan and amendments.

The Committee voted unanimously to recommend Resolution No. 90-1337 as amended to the full Council for adoption.

TD:DEC:pa
90-1337.RPT

STAFF REPORT

CONSIDERATION OF RESOLUTION NO. 90-1337 FOR THE PURPOSE OF ESTABLISHING INCENTIVES THAT ENCOURAGE GREATER WASTE REDUCTION AND RECYCLING

November 20, 1990 Presented by: Debbie Gorham
Terry Petersen

Metro staff has completed an evaluation of economic incentives that could be used to reduce waste. The types of incentives included in the analysis are those that are related to collection rates or disposal fees. Incentives that local governments, as well as Metro, are responsible for are included.

Resolution No. 90-1337 includes economic incentives that staff recommends for adoption. A summary that includes all incentives examined and action required for implementation is shown on the reverse side.

BACKGROUND

Environmental Quality Commission Order SW-WR-89-01 required that by January 1, 1990, Metro "conduct a study of the effectiveness of present rate incentives at reducing waste, and possible modifications to the rate structure that would further encourage the recovery of paper products, yard debris, metals, lumber, other salvageable building materials, asphalt, and other materials". A report was submitted to the DEQ that described the effectiveness of existing incentives and Metro's options for possible future incentives.

The DEQ and the Metro Council Solid Waste Committee requested that staff complete a more in-depth analysis of alternative incentives by October 1, 1990. To accomplish this, a series of meetings have been held to get ideas and reviews from haulers, processors, local governments, and recycling advocates. A draft report and update was presented to the Solid Waste Technical Committee on August 31. An oral status report was delivered to the Council Solid Waste Committee on September 4. The draft was reviewed by the Waste Reduction Subcommittee on September 5 and the Solid Waste Policy Committee on September 14. In October, meetings were held with members of the Association of Oregon Recyclers, Recycling Advocates, and the Oregon Environmental Council.

EXECUTIVE OFFICER'S RECOMMENDATION

The Executive Officer recommends adoption of Resolution No. 90-1337, approving recommendations for economic incentives.

TP:jc
October 2, 1990
INCENT\STAF1002.RPT

ANALYSIS OF ECONOMIC INCENTIVES TO INCREASE RECYCLING

November 20, 1990

REPORT INDEX

SUMMARY: RECOMMENDATIONS

	RECOMMENDATIONS
GENERATOR INCENTIVES	
1. Self-Haul Recycling at Transfer Stations	
a. Provide convenient drop-off of recyclables at no charge. Weight-based fee system provides incentive to separate recyclables. Recycling credit of $3.00 is given to all customers who bring recyclables to existing facilities.	DO NOT IMPLEMENT
b. Same as a. but at Metro South and Metro East haulers have option of crossing scales twice in order to drop off heavy recyclables prior to weighing of waste.	IMPLEMENT
c. Do not provide free drop off. Apply full tip fee on all material delivered to transfer stations to encourage use of curbside and private depots.	DO NOT IMPLEMENT
2. Volume-Based Collection Rates With Mini-Can Service.	
a. Charge for each additional can is constant (levelized rates).	IMPLEMENT
b. Per-can charge increases with each additional can. Exemptions are provided for large families.	DO NOT IMPLEMENT
HAULER INCENTIVES	
3. Diversion of Source-Separated Yard Debris from Metro Facilities	
a. Apply full tip fee at Metro facilities to provide maximum incentive for delivery to private yard debris processors. Transfer stations recover clean yard debris for delivery to processors.	DO NOT IMPLEMENT
b. A "three-tier" rate structure in which the yard debris fee at transfer stations is less than the fee for waste but more than the yard debris fee at private processors.	IMPLEMENT
4. Recycling "Rebates" for Haulers	
Metro increases the tip fee to create a fund to pay haulers on a per ton basis for material collected and marketed.	DO NOT IMPLEMENT
5. Routing of Food Waste to the MSW Compost Facility	
Metro and Riedel establish a tip fee incentive that encourages haulers to create special collection routes for high-organic loads.	IMPLEMENT
6. Recovery of Construction/Demolition Debris	
a. Local governments increase disposal fees at out-of-region limited-purpose landfills to levelize fees facilities.	DEFER TO PROCUREMENT OF SPECIAL WASTE SYSTEM
b. Utilize Metro's flow control authority and franchises to divert material from landfills to recovery facilities.	DEFER TO PROCUREMENT OF SPECIAL WASTE SYSTEM
PROCESSOR INCENTIVES	
7. Support of Commercial Mixed-Waste Paper Collection Programs	
a. Increase the per ton payment of the existing $2 per ton incentive.	DO NOT IMPLEMENT
b. Eliminate existing $2 per ton incentive because it is not effective.	IMPLEMENT
c. Financial support is provided to private processors so that collection programs are not interrupted during market downturns. Payments are based on tonnage marketed. Payments decrease as the market improves.	DO NOT IMPLEMENT
8. User Fee Waiver	
a. Maintain current fee waiver but establish a minimum recovery level to determine eligibility for waivers.	IMPLEMENT
b. Make the current user fee waiver at high-grade facilities dependant on the facility's recovery level.	DO NOT IMPLEMENT
9. Recycling Credits for Non-Profit Charitable Organizations	IMPLEMENT
10. Loan Program	
Loan program to fund recycling businesses unable to get 100% conventional financing. Program administered jointly by Portland Development Commission and Metro.	RESEARCH

SUMMARY: IMPLEMENTATION

	TARGET DATE	ACTION REQUIRED
GENERATOR INCENTIVES		
1. Self-Haul Recycling at Transfer Stations		
a. Provide drop-off of recyclables at no charge. Weight-based fee system provides incentive to separate recyclables. Recycling credit of $3.00 is given to all customers who bring recyclables to existing facilities .	FY90/91	DO NOT IMPLEMENT
b. Same as a. but at Metro South and Metro East haulers have option of crossing scales twice in order to drop off heavy recyclables prior to weighing of waste.		AMEND METRO CODE CHAPTER 5.02 (SOLID WASTE DISPOSAL FEES)
c. Do not provide free drop off. Apply full tip fee on all material delivered to transfer stations to encourage use of curbside and private depots.		DO NOT IMPLEMENT
2. Volume-Based Collection Rates With Mini-Can Service		
a. Charge for each additional can is constant (levelized rates).	FY90/91	MODIFY LOCAL GOVERNMENT WORK PLAN
b. Per-can charge increases with each additional can (variable rates). Exemptions are provided for large families.		DO NOT IMPLEMENT
HAULER INCENTIVES		
3. Diversion of Source-Separated Yard Debris from Metro Facilities		
a. Apply full tip fee at Metro facilities to provide maximum incentive for delivery to private yard debris processors. Transfer stations recover clean yard debris for delivery to processors.	FY91/92	DO NOT IMPLEMENT
b. A "three-tier" rate structure in which the yard debris fee at transfer stations is less than the fee for waste but more than the yard debris fee at private processors.		AMEND METRO CODE CHAPTER 5.02 (SOLID WASTE DISPOSAL FEES)
4. Recycling "Rebates" for Haulers		
Metro increases the tip fee to create a fund to pay haulers on a per ton basis for material collected and marketed.		DO NOT IMPLEMENT
5. Routing of food Waste to the MSW Compost Facility		
Metro and Riedel establish a tip fee incentive that encourages haulers to create special collection routes for high-organic loads.	FY91/92	METRO AND RIEDEL DISCUSSIONS
6. Recovery of Construction/Demolition Debris		
a. Local governments increase disposal fees at out-of-region limited-purpose landfills to levelize fees with recovery facilities.	FY94/95	DEFER TO PROCUREMENT OF SPECIAL WASTE SYSTEM
b. Utilize Metro's flow control authority and franchises to divert material from landfills to recovery facilities.	FY94/95	DEFER TO PROCUREMENT OF SPECIAL WASTE SYSTEM
PROCESSOR INCENTIVES		
7. Support of Commercial Mixed-Waste Paper Collection Programs		
a. Increase the per ton payment of the existing $2 per ton incentive.		DO NOT IMPLEMENT
b. Eliminate existing $2 per ton incentive because it is not effective.	FY91/92	AMEND METRO CODE CHAPTER 5.02 (SOLID WASTE DISPOSAL FEES)
c. Financial support is provided to private processors so that collection programs are not interrupted during market downturns. Payments are based on tonnage marketed. Payments decrease as the market improves.		DO NOT IMPLEMENT
8. User Fee Waiver		
a. Maintain current fee waiver but establish a minimum recovery level to determine eligibility for waivers.	FY91/92	AMEND METRO CODE CHAPTER 5.02 (SOLID WASTE DISPOSAL FEES)
b. Make the current user fee waiver at high-grade facilities dependant on the facility's recovery level.		DO NOT IMPLEMENT
9. Recycling Credits for Non-Profit Charitable Organizations	FY90/91	IMPLEMENTED (ORDINANCE No. 90-362)
10. Loan Program		
Loan program to fund recycling businesses unable to get 100% conventional financing. Ten-year program administered jointly by Portland Development Commission and Metro.		LOAN PROGRAM PROPOSAL

INTRODUCTION

This study evaluates economic incentives that could be used to encourage additional recycling in the Portland metropolitan region. The objectives of the study are to determine the advantages and disadvantages of each option and provide technical data related to each incentive. This draft report has been reviewed by the Metropolitan Service District (Metro) staff and Metro's Policy and Waste Reduction Committees during August and September 1990. The resolution attached to this report will be presented to the Metro Council for consideration during October 1990.

The following sections are included in this report:

- *Background Information.* Legislation and ordinances that create statutory authority and responsibilities of Metro and local governments are outlined. Their relevance to recycling economic incentives is discussed.

- *Description of Incentives.* The advantages and disadvantages of each option are outlined.

- *Technical Data.* When possible, the new recycling that would result from each incentive is estimated.

Incentives Included In This Study

1. *Self-haul recycling at transfer stations.* Three options are considered: (a) Provide convenient drop-off of recyclables at no charge. Weight-based fee system provides incentive to separate recyclables. Recycling credit of $3.00 is given to all customers who bring recyclables to existing facilities; (b) Same as (a) but at Metro South and Metro East haulers have option of crossing scales twice in order to drop off heavy recyclables prior to weighing of waste; and (c) Do not provide free drop off. Apply full tip fee on all material delivered to transfer stations to encourage use of curbside and private depots.

2. *Volume-based collection rates with mini-can service.* Two options are considered: (a) The collection charge established by local governments is constant for each additional can (levelized rates), and (b) The per-can charge increases with each additional can (variable rates). Exemptions are provided for large families.

3. *Diversion of source-separated yard debris from Metro facilities.* Two options are considered: (a) Apply full tip fee at Metro facilities to provide maximum incentive for delivery to private yard debris processors. Transfer stations recover clean yard debris for delivery to processors, and (b) A "three-tier" rate structure in which the yard

debris fee at transfer stations is less than the fee for waste but more than the yard debris fee at private processors.

4. *Recycling "rebates" for haulers.* Metro raises tip fees in order to make payments to haulers based on the amount of recyclables they collect and market.

5. *Routing of food waste to the Municipal Solid Waste (MSW) Compost Facility.* Disposal of residual material could be reduced if haulers deliver loads with a high proportion of organic material (food waste) to the compost facility. Metro and Riedel could discount the tip fee for loads that meet desired specifications. This reduction in the amount of residue would increase compost sales for Riedel.

6. *Recovery of Construction and Demolition Debris.* Two options to divert construction/demolition debris from landfills to recovery facilities are considered: (a) Local governments increase disposal fees at out-of-region limited-purpose landfills. This would eliminate the rate differential that causes recoverable material from the Metro region to flow to these out-of-region limited-purpose landfills instead of to in-region processing centers; and (b) Utilize Metro's flow control authority to divert material from landfills to recovery facilities.

7. *Support of Mixed Waste Paper Collection Programs.* Three options are considered: (a) Increase the per ton payment of the existing $2.00/ton incentive; (b) Eliminate existing $2.00/ton incentive because it is not effective; and (c) Financial support is provided to private processors so that collection programs are not interrupted during market downturns. Payments are based on tonnage marketed. Payments decrease as the market improves.

8. *User fee waivers.* Two modifications in the current fee waiver for facilities that accomplish recycling as a primary objective: (a) Maintain the current fee waiver but establish a minimum recovery level to determine eligibility for waivers; and (b) Make the current user fee waiver at high-grade facilities dependent on the facility's recovery level.

9. *Recycling Credits for Non-Profit Charitable Organizations.* Metro would provide recycling credit for qualified organizations that prepare donated goods for re-use or recycling.

10. *Loan Program.* Loan program to fund recycling businesses unable to get 100% conventional financing. Ten-year program administered jointly by Portland Development Commission and Metro.

Evaluation Criteria

- *Recycling/Waste Reduction.* The incentive promotes the recycling of material that, in the absence of the incentive, would be landfilled. An incentive that results in a shift of recyclables among programs (e.g. from curbside and depot systems to transfer stations) would not produce the desired result.

- *Equity.* The incentive should be fair and equitable. This includes a fair apportionment of costs among different groups.

- *Acceptability.* The incentive must be acceptable to local governments, Metro, haulers, processors, and the community. At best, the incentive would provide alternative choices for the generator and hauler. There should be no adverse market impacts.

- *Implementation.* The incentive is understandable, requires minimal administration, and poses no major operational problems.

- *Rate Effects.* The incentive is in agreement with the rate setting policies of local governments and Metro.

BACKGROUND INFORMATION

In order to evaluate economic incentives it is necessary to understand fundamental authorities, responsibilities and constraints.

Statutory Authority

Planning Metro's functional planning authority, delineated in ORS 268.390, enables Metro to prepare and adopt functional plans and recommend or require that plans of cities and counties within the Metro boundary be consistent with these functional plans. The Regional Solid Waste Management Plan (RSWMP) has been adopted as a functional plan and therefore local comprehensive plans must be consistent with its provisions relating to waste management and waste reduction.

Disposal Responsibility for solid waste disposal is defined in ORS 268.317. Metro's authority encompasses rate-setting, franchising, flow control and other regulatory authorities. These powers can be used to influence waste reduction levels by establishing needed waste reduction facilities, setting rates that encourage waste reduction or by controlling the amounts and types of waste going to various facilities.

Rate-setting The authority to establish, maintain and amend rates for disposal, transfer and resource recovery sites or facilities is outlined in ORS 268.317. In addition, ORS 268.515 provides that "a district may impose and collect service or user charges in payment for its services or for the purposes of financing the planning, design, engineering, construction, operation, maintenance, repair and expansion of facilities, equipment, systems or improvements."

Disposal Rates

Disposal rates are set by Metro Council and adopted as Title V, Chapter 2 of the Metro Code following an annual rate analysis and recommendations by Solid Waste staff. Staff recommendations are based on projected operating costs that are derived from projected waste flow data. Rates are set to cover operational and fixed costs.

Components Metro's Solid Waste Department administers three basic fee components which cover specific system expenses:

- The Base Disposal Rate pays for the transportation and disposal of waste at St. Johns Landfill and Columbia Ridge Landfill in Gilliam County.

- o The User Fee, which is collected on all wastes generated in the region, pays the cost of solid waste programs that are indirectly related to disposal system and transfer station operation. This includes management, administration, engineering and planning, and implementation of Waste Reduction programs, As of July 1990, the User Fee has been modified to a two-tiered approach that is lower at non-Metro facilities and higher at Metro facilities in order to recover higher fixed costs at Metro facilities. Tonnage recovered at material recovery facilities are currently exempt from the User Fee.

- o The Regional Transfer Charge is assessed on both commercial and publicly-hauled tonnage at general-purpose disposal sites. Revenues pay the cost of operating Metro's transfer and material recovery system.

Surcharges Surcharges include mitigation fees for neighborhood rehabilitation and enhancement at landfill and transfer stations. An additional surcharge is imposed by DEQ.

Constraints Metro is obligated by ordinance to set rates that cover the cost of system operations and debt service. Metro is further constrained by how rates are set for principal recyclables. ORS 459.190 states that rates at disposal sites may not be higher for source-separated material at disposal sites than for waste.

Collection

Cities and counties have responsibility for solid waste collection in the Portland Metropolitan region. Collection service is provided by private haulers who are regulated by local governments. When assessing potential economic incentives it is important to clarify the role of cities and counties in setting collection rates.

Recycling Cities and counties are required by state statute to ensure that the opportunity to recycle is provided. Specific local government responsibilities to carry out the Opportunity to Recycle Act are identified in the Waste Reduction Chapter of the RSWMP and include ensuring that curbside collection is provided to customers requesting recycling service, promotion and education programs, and preparation of recycling reports (wasteshed reports).

Haulers Local governments have designated refuse haulers as responsible for providing recycling collection programs required under the Opportunity to Recycle Act.

In franchised areas, the recycling requirement is contained in the language of refuse hauling franchises. In the City of Portland, haulers are required by ordinance to provide recycling collection.

Collection rates

Agreements Clackamas and Washington Counties regulate haulers through franchise agreements that give haulers the exclusive right to collect refuse in distinct service areas. Franchise agreements are also employed in some cities in Multnomah County. However, the City of Portland and unincorporated areas of Multnomah County do not have franchised service areas but instead issue permits that require haulers to meet service standards. This approach results in competitive, unregulated collection rates.

Statutes ORS 459.200 (8), which outlines collection rate-setting responsibilities of cities and counties, states that rates shall allow the franchisee to recover the additional costs of providing the opportunity to recycle, at a minimum level or required by statute or at a higher level designated by the city or county. ORS 459.200 (9) gives cities and counties the option of providing alternatives to rates as a means of funding the opportunity to recycle.

Waste Reduction

Statutes ORS 459.250 requires that a place for source-separated recyclables be located either at the disposal site or another location more convenient to the population being served. Cities with a population of 4,000 or more must also provide, at a minimum, monthly collection of recyclable materials for their collection customers. An alternative method may be used if approved by DEQ.

Existing Incentives Metro presently employs several economic incentives to encourage participation in waste reduction efforts. These include payments of $2/ton for recycled mixed waste paper; a reduced rate for source-separated yard debris delivered to the St. Johns Landfill; a discounted disposal fee to self-haulers who bring recyclables to disposal facilities; and waiver of the Metro User Fee at material recovery facilities. An analysis of the effectiveness of these incentives is included in this report.

DESCRIPTION OF INCENTIVES

Incentive #1

Self-Haul Delivery of Recyclables to Transfer Stations

Existing System

Metro currently charges a flat fee for the disposal of self-hauled loads. A discount is given to self-haulers who bring in source-separated recyclables along with their garbage. The discount is given for a minimum of 1/2 cubic yard (three grocery bags) of recyclables according to the following schedule:

Minimum charge without recyclables	$15
2 1/2 cubic yards of garbage with recyclables	$10
2 cubic yards of garbage with recyclables	$ 8
1 1/2 cubic yards of garbage with recyclables	$ 6
1 cubic yard of garbage with recyclables	$ 4

Any of the materials normally included in curbside programs qualify for the discount.

There are several difficulties with providing a disposal discount such as the one currently used. First, determining whether a self-hauler has the minimum 1/2 cubic yard of recyclables necessary to qualify for a discount is highly subjective. Second, the necessity of keeping loads covered during transport, coupled with the need to expedite the flow of traffic through the scalehouse during peak hours, make an "honor system" necessary in which self-haulers are simply asked whether they have source-separated recyclables present difficulties. Repeat self-haulers quickly learn that an affirmative response results in a discount. Disposal discounts also create an artificial and transferable value for recyclables. The result is an incentive to acquire recyclables to use as money to pay disposal fees at the transfer station. These could be recyclables that the self-hauler had acquired from someone else.

Metro will soon install a new truck scale at the Metro South Transfer Station and begin weighing self-haul loads. Self-haul loads at the Metro East Transfer Station will also be weighed. This raises the question of how rate incentives for recycling should work after the switch from a flat fee system to a weight based system for self-haul.

Analysis of Recyclables Per Trip

The tonnages delivered to Metro South Station and St. Johns Landfill during 1989 and 1990 are shown below.

Metro South Transfer Station

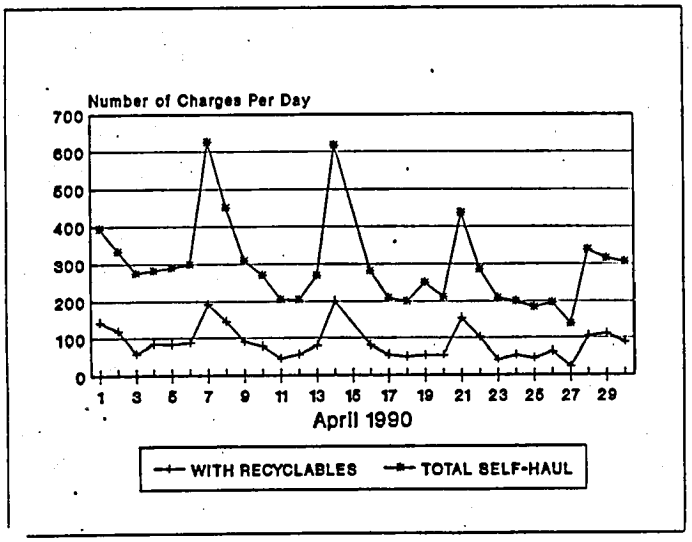
Month	Delivery (tons) 1989	1990	% Change
JAN	212	181	-15%
FEB	158	178	13%
MAR	234	226	-3%
APR	256	278	9%
MAY	292	224	-23%
JUN	267	263	-2%
JUL	298		
AUG	294		
SEP	228		
OCT	278		
NOV	209		
DEC	257		

St. Johns Landfill

Month	Delivery (tons) 1989	1990	% Change
JAN	42	64	52%
FEB	34	37	9%
MAR	31	76	145%
APR	54	65	20%
MAY	70	73	4%
JUN	54	81	50%
JUL	50		
AUG	64		
SEP	63		
OCT	49		
NOV	65		
DEC	48		

To provide free drop-off of recyclables the discount in tip fee would need to be equal to the weight of recyclables. One approach would be to base the discount on an estimate of the average weight of recyclables in discounted loads.

Past data was used to make this estimate. For April 1990 at Metro South, the cash transaction records were used to determine (1) the total number of self-haul trips, and (2) the number of self-haul trips that claimed the discount. These data are shown in the following figure. Comparisons could also be made for other months and for St. Johns Landfill, but it requires entering data that has not been computerized until now.



Waste Management provides monthly tonnages of recovered material that is marketed. This tonnage for April was combined with the trip data to get an average weight of recyclables per discounted trip as follows:

Total Self-Haul Trips	8,651 trips
Self-Haul Trips With Discount	2,585 trips
Total Tons Recovered	241 tons
Total Pounds Recovered	482,000 pounds
Adjustments:	
-10% for recyclables from pure loads	-48,000 pounds
- 5% for recyclables from self-haulers who don't claim the discount	-24,000 pounds
-20% for recovery by Waste Management	-96,000 pounds
Pounds delivered with discounted fee	314,000 pounds
AVERAGE POUNDS PER DISCOUNTED TRIP	121 pounds
AVERAGE TIP FEE VALUE OF RECYCLABLES	$3.30

NOTE: (1) Total tons recovered <u>includes</u> glass (8.65 tons), newspaper (26.39 tons), tin (141.52 tons), ferrous (48.23 tons) and corrugated (16.09 tons), but <u>excludes</u> appliances, appliance strippings, bicycles, lawn mowers, oil, batteries, and tires.

(2) The 10% adjustment is for self-haulers who bring just recyclable material to the transfer station without any waste.

(3) The 5% adjustment is for self-haulers who deliver both recyclables and waste but don't take the discount.

(4) The 20% adjustment is for recovery of glass, newspaper, tin, ferrous, and corrugated from mixed waste by Waste Management workers.

An estimate of 121 lbs/trip can be compared to curbside collection programs. Good curbside programs collect 70-80 lbs/participating household/month of mostly glass, tin, and newspaper. Excluding ferrous from the 121 lbs per discounted self-haul trip gives a weight of about 97 lbs.

This appears reasonable if it is assumed that (1) self-haulers deliver recyclables to transfer stations that would have otherwise been put out curbside, and (2) self-haulers

come to the transfer station about once every 4-5 weeks. Note that the current rate structure encourages self-haulers to come as infrequently as possible (4 weekly trips with 1 cubic yard of garbage with recyclables costs a total of $16; 1 monthly trip with the same amount of garbage and recyclables costs $10).

Given the densities of recyclables (glass (whole)=700 lbs/cubic yard, newspaper (stacked)=500 lbs/cubic yard, tin cans (uncrushed)=150 lbs/cubic yard), 97 lbs of a mixture of these materials would be about .3 cubic yards or a cubic volume with dimensions of 2 feet on a side. This is less than the .5 cubic yard required for the existing incentive.

If rates are to be established based on this type of analysis, it would be helpful if self-haul loads were periodically sampled to check the weight of recyclables. As curbside programs become more effective, the amount of recyclables delivered to transfer stations may decrease and the discount would need to be adjusted.

If the objective is to provide free drop off of recyclables for the "average" self-hauler, the discount would need to be around $3/trip.

Possible New Action

Note: A detailed discussion of alternatives specific to Metro South Station is given in Attachment A. Three of the most likely alternatives that are relevant to the regional system are described below.

Alternative 1. Convenient drop-off of recyclables is provided at transfer stations at no charge. Weight-based fee system provides incentive to separate recyclables. A recycling credit of $3.00 is given to all customers who bring recyclables to existing facilities.

Alternative 2. Same as the first alternative with the addition of giving haulers with recyclables the option of crossing the scales twice in order to drop off recyclables prior to weighing of garbages. Haulers would decide whether they want to accept the standard $3.00 discount or make two trips through the facility.

Alternative 3. Free drop off is not provided at transfer stations. The full tip fee is applied to all material delivered to transfer stations to provide the maximum possible encouragement for use of curbside and private collection depots.

Alternatives 1 and 2 make recycling convenient for those who choose not use curbside collection or do not have easy access to established recycling depots. However, they have several disadvantages. As with the current system, recyclables could be diverted from curbside and other collection programs without causing any new recycling. Haulers could simply take recyclables that would have otherwise been recycled through one of these other programs to the transfer station in order to get the discount.

Alternative 3 encourages use of curbside collection and private depots. A clear signal is given to haulers that the best way to avoid high tip fees is reduce the amount of waste they deliver to transfer stations. However, the tip fees may not be high enough to create an adequate incentive. With a disposal fee of $55/ton, there would be a $2.75 savings for every 100 pounds of reyclables.

Alternative 3 also depends on convenient alternatives to transfer stations being available for self-haul residents. While this is the case for most, there is a small percentage of rural residents who do not have convenient alternatives to transfer stations.

Recommendation

Implement Alternative 2. Metro policy shall be that transfer and material processing stations are designed to the maximum extent feasible to provide convenient drop-off of recyclables for non-commercial haulers at no charge. Requires amendment of Metro Code 5.02 (Solid Waste Disposal Fees). At existing facilities customers have the option of accepting a standard $3.00 discount in tip fee or crossing the scales twice to deposit recyclables prior to weighing of garbage.

Regional Recycling Level Impact

Alternative 2 provides an incentive similar to what exists in the current rate structure. It is expected that the tonnage currently being recovered at disposal facilities will be maintained if the recommendation is implemented. It is not likely that a significant amount of new recycling will take place because of this incentive.

Tip Fee Impact

On the average, customers will not pay the tip fee for recyclables they deliver to transfer stations. The full fee would still be assessed against waste in their load. Therefore, there should be impact on the tip fee if alternative 2 is implemented.

Incentive #2

Volume-Based Collection Rates With Mini-Can Service

Local governments responsible for establishing collection rates can use volume-based rates with a mini-can service to create one of the most direct economic incentives for encouraging waste reduction.

Existing System

Most residents of the Metro region are offered collection service on a volume basis. However, relatively few are offered a service level at less than one full can. As a result, the collection rates do not serve as an economic incentive to those who are already at a one-can level.

Existing rates in the Metro region are at most levelized, such that the charge for each additional can is constant. A stronger incentive for waste reduction could be created by increasing the per can charge for each additional can.

Metro recently conducted a household survey to determine the current level of household waste generation. The survey will include approximately 5,000 households. Results shown below are based on the 1,943 households that have been sampled to date.

Cans Per Week	Number of Households	Percent of Households
0.0	22	1.13%
0.5	325	16.73%
1.0	1,206	62.07%
2.0	317	16.31%
3.0	52	2.68%
4.0	10	0.51%
5.0	4	0.21%
6.0	3	0.15%
7.0	4	0.21%

Approximately 18% of the households surveyed produced less than one can of waste each week. Of these households, 7% produced no waste for disposal.

For the purpose of predicting the potential new diversion of mini-can rates were implemented region-wide, it is assumed that the 18% of the households that generate less than one can of waste are either paying for one-can service or are not subscribing to commercial collection services.

If the response to mini-cans is similar to what has occurred in Seattle, 30% of households would subscribe. Assuming that 18% would be the households currently producing less than one can, the remaining 12% would most likely be households currently producing one can or more. Total potential diversion from just the mini-can rate is shown below.

The potential new diversion is approximately 17,000 tons each year. This is 1.4% of the 1,171,500 tons of all waste projected to be disposed in 1990 and 4.7% of the 363,000 tons of residential waste.

Current Generation (cans/hh/wk)	Estimated Percent of All Households	Estimated Number of Households	Expected Household Participation (%)	Expected Participating Households	Potential Diversion (cans/hh/wk)	New Diversion (cans/hh/wk)	New Diversion (tons/year)
0	1.13%	4,238	100%	4,238	0	0	0
0.5	16.73%	62,738	100%	62,738	0	0	0
1	62.07%	232,763	20%	45,525	0.4	18,495	16,830
2	16.31%	61,163	0%	0	1.4	0	0
3	2.68%	10,050	0%	0	2.4	0	0
4	0.51%	1,913	0%	0	3.4	0	0
5	0.21%	788	0%	0	4.4	0	0
6	0.15%	563	0%	0	5.4	0	0
7	0.21%	788	0%	0	6.4	0	0
Total	100%	375,000		112,500		18,495	16,830

NOTES:

1. Expected participation rate for 1-can households of 20% assumes 30% of all households will participate.
2. Current cans/hh/wk is based on preliminary results of 1990 Metro Survey.
3. Potential diversion is based on a mini-can volume of 19 gallons.
4. Potential new diversion assumes 32 gallon cans weight 35 pounds and 19 gallon cans weigh 23 pounds (10% higher density).
5. Households are single-family dwellings in the tri-county area..

Possible New Action

Though Metro has no direct responsibility in setting collection rates, recommendations can be made as part of the Local Government Work Plan. The current Plan states that:

"Each local government shall develop a rate structure that provides an incentive to reduce waste. The rate structure shall specify higher per unit disposal charges for higher volume setouts. This includes: (1) a mini-can option for which the disposal charge per unit volume for a mini-can is less than the disposal charge per unit volume for a standard 32 gallon can, or (2) a weight based disposal rate that makes use of a sliding rate scale such that the disposal charge per unit of weight is less for garbage setouts of lesser weight than for garbage setouts of greater weight. The disposal rate for two 32 gallon cans or a single 60 gallon can shall be at a higher charge per unit volume than for one 32 gallon can. The disposal rate for a third can or for a single 90 gallon can shall be at a higher charge per unit volume than for two cans or a single 60 gallon can".

Alternative 1. Modify the Local Government Work Plan to recommend that the per unit disposal charge for high-volume service is equal to or greater than the per-unit charge for low-volume service.

Alternative 2. Maintain the higher per unit disposal rates for higher volumes (or weights) recommended in the Local Government Work Plan with the addition of exemptions for large families.

There are risks associated with implementing Alternative 2 throughout the region at the present time. Higher rates for extra service could create an incentive for reducing waste by both illegal and legal means. Presumably, the availability of convenient recycling programs will help minimize illegal dumping.

Convenient collection of recyclables is not presently available throughout the region. The risks of illegal dumping could be minimized if local governments wait to implement Alternative 2 until after weekly curbside collection is offered with containers provided.

Recommendation

Implement Alternative 1. Local governments have the option of establishing a constant per unit disposal charge. After weekly curbside collection with containers is provided, re-evaluate the proportion of residents with different levels of service. If convenient collection plus levelized rates have not reduced waste, then reconsider Alternative 2.

Regional Recycling Level Impact

If the response is similar to what has occurred in Seattle, the region-wide availablity of mini-cans could increase the regional recycling level by about 1%. Response to variable per-unit volume rates is difficult to predict. While some areas have reported significant reductions in waste, West Linn has found that the percentage of households subscribing to different levels of service was not affected by a change to a levelized rate structure.

Tip Fee Impact

No impact on Metro's fees.

Incentive #3

Diversion of Source-Separated Yard Debris from Metro Facilities

A significant portion of waste delivered to Metro South Station and St. Johns Landfill is yard debris. In order to reach regional recycling goals, diversion of yard debris is necessary. The Regional Yard Debris Plan (June 1990) states that Metro shall "Establish an effective diversion program which results in yard debris getting to regional yard debris processors instead of dumped as mixed solid waste at disposal facilities."

An effective diversion program would have two objectives:

(1) Diversion of as much yard debris as possible directly to the private processors. If Metro is not going to build and operate a full-scale yard debris processing center, then support of private facilities is necessary for long-term enhancement of the region's yard debris recycling program.

(2) Recovery of yard debris that is delivered to transfer stations by providing separate dumping areas with capacity for sorting slightly contaminated loads to the extent possible giving operational constraints.

The rate structure and operational plans at transfer stations should be consistent with accomplishing these two objectives.

Existing System

Current rates for disposal of mixed waste at St. Johns Landfill are $48 per ton and $15 per trip for commercial and self-haul loads respectively. Rates for delivery of source-separated yard debris to St. Johns Landfill are $25 per ton and $10 per trip for commercial and self-haul loads.

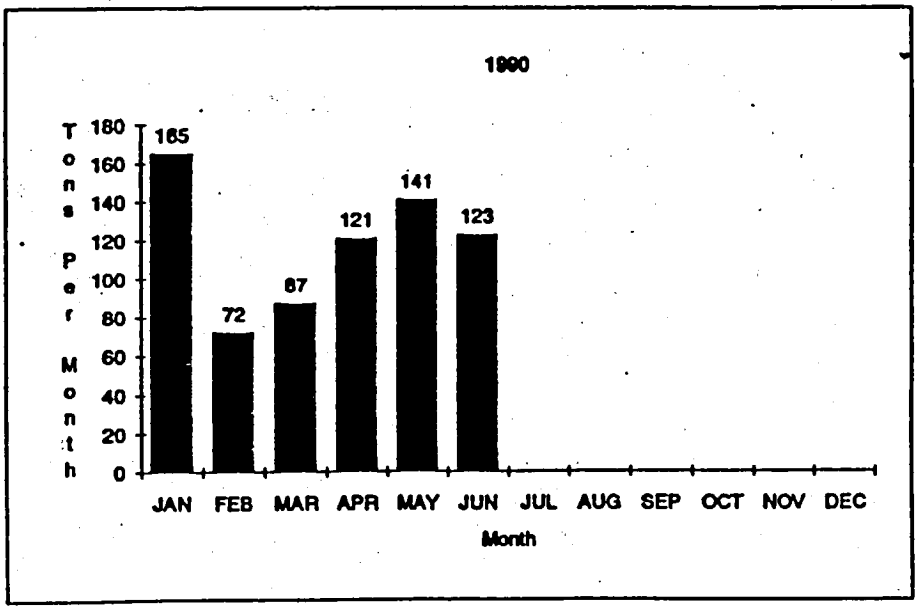
A comparison of yard debris rates at processors and St. Johns Landfill is shown below. Grimm's and McFarlane's are currently charging on a cubic yard basis. The per ton rates are estimated equivalents using 9:1 for loose cubic yards and 3:1 for compacted cubic yards.

	St. Johns Landfill	Grimm's	McFarlane's	ECRC	American Container
Self-Haul	$10/trip ($36/ton)	$4/lcy ($12/ton)	$4/lcy	$55/ton	$4/cy branches $3/cy leaves, grass
Commercial	$25/ton	$3.50/lcy ($31.50/ton) $6.50/ccy ($19.50/ton)	$4/lcy ($36/ton) $4/ccy ($12/ton)	$55/ton	$4/cy branches $3/cy leaves, grass

Note: (1) lcy=loose cubic yards; ccy=compacted cubic yards.
(2) East County Recycling (ECRC) accepts only loads greater than 600 pounds.
(3) A special rate has recently been established for landscapers and contractors of $3.50/lcy. Grimm's has also provided a special rate of $6.50/ccy for material in packer trucks.

More than 90% of the yard debris delivered to Metro South Station and St. Johns Landfill is loose rather than compacted. For most yard debris, therefore, the rate at St. Johns Landfill is about $10/ton lower than the rate at the two major yard debris processors, Grimm's and McFarlane's. At Metro South there is no discounted yard debris rate and the tip fee is about $20/ton higher than the rate at processors.

The source-separated yard debris tonnage received at St. Johns Landfill during 1990 is shown below.



The geographic distribution of facilities that collect or process yard debris is shown on the map on the following page. Unless new private facilities are developed, there will be no major yard debris processors serving both self-haul and commercial haulers in the northern part of the region after St. Johns Landfill closes in 1991.

Loose cubic yards received at the two major processors, Grimm's and McFarlane's, during 1989 and 1990 are shown below.

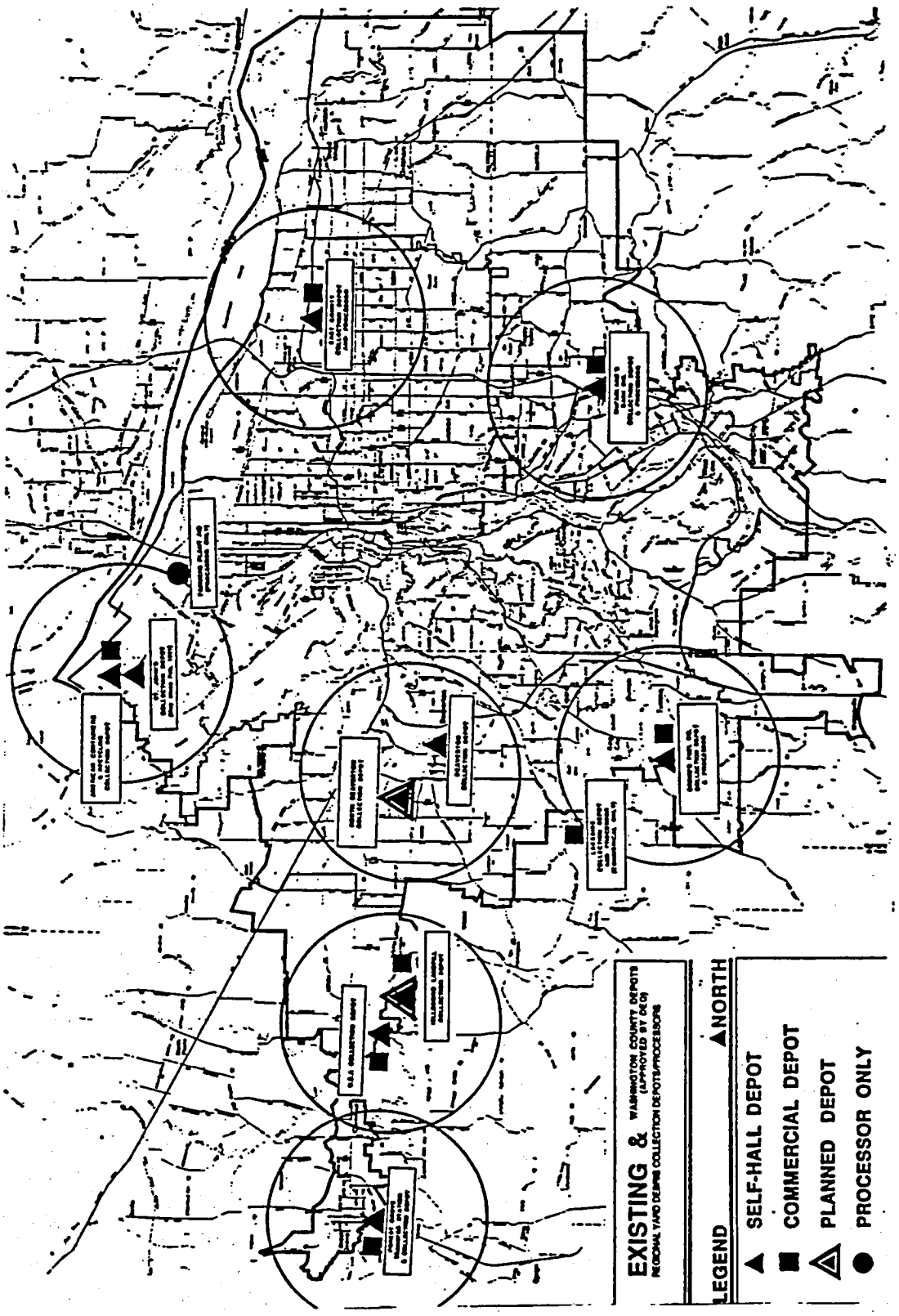
Grimm's Fuel Company

	Received (cubic yards)		
Month	1989	1990	% Change
JAN	8476	13045	54%
FEB	5196	5121	-1%
MAR	10158	12418	22%
APR	14405	12273	-15%
MAY	14819	11021	-26%
JUN	15977	12649	-21%
JUL	15004		
AUG	12224		
SEP	12583		
OCT	8688		
NOV	13686		
DEC	10108		

McFarlane's Bark, Inc.

	Received (cubic yards)		
Month	1989	1990	% Change
JAN	8579	7575	-12%
FEB	3722	4735	27%
MAR	5232	10215	95%
APR	10038	11251	12%
MAY	10200	11525	13%
JUN	9094	11965	32%
JUL	8121		
AUG	7807		
SEP	7207		
OCT	6722		
NOV	6116		
DEC	4756		

LOCATION OF YARD DEBRIS COLLECTION AND PROCESSING FACILITIES



The percentage of yard debris in the waste delivered to Metro South and St. Johns Landfill during 1989 is shown below. An estimate is made of the potentially recoverable portion of this waste stream.

	Metro South	St. Johns Landfill
Total Waste Delivered to Facility (tons)	341,000	393,200
Self-Haul (%)	16%	10%
Commercial Drop Box (%)	25%	30%
Self-Haul Waste (tons)	55,000	39,000
Commercial Drop Box Waste (tons)	85,000	117,960
Self-Haul Yard Debris (%)	10%	10%
Commercial Drop Box Yard Debris (%)	5%	5%
Self-Haul Yard Debris (tons)	5,500	3,900
Commercial Drop Box Yard Debris (tons)	4,500	4,700
Self-Haul Recoverable Yard Debris (%)	80%	80%
Commercial Recoverable Yard Debris (%)	50%	50%
Self-Haul Recoverable Yard Debris (tons)	4,000	3,000
Commercial Recoverable Yard Debris (tons)	2,000	2,000
Total Recoverable Yard Debris (tons)	6,000	5,000

Yard debris is 12.3% (42,000 tons annually) and 7.7% (30,000 tons annually) of all waste delivered to Metro South and St. Johns Landfill, respectively. Most yard debris, therefore, is in mixed waste loads such as from residential packer trucks. It is not likely that this yard debris can be effectively diverted by special tip fees for yard debris.

Bans on Yard Debris

Banning yard debris is an alternative to using tip fee incentives to encourage source-separation. Several states have implemented bans as shown below.

State	*Date Effective*	*Yard Waste Banned*	*Market Development*	*Compliance*
Connecticut	1/1/91	Leaves only	Preferential procurement for recyclables that could include yard waste	Measures under consideration; enforcement possible under solid waste law
Florida	1/1/92 (from lined landfills only)	Vegetative matter, including stumps & branches	State agencies required to buy compost products when cost-competitive	Via achievement of 30% state recycling goal by 1994; yard waste can represent 15% of the 30% goal
Illinois	7/1/90 (ban on truckloads of leaves by 9/89 repealed)	Al landscaping waste, grass, leaves, tree trimmings	State working with Dept. of Transportation on compost use	Enforcement action at landfill
Iowa	1/1/91	Not yet specified	Agencies should give preference to compost use in all land maintenance activities	Unannounced inspections at landfills
Minnesota	1/1/90 for 7 county metro area; 1/1/92 for rest of state	Yard waste, clippings, boughs, etc.	1985 Exec. Order covers state use of compost products; Waste Mngt. Act also requires market development for compost	Enforced at county level
New Jersey	8/89 (Ban extended to year-round vs. only 9/1-12/31)	Leaves only	All public lands must give preferential procurement to compost materials	Provisions available under Solid Waste Mngt. Act to impose fines; enforcement at landfills and transfer stations where permits don't allow acceptance of yard waste
North Carolina	1/1/93	All yard trash	Market evaluation due by 3/91; all state agencies & local govts. required to procure compost when cost-competitive & suitable substitute	
Ohio	1/1/93	Leaves, grass, brush & other woody bits	Assistance being evaluated for all recycled products, including compost	Fines; and need provision for yard waste composting in solid waste mngt. plan to get state approval and funding
Pennsylvania	9/26/90	Leaf waste, inc. leaves, garden residues & tree trimmings but not inc. grass clippings	Preferential consideration to use of compost in maintenance of public lands	Non specific to leaf waste ban but mechanisms are available
Wisconsin	1/1/93 (6 of 72 counties have bans in place)	Leaves, grass, small woody bits under 6"	Communities' responsibility	No state mechanism

From: Yard Waste Composting. 1989. JG Press, Inc.

Problems With the Existing System

Reasons that haulers take yard debris to disposal facilities instead of processors include:

(1) Processors have not had a weight based rate structure. Haulers have reported that the equivalent per ton charge is sometimes much higher than at transfer stations. A 20 cubic yard drop box containing one ton of yard debris could be charged $70 to $80 at processors and only $55 at transfer stations.

(2) Turn around time for commercial loads may be greater at processors than at transfer stations because of less efficient traffic arrangements.

(3) Processors may reject loads or assess penalties for slightly contaminated loads. Haulers may not know what is in the bottom of drop boxes until the load is emptied. Rather than risking penalties, they take the load to the disposal facility and pass any higher cost of disposal back to the generator.

These kinds of problems are not likely to be solved with tip fee incentives. The long term solution that will result in more yard debris diversion is to provide a convenient system of processors that have weight based rates and the capability of accepting slightly contaminated loads.

Possible New Actions

Alternative 1. Apply the full tip fee to yard debris delivered to Metro transfer stations in order to create the maximum incentive for delivery of yard debris to private processors. Transfer stations recover clean yard debris for delivery to processors.

Alternative 2. Create a "three-tier" rate structure in which the yard debris fee at transfer stations is less than the fee for garbage but more than the yard debris fee at private processors. Yard debris rates would be set by charging the disposal cost (to be negotiated), the Regional Tier One User Fee (covering fixed costs), and the Regional Transfer Charge (covering facility operator costs). With the current rate structure, the fees would be $35/ton at yard debris processors, about $45/ton for yard debris at transfer stations, and $55/ton for mixed waste at transfer stations.

Alternative 1 is a better approach for accomplishing the first objective of an effective diversion program: encouraging haulers to deliver yard debris directly to processors. The larger the difference between yard debris fees at transfer stations and processors, the greater will be the incentive for taking yard debris to processors.

If rate incentives were the only means to accomplish the second objective, recovery of yard debris delivered to transfer stations, Alternative 2 would be the better approach. However, there are other approaches that can be used. Spotters and scalehouse personnel can be used to direct mostly clean loads of yard debris to special dumping areas within transfer stations. Combining Alternative 1 with new operational practices at existing facilities would be most likely to accomplish both objectives of a diversion program.

Alternative 1 should also provide a greater incentive for the long-term development of private processing capacity. If Metro maintains a discounted tip fee for yard debris there will less incentive for businesses to start or expand yard debris processing capacity.

The effectiveness of Alternative 1 in causing haulers to deliver yard debris directly to processors depends on two factors: (1) there must be a convenient system of yard debris processors available to most haulers in the region that serves as an alternative to transfer stations, and (2) the differential between the transfer station fee (currently $55/ton) and the fee at processors (currently $35/ton) must be enough to cause haulers to switch from transfer stations to processors.

The convenience factor for many haulers includes a consistent weight-based fee structure. Haulers need to know what the savings will be if they deliver yard debris to processors rather than to transfer stations. Using volume-based fees, as is currently the case at the major processors, creates uncertainty that causes some haulers to deliver to transfer stations even though the tip fee is higher. One processor is installing scales and the other major processor is looking at the possibility of scales.

The rate differential must be maintained if Alternative 1 is to be effective. This may mean that Metro would need to enter into some type of agreement with processors that would ensure that rate differentials are maintained. Metro staff is currently examining this possibility.

Recommendations

(1) Implement Alternative 2. Metro creates a yard debris rate based on disposal costs plus appropriate fixed costs. Requires amendment of Metro Code Chapter 5.02 (Solid Waste Disposal Fees).

(2) Metro pursues options for eliminating the problems that cause haulers to choose not to deliver yard debris to processors. This may include some form of regulation.

Regional Recycling Level Impact

The implementation of a yard debris rate that is less than the full tip fee but more than the proecesors will result in new recovery at Metro South. Less yard debris may be recovered at St. Johns than currently is with the $25/ton rate. However, some of this potential loss will likely be compensated for by more direct deliveries to processors.

The new recovery at Metro South is likely to be greater than the decrease at St. Johns (Metro East). Therefore, the net effect of this recommendation should be an increase in the regional recycling level. Based on the deliveries to St. Johns during the past year, recovery rates may be about 100 tons/month at each facility.

Improvements in processing facilities would have a much greater impact on the regional recycling level. If such improvements resulted in recovery of half of the yard debris currently being disposed, about 35,000 more tons would be recycled every year.

Tip Fee Impact

If the rate for yard debris is sufficient to cover the cost of processing, there should be no impact on the rates charged for waste. If a disposal cost of $30/ton could be negotiated for yard debris delivered to transfer stations, the rate structure would be as follows:

Disposal fee (negotiatable)	$30/ton
Tier One User Fee (fixed costs)	$ 7/ton
Transfer Charge (facility operator)	$7/ton
TOTAL YARD DEBRIS RATE	$44/ton

This assumes that DEQ charges could be waived on yard debris.

If the the disposal cost is higher than $30/ton, part of the user fee or transfer charge would have to be waived to maintain the rate near $45/ton. Fees on other tonnage would need to be increased in order to collect sufficient revenue to cover expenses.

Incentive #4

Recycling Rebates for Haulers

The current market value of recyclables does not cover the cost of collection and marketing. Ratepayers must pay for the costs of establishing new collection programs.

Local governments could set collection standards and establish collection rates that cover the costs of accomplishing the standards. An alternative used by some governments (e.g. Lane County) has been to pay haulers on a per ton basis for material collected and marketed. Revenue for such payments is generated by increased tip fees. Because tip fees are passed back to ratepayers, this incentive is an indirect way of making sure collection rates are high enough to pay for the cost of collecting and marketing recyclables.

Existing System

Local governments are responsible for setting collection rates. In franchised areas of the Metro region, collection rates include the cost of implementing recycling standards. The changes being considered by the City of Portland would create standard and rates for residential collection.

Possible New Action

Metro makes per ton payments to haulers for material collected and marketed by haulers. Money for the incentive is generated from higher tip fees on waste disposed.

The major problem with this incentive is the potential inequities caused by demographic variability. Regardless of effort on the part of haulers, the amount of recyclables collected may vary among neighborhoods because of differences in the type of businesses, household income, family size, education, and other factors that influence waste generation and participation in recycling programs.

One approach to reduce this inequity would be to base payments on the annual change in tonnage marketed by a hauler. Tonnage marketed by each hauler during a base year could be determined prior to implementing the incentive.

Recommendation

Do not implement. Instead, Metro encourages local governments to continue to improve recycling standards and develop rate-setting processes that ensure that recycling costs will be included in both residential and commercial rates. The Waste Reduction Sub-Committee suggested that Metro re-evaluate this incentive in the future depending on the success of local government programs.

Regional Reycling Level Impact

The greatest potential for this type of incentive would be in commercial recycling. The costs of residential recycling will be included in rates set by franchise collection areas. Haulers can not be assured of exclusive rights to commercial recyclables at a franchise rate.

An estimated 52% (624,000 tons) of all waste disposed in the region is from non-residential generators. 35% (218,000 tons) of this waste is paper. If an incentive results in recovery and marketing of even a relatively small portion of this tonnage, the impact on the regional recycling level could be significant.

Tip Fee Impact

Approximately 135,000 tons of paper were recycled during 1989 from the non-residential sector for an overall recycling level of 38%. If this increases to 50%, about 40,000 more tons would be recycled. If $50/ton payments were made for new recycling tonnage, the total cost of the incentive would be $2 million and the tip fee increase would need to be $2/ton.

Incentive #5

Routing of Food Waste to the MSW Compost Facility

Existing System

The tip fees at the MSW Compost Facility will include the cost of disposing residual material. The residual waste is determined by the waste composition of loads delivered to the facility. The "reference waste composition" used in the Service Agreement is:

Paper	34.8%
Yard Debris	9.9%
Wood	8.0%
Food Waste	8.8%
Diapers	1.5%
Misc. Organic	6.7%
Textiles	3.8%
Fines	2.0%
Plastics	7.8%
Aluminum	0.9%
Misc. Inorganics	5.5%
Ferrous Metal	6.0%
Nonferrous Metal	0.2%
Glass (recyclable)	3.6%
Other	0.5%

Residual can be reduced if loads with higher organic contents than the above waste composition are delivered to the Compost Facility. Accomplishing this, however, may require that haulers create special collection routes or make other changes in collection methods (e.g. providing a second container for food wastes). The avoided cost of disposal could be used to fund these changes.

Possible New Action

A tip fee incentive is established that encourages haulers to create special collection routes for high-organic loads that will be delivered to the Compost Facility.

Metro would offer the incentive without specifying how haulers will accomplish high-organic loads.

The incentive may not be sufficient to pay the extra cost of establishing special collection routes. The inspection of loads needed to determine eligibility would be operationally difficult to accomplish.

Recommendation

Metro and Riedel negotiate an amendment to the Compost Facility Service Agreement that creates an incentive for haulers to create special collection routes and deliver loads with less residue.

Regional Recycling Level Impact

Without this incentive the annual delivery to the compost facility is expected to be 185,000 tons with a residual of 55,500 tons that will be landfilled. If this incentive reduces the residual level to 10% of delivery tonnage, there would be a net increase in the regional recycling tonnage of about 37,000 tons. A residual of 10% would be similar to recovery levels at compost facilities with wet/dry collection systems and is probably the best that could be expected using rate incentives to divert loads.

Tip Fee Impact

The incentive offered would not exceed the avoided cost of transporting and landfilling residue. Therefore there should be no impact on Metro tip fees.

Incentive #6

Recovery of Construction/Demolition Debris

The 1989/1990 Waste Characterization Study estimated that construction and demolition debris makes up 17% of all tonnage disposed in the Metro Region. Metro's Special Waste Project has concluded that a significant portion of this waste is potentially recyclable.

Existing System

There is no major facility capable of recovering a significant amount of the construction and demolition debris generated in the region. Instead, the material is being delivered to transfer stations and landfills without recovery capacity.

Disposal fees at some landfills (e.g. Hillsboro Landfill) are low enough to cause haulers to pay the extra transportation cost to deliver material to the landfills.

Expansion of existing facilities or construction of new ones capable of handling construction and demolition debris will occur in the near future. Diversion of recoverable waste from landfills to recovery facilities could be accomplished in several different ways.

Possible New Actions

Alternative 1. Local governments increase disposal fees at out-of-region limited-purpose landfills to levelize fees with recovery facilities.

Alternative 2. Metro utilizes its flow control authority and franchise agreements to divert recoverable material from landfills to recovery facilities.

Alternative 1 maintains haulers' freedom of choice in selecting facilities for delivering loads. However, it makes the rate-setting process more difficult because rates at recovery facilities would need to be considered. There would need to be some way to ensure that rate differentials are maintained.

Alternative 2 may be a more certain way of achieving desired flow patterns. However, the it removes hauler flexibility.

The best approach will depend on the system that is being developed for recovering construction/demolition debris. The need for flow control or special rates can not be evaluated at present.

Recommendation

Defer to the implementation stage of the Special Waste Project.

Regional Recycling Level Impact

Construction and demolition debris makes up 17% (192,000 tons) of all waste disposed in the region. The potential impact on the regional recycling level is significant if a portion of this material can be recovered.

Tip Fee Impact

Cannot be estimated at this time.

Incentive #7

Support of Mixed Waste Paper Collection Programs

Fluctuations in market prices have made it difficult to maintain consistent collection programs for mixed waste paper in the Metro region. During the past few years, private processors, haulers, Metro, local governments, and recycling groups have all been actively working with commercial customers to establish special recycling programs for mixed waste paper. Large offices have sometimes invested in special janitorial services. Haulers have purchased new trucks and containers in order to service small generators with special collection routes.

Market prices may create instability that makes it difficult to maintain these programs. When processors stop accepting mixed waste paper or increase the tip fees they charge because of low market prices, haulers cancel special collection routes. Both generators and haulers may be less likely to re-establish collection programs if there is no assurance that cancellations will not be repeated as the market price once again falls.

Metro and local governments could take several actions to help create stability in waste paper collection programs. Some local governments in the region have considered making commercial recycling services a requirement of hauler franchises. Any loss that haulers incur because of poor markets could be considered during the franchise rate-setting process.

Metro could accomplish the same objective by providing financial support to processors when market prices are low. Processors would then be able to continue accepting deliveries of mixed waste paper. While such support would help maintain program stability, there are several risks. Poor market conditions could be made worse by supporting continued collection when prices are low. Source-separation may also be discouraged by such an incentive.

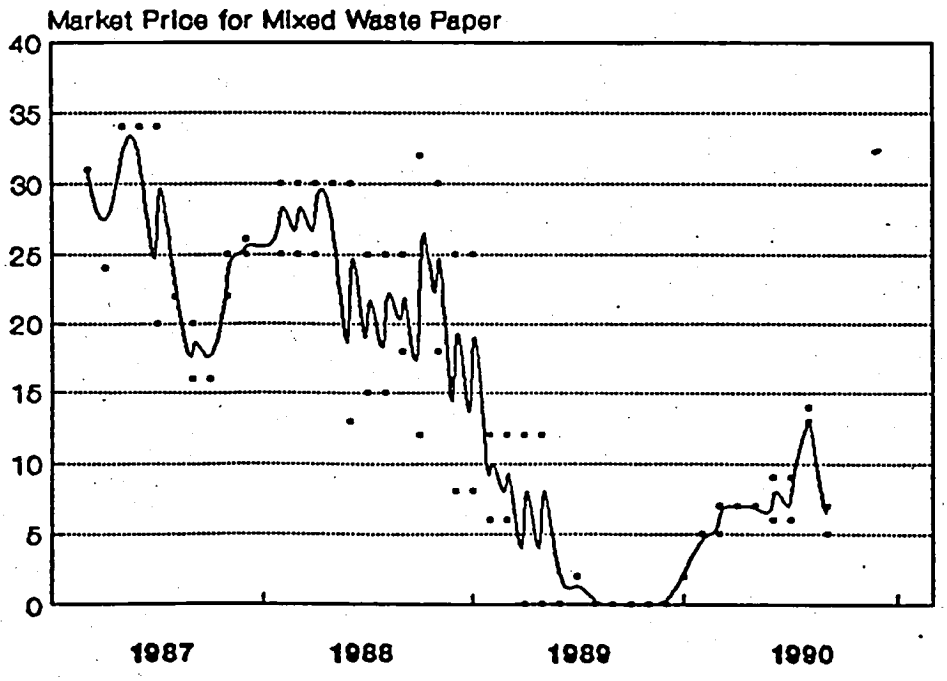
Existing System

Metro currently offers a $2 payment to processors for each ton of mixed paper recovered form loads of 50% to 79% mixed paper. Mixed paper is defined as "uncontaminated, recyclable paper exclusive of newspaper and cardboard". The payment is offered regardless of market price.

The existing incentive has been ineffective. Even those processors who are eligible for the incentive have not applied for payment.

An example of the instability caused by market prices, and the ineffectiveness of the current incentive, is demonstrated by the recent experience of the Oregon Processing and Recovery Center. The following chart is the regional monthly market price for mixed waste paper since 1987. Recovery of mixed waste paper at OPRC peaked during 1987 when market prices were approximately $20/ton higher than they currently are.

The $2/ton incentive did not help maintain recovery during the 1989 market downturn. Special collection programs created for mixed waste paper were cancelled during 1989 and as market prices improved during 1990, the tonnage recovered at OPRC did not increase. Collection programs were eliminated and not re-established once markets prices improved.



Possible New Actions

Three alternative actions could be taken given the ineffectiveness of the current incentive:

Alternative 1. Increase the per ton payment (e.g. from $2 to $5).

Alternative 2. Create a variable payment that is sensitive to the market conditions. The incentive would not be offered when market conditions are good and disruption of collection programs is not likely. The payment could be structured such that if the

current month's market price for mixed waste paper is above the average price of the previous year, no payment would be made. If the current month's market price for mixed waste paper is below the average price of the previous year, the per ton payment would be the difference between the two. For example, average price during 1987 and 1988 was about $23/ton. Payments during 1989 would have been as high as $23/ton when the market price dropped to $0/ton.

Alternative 3. Eliminate the incentive entirely.

Alternative 1 would make it more likely that the incentive would accomplish the objective of supporting collection programs during poor markets. However, it still has the disadvantages associated with any fixed incentive. Regardless of market conditions a fixed payment would be made. When markets are good, Metro would unnecessarily be asking other users of the system to make payments to processors of mixed waste paper. When markets are bad, the payment would have to be increased to over $20 per ton to have been effective when mixed waste paper prices dropped to $0 per ton. Increasing the payment to $5 or $10 per ton may not be enough to avoid program disruptions during bad markets, but too much during good markets.

Alternative 2 links the payment to market prices and eliminates many of the problems associated with a fixed payment. The key decision question, however, is whether haulers and generators are refusing to re-establish collection programs during market improvements.

Both Alternatives 1 and 2 could act as disincentives to source-separate paper. However, more than 70% of OPRC's mixed waste paper customers also have souce-separated programs in place. Paper collected as mixed waste has not been acceptable for the source-separation process.

<u>Recommendation</u>

Eliminate the existing incentive because it has been ineffective and a high level subsidy would be required to make it effective.

Regional Recycling Level Impact

During 1989 only 8% (11,000 tons) of mixed waste paper were recycled. More than 130,000 tons were disposed. A significant portion of this is from the non-residential waste stream that could be targeted with this incentive.

Tip Fee Impact

Tip fee impacts would depend on market conditions and would vary from year to year. During the past year, an average of about $15/ton would have needed to be paid on about 2,000 tons of paper recovered from mixed waste.

Incentive #8

User-Fee Waivers

Metro Code Chapter 5.02 states that "The User Fee shall be waived at material recovery facilities that accomplish recycling as a *primary* operation". The objective was to create an economic incentive for high-grade recovery.

Loads with a low percentage of recyclable material will be delivered to transfer stations for processing. Some material recovery will take place at transfer stations, but the recovery level will be considerably lower than at high-grade facilities.

Facilities that operate primarily as transfer stations are not the intended targets of this incentive. The lack of clear standards creates confusion about which facilities should be eligible for User Fee waivers.

Existing System

There are currently two franchised facilities that apply for the User Fee Waiver: Oregon Processing and Recovery Facility and East County Recycling Center. The delivery and recovery tonnages for these two facilities are shown on the next page.

Possible New Action

Alternative 1. Maintain the current fee waiver but establish a minimum recovery level to determine eligibility for waivers. 30% is the recommended standard.

Alternative 2. Establish a sliding scale for waivers such that the facility's recycling level determines what percentage of the fee is waived.

Alternative 1 is a more direct approach to encouraging high-grade facilities to improve recovery levels.

Recommendation

Implement Alternative 1. Requires amendment to Metro Code Chapter 5.02 (Solid Waste Disposal Fees).

Oregon Processing and Recovery Center

	Tons				Recovery Percent	
	Delivery		Recovery			
Month	1989	1990	1989	1990	1989	1990
Jan	796	687	449	299	56%	44%
Feb	704	539	353	261	50%	48%
Mar	840	617	321	337	38%	55%
Apr	861	492	327	221	38%	45%
May	1071	532	92	215	9%	40%
Jun	1414	464	175	215	12%	46%
Jul	574		149		26%	
Aug	377		57		15%	
Sep	592		355		60%	
Oct	578		216		37%	
Nov	856		324		38%	
Dec	703		233		33%	

East County Recycling Center

	Tons				Recovery Percent	
	Delivery		Recovery			
Month	1989	1990	1989	1990	1989	1990
Jan	345	2185	58	497	17%	23%
Feb	237	1422	229	250	97%	18%
Mar	380	2529	130	422	34%	17%
Apr	564	2965	564	926	100%	31%
May	670	3629	305	1746	46%	48%
Jun	1931	3170	1405	1074	73%	34%
Jul	3224		1626		50%	
Aug	3546		1250		35%	
Sep	3077		685		22%	
Oct	2806		663		24%	
Nov	2137		455		21%	
Dec	1985		420		21%	

Incentive #9

Recycling Credits for Non-Profit Charitable Organizations

The purpose of this incentive is to provide disposal cost relief at Metro solid waste disposal facilities for charitable, nonprofit entities that accomplish a significant level of waste reduction and recycling. It is the intent of this incentive to provide assistance to organizations that uniquely qualify by achieving significant amounts of waste reduction and recycling while at the same time providing assistance to needy citizens of the region and opportunities for employment.

Existing System

Charitable organizations pay the full tip for waste generated from their operations.

Possible New Action

Recycling credits are established to provide disposal cost relief at Metro disposal facilities to organizations that qualify under the following eligibility criteria.

(a) The organization must be classified as a nonprofit organization under Section 501 (c) (3) of the United States Internal Revenue Code. Furthermore, the organization must submit an annual report on Federal Form 990 (Return of Organization Exempt for Income Tax).

(b) The organization must be registered as a nonprofit organization with the Corporation Commission of the State of Oregon.

(c) The organization submits an annual report to the Oregon Department of Justice Charitable Trust Section.

(d) The organization does not contract with for-profit organizations to collect, process, or sell used goods.

(e) The organization must be engaged, as a primary form of revenue, in the processing of donated goods for resale or reuse.

(f) The organization facilitates the opportunity to reuse and recycle for the general public via curbside collection of donated goods or staffing of drop-off sites.

(g) The waste reduction activities of the organization divert a significant amount of material that might otherwise be landfilled. A significant amount is defined as a minimum of 250 tons per year of donated goods that are either reused or recycled.

(h) The organization is a credit customer in good standing at Metro disposal facilities.

(i) The organization submits annual waste reduction data to the Metro Solid Waste Director by February 15th of each year which documents the organization's recycling level for the preceding calendar year using a methodology approved by Metro.

(j) No portion of the District funds authorized by this program will benefit any religious function of any religious organization.

Recycling Credits are based on an eligible organization's overall waste reduction level. The waste reduction level includes both reuse and recycling activities. The following formula establishes the amount of the Recycling Credit relative to the organization's recycling level. Recycling Credits will be applied to total disposal costs at the time Metro bills the eligible organization:

If the recycling level is 70% or above,
a 100% credit is granted;
If the recycling level is 65% or above,
a 90% credit is granted;
If the recycling level is 60% or above,
an 80% credit is granted;
If the recycling level is 55% or above
a 70% credit is granted;
If the recycling level is 50% or above,
a 60% credit is granted;
If the recycling level is below 50%,
no credit is granted.

The recycling level of the eligible organization will be based on documentation provided to Metro's Solid Waste Director on an annual basis.

Recommendation

Implemented (Ordinance No. 90-362).

Incentive #10

Metro Recycling Business Development Revolving Loan Fund

Some businesses are unable to get conventional financing to start or expand recycling operations. One way Metro can assist is through a loan program co-sponsored by the Portland Development Commission.

Background

A proven public sector tool to stimulate the rapid emergence of private business development in new industries or economically lagging sectors is the revolving loan fund. Programs have existed in the Portland area for over ten years, using Federal, state and private grants and loans for initial capitalization, to stimulate new business expansion in slum and blighted area. This same tool can be used to maximize investment dollars to accomplish specific public goals. In this case, a revolving loan fund is envisioned to assist in the assembly of capital resources for companies organizing to accomplish METRO's solid waste management objectives. loan funds would be made available on a companion loan basis to qualified companies and projects. Eventually, these loan funds would be repaid out of business operations, and be available to reloan into a new project.

A revolving loan program will complement other solid waste management incentive programs, such as the 1% For Recycling Program. loans would be directed at the capital needs of specific companies that cannot gain needed capital on normal terms, and thereby fill a large and critical gap which currently stops the emergence of private business in this rapidly evolving industry.

Program Development

Creating a revolving loan program will take place in three phases spanning six to eight months prior to initial funding.

Phase One: Revolving Loan Fund Plan

In this phase, the goals and objectives for the fund are established, based upon research indicating the capital needs of recycling businesses seeking start-up and expansion funds. The plan should characterize: Economic and private sector lending problems for recycling businesses; a strategy to deal with these problems; how the revolving loan fund would be used; and how the fund would be coordinated with other business development activities planned or underway at METRO.

At the completion of Phase One, a review would be made of other potential funding sources to establish potential areas of joint interest and funding.

Phase Two: Administrative Planning

During this phase, an evaluation would be made to determine how and where to administer the fund. A Loan Administration Board is envisioned to make specific loan application decisions. This board, appointed by and responsible to METRO, could operate with the support of METRO or take advantage of other regional agencies now operating revolving loan funds. This would facilitate not having to re-create the loan administration staff and portfolio maintenance procedures for a relatively small volume of work.

Also during this phase, a marketing plan, loan selection and approval process, loan administrative and servicing concept, administrative cost and payment formula, and capital management strategy would be worked out. Plans would be formed to expand the capital base of the fund. Audit and funds control procedures would be established in coordination with METRO financial officers and appropriate State agencies. The entire plan then would be presented for review and approval by the METRO Council and appropriate agencies of the State and Federal governments.

Phase Three: Start-up

Based upon an acceptable plan, the METRO Council would approve members of the Loan administrative board who would be selected from the local community based upon their knowledge of lending, business management, and solid waste recycling. The board would serve for a fixed period of time, making decisions on the operation of the fund.

Initial marketing and loan application screening would commence immediately.

Recommendation

Implement Phase One and Phase Two in the next 12 months. Direct staff to prepare a METRO Revolving Loan Program Plan that utilizes funds to sponsor the start-up and expansion of business activities for recycling. Based upon the feasibility of the plan, negotiate with other participating providers of capital funds and development joint statements of goals and objectives. Finally, select a method to administer the loan program, taking advantage of other municipal agencies prepared to offer these services with existing program resources.

ATTACHMENT A

A PROPOSED RATE INCENTIVE TO PROMOTE RECYCLING BY SELF-HAULERS AT THE METRO SOUTH TRANSFER STATION

Steven L. Kraten

Introduction

This report describes five alternatives for implementing a recycling incentive at the Metro South transfer station. It was found that technical limitations of the scales and design limitations of the facility severely constrained the number of feasible alternatives. Of the five alternatives listed, three require major or minor facility modifications. At least two of the alternatives require further study to determine whether or not they are actually feasible. In addition to the complications associated with facility and procedural modifications, each alternative presents some unique operational difficulty to be overcome. The final decision process may thus come down to choosing among several sub-optimal solutions.

Three primary criteria were used in evaluating the alternatives. The first criterion was effectiveness of the incentive in diverting recyclables from the waste stream. The second criterion was safety of the users of the facility. And the third criterion was minimization of disruptions in transfer station operations. Though it would be preferable to develop an incentive system that could be implemented in the same way at both the Metro South and the Metro East transfer stations, the differences in the physical plants and the large role that facility layout plays in determining the feasibility of any particular recyclable handling system may require a site specific alternative for each facility.

Description of the Present Recycling Incentive

Under the present system Metro charges a flat fee for the disposal of self-hauled loads at the Metro South transfer station. A disposal discount is given to self-haulers who bring in source separated recyclables along with their garbage loads. The discount is given for 1/2 cubic yard (three grocery bags) of recyclables according to the schedule given below:

Minimum charge without recyclables	$ 15
2-1/2 cu. yds. with recyclables	10
2 cu. yds. with recyclables	8
1-1/2 cu. yds. with recyclables	6
1 cu. yd. with recyclables	4

The disposal charge varies with the quantity of garbage, not with the quantity of recyclables. Thus the fee schedule listed above is really a two part incentive. One part is a flat $5 discount.

The second part is an exemption from the minimum fee system in favor of a stepped system which allows the hauler to pay in incremental amounts for small quantities of garbage. This part of the incentive has the unintended effect of encouraging small loads of waste to be brought to the transfer station.

Any of the materials normally included in curbside programs qualify for the discount. Scrap metal, mostly in the form of major appliances, comprises the largest tonnage of recyclable materials delivered to the transfer station by self-haulers. On a monthly basis, the proportion of self-haulers who take advantage of the disposal discount ranges from half to three quarters. Most of those bring in the minimum amount of recyclables required to qualify for the discount.

Prices Paid by Metro For Recyclables

Under the current discount schedule, the prices paid by Metro for recyclables are well above market prices. Consider, for example, a discount given for old newspapers. Three grocery bags full of newspapers weighs in the neighborhood of 75 pounds. Even the minimum discount of $5 equates to a price paid by Metro of $133 per ton for a commodity with a market value of about $20 per ton. Three grocery bags of uncrushed aluminum cans weigh approximately three pounds. A five dollar discount would thus be equivalent to $1.67 per pound, even though the average market price of aluminum cans is only about $0.27 per pound.

Why a New Incentive Structure is Needed

Metro will soon install a new truck scale at the Metro South transfer station and begin weighing self-haul loads. This raises the question of how rate incentives for recycling should work after the switch from a flat fee system to a weight based system for self-haul.

Difficulties Related to the Weighing of Recyclables

One of the difficulties in implementing a weight based system at Metro South is that installation of the scale still will not allow a complete conversion to weight based disposal charges. Due to limited accuracy at low weights, the gatehouse scales presently being considered cannot legally be used in trade for weighing loads of less than 500 pounds (excluding the weight of the vehicle). Use of a somewhat more sensitive scale may be feasible but scales that are accurate at low weights are less usable at higher weights. A second problem is that the outbound scale is not sensitive at low weights, though it may be possible to recalibrate it for somewhat greater sensitivity.

This effectively creates two different categories of self-hauler; those with loads of more than 500 pounds and those with 500

pounds or less. Those in the heavy category can save money by separating out their recyclables and saving on the weight charge with an approximate sensitivity of plus or minus five pounds. Those in the light category cannot be weighed accurately and will continue to pay a flat fee for disposal. Thus a self-hauler with less than 500 pounds will have no incentive to lighten his load.

A second difficulty is that with an inbound weighing and an outbound weighing there is no way to separate the weight of the recyclables from the weight of the garbage. Both will have to be weighed together. The only way to prevent self-haulers from having to pay the weight charge on the recyclable portion of the load would be to unload the garbage keeping the recyclables on the vehicle for the outbound weighing and then to make another circuit through the transfer station to unload the recyclables. This would probably not be a very effective incentive to recycle. Unless one had a relatively large volume of recyclables it is doubtful that the avoided weight charge would be worth the inconvenience.

Difficulties with a Disposal Incentive

There are several difficulties with providing a disposal discount such as the one presently in place. First, the decision of whether or not a self-hauler has a sufficient quantity of recyclables to legitimately qualify for a discount is a highly subjective one. Recyclable materials brought to the transfer station tend to be highly irregular in shape and extremely variable in weight and density. Second, the necessity of keeping loads covered during transport coupled with the need to expedite the flow of traffic through the gatehouse during peak hours often makes it impractical to actually check for recyclables. Thus it becomes necessary to rely an "honor system" where self-haulers are simply asked whether or not they have source separated recyclables. Repeat self-haulers quickly learn that an affirmative response results in a discount.

Disposal discounts also create an artificial and transferable value for recyclables. The result is an incentive to acquire recyclables to use as money to pay garbage disposal fees at the transfer station. These could be recyclables that the self-hauler had already source separated or had acquired from someone else.

Purpose of a Recycling Incentive

The purpose of a recycling incentive is to promote the recycling of material that, in the absence of the incentive, would have been landfilled. An incentive that merely results in a shifting of recyclables from curbside and depot systems to the transfer station would not be producing the desired result. It is also

important that the recycling incentive chosen be equitable and practical to administer.

Alternative Proposals for a Recycling Incentive

Six recycling incentive alternatives are offered for consideration. These alternatives are explained below.

Alternative #1 - Construction of a Recycling Depot Separate from the Transfer Station

The Metro South transfer station is functionally obsolete and cannot efficiently facilitate even garbage disposal, much less the handling of recyclables. Given the facility's current configuration and limited space there does not appear to be any fully satisfactory way to handle recyclables. Typically an integrated waste management system will incorporate a recycling buy-back center upstream of the transfer station. This is not possible at Metro South due to a lack of space.

In the long run, the best solution might be for Metro to buy or lease a nearby property for construction of a separate recycling depot. The triangular parcel of property that lies on the south side of Washington Street and to the west of the transfer station has already been leased by Metro for temporary storage of transfer trailers and might be a suitable site for such a depot. Access to the site is an issue of concern with this proposal. The site has two paved access points from Washington Street which would facilitate traffic in and out of the property. However, at present, the part of Washington Street adjacent to these access points is divided by a double yellow line. In order to facilitate the flow of traffic a left hand turn lane for vehicles entering the depot from the east. Another possibility is to access the property from the entry point directly opposite the transfer station and to drive through the property currently used by Keller Drop Box. This might cause too much traffic congestion at the entrance to the transfer station. Public access through the drop box area might also cause operational difficulties.

The depot would consist of a pole barn with a set of scales and drop boxes. The facility could be a drop off center, a buy-back facility, or it could issue weight tickets good for disposal credits at the transfer station. Self-haulers would be diverted to this facility to unload their recyclables before entering the transfer station. Prominent signage would direct vehicles with recyclables to the depot.

The recycling drop boxes presently situated at the transfer station would be retained in their present location and used for recyclables that are either separated by spotters or deposited by customers who may choose not to use the recycling depot.

However, no rebate would be given for recyclables brought to the transfer station.

A possible problem with this proposal is the inconvenience of having to untarp the load at the depot and then tarp it again for the short trip down the street to the transfer station. Many haulers may not bother to securely re-tarp their loads.

Another concern is the cost to implement such a solution. In addition to the cost of the site, building, scales, and drop boxes, the area would have to be fenced and manned.

The advantages of this solution are minimal disruption of transfer station operations and efficient handling of recyclables.

Alternative #2 - Recycling Depot in "The Loop"

Another solution is to enable self-haulers to unload recyclables before crossing the scales. This alternative would eliminate the need to weigh or estimate the weight of incoming recyclables.

After the compactors are relocated, the loop presently used for loading transfer trailers will be used for access to the household hazardous waste facility which will be located in what is now a lawn in the center of the loop. One way to unload recyclables before weighing would be to locate recycling drop boxes in the area that is now a steeply sloped grass strip bordering the south end of the loop. Under this scenario no disposal discount would be offered. Lightening the load would be the incentive to recycle. However, this would only apply to heavy loads. Self-haulers with loads of less than 500 pounds would still have no incentive to unload their recyclables separately.

There are several possible problems to be overcome in order to implement this solution, the most serious of which is a liability issue due to the proximity to the household hazardous waste (HHW) facility. According to law a HHW facility must be sited at the transfer station. In order to divert the maximum amount of hazardous waste from the MSW stream and to assure the safety of other transfer station users, this facility must be located upstream of the scalehouse. The only possible location for the facility is the loop. The presence of hazardous waste including potentially explosive materials most likely precludes this area from being used as a recycling depot.

A second potential problem is the width of the road between the barrier wall and the recycling drop boxes. It must be determined whether or not the width would be adequate to meet any relevant requirements.

A third problem is a requirement by the city of Oregon City that all unloading be done in a covered area. For this solution to be implemented either a waiver would have to be granted or the recycling area would have to be covered.

A fourth problem is simply the traffic flow. Household hazardous waste collection is a careful and deliberate process that will require a relatively slow traffic flow. The number of HHW participants is projected to be less than 100 even on the busiest day of the year. For most days it is projected to be well under 50. Unloading recyclables, on the other hand, is a rapid process and will have a much heavier traffic volume. Routing two different traffic flows through the same area when they are very different in both volume and speed may create a serious logistical problem.

Finally, it might be difficult for a pickup truck and trailer to make a sharp enough right turn at the end of the loop to smoothly enter the flow of traffic to the fee booth and scales in order to dispose of the garbage portion of the load.

Alternative #3 - Disposal Discount for Flat Fee Customers Only

Under this alternative, avoidance of payment for the weight of recyclables contained in garbage loads would be the primary incentive to recycle for self-haulers with loads in excess of 500 pounds. However, there would be a disposal discount incentive for light weight loads subject to the flat fee. A potential problem with this alternative is that it may be perceived by the public that flat fee customers are being offered a recycling incentive while weighed customers are not.

It would be incumbent upon the self-hauler to make the material easily accessible for inspection by the gatehouse staff. Transition to the new system would be preceded by an informational program to publicize and explain the new system.

Alternative #4 - Continuation of Disposal Discount for All Self-haul Customers

This alternative consists of a flat fee disposal discount for self-haulers who bring in some minimum quantity of any recyclable materials. Whether or not the quantity of recyclables brought in is sufficient to qualify for the discount would be estimated at the gatehouse just as it is now. Recyclables would be weighed along with the garbage but the increased weight would be more than offset by the disposal discount up to some break-even point.

The difficulty of such a system is that weighing combined with a discount on recyclables, which are also weighed, gives two conflicting incentives. Weighing provides an incentive not to bring recyclables to the transfer station while a disposal

discount is an incentive to do just that. The self-hauler's decision may then be based on which is the greater incentive. With a large enough disposal discount one may choose to pay the charge for the additional weight in order to get the discount. With a smaller discount one may choose to forego the discount and save on the weight. A self-hauler with a large volume of recyclables may be better off to take them to a depot or buy-back center.

The above analysis only applies to self-haulers with loads over 500 pounds. A self-hauler with a light load will have an incentive to bring in enough recyclables to qualify for the discount but will not be concerned about weight. A 400 pound load will cost the same to dispose of as a 200 pound load.

Alternative #5 - Separate Scales to Weigh Recyclables

Another possible solution that was studied is to install one or two small scales inside the transfer station. These scales would be designed to weigh lighter weights and smaller increments than the gatehouse scales. Recyclables would be unloaded onto carts by transfer station staff who would roll the carts over the scales before depositing the recyclables into drop boxes. A weight ticket would then be issued which would be given to the gatehouse attendant on the way out. The weight ticket on recyclables would be valid for a credit on the garbage disposal charge. In order to make it worth the effort to separate recyclables, it may be necessary to offer a credit that is greater than the avoided weight charge. At $55 per ton the avoided charge for 40 pounds of recyclables is only $1.10. A credit equal to double the avoided charge would probably be a sufficient incentive to recycle. This would still be less than the disposal discounts currently being offered by Metro. For ease of administration Metro would issue the same credit for all types of recyclables and would not differentiate among different recyclable materials.

The advantages of such a system would be accurate charges, the elimination of subjectivity in determining volumes of recyclables, and an ability to maintain records on the amount of material recycled. The disadvantage of such a system is greater complexity due to the need for dealing with second weight ticket. However, since each customer must present a weight ticket at the gatehouse anyway, this may not be a significant change.

Of more concern is the bottleneck in traffic flow that would be created by the delay as recyclables are weighed and credit tickets are issued. Even if two scales are used and if an efficient system of traffic flow and cart routing can be devised, it seems unlikely that such a system could be made workable. Even on slow days the self-haul side of the Metro South transfer station is a somewhat disorganized and dangerous place as

vehicles jockey for positions within the tightly restricted space between the pit and at the recyclables loading dock. At the same time users who have backed up to the pit are dodging traffic as they walk across the transfer station to the loading dock with armfuls of recyclables. In this environment it is unlikely that users would tolerate the added complication of having to weigh recyclables. They might in fact dispose of them in the pit rather than go to the trouble to recycle them.

Alternative #6 - Weight Based Rates as a Recycling Incentive

A weight based disposal rate is, by itself, be an efficient market driven incentive to recycle. The less a load weighs, the less it costs to dispose of. It is analogous to the incentive that garbage customers have to recycle enough material at curbside to enable them to realize a savings on their garbage bills. The only way a self-hauler can realize a savings is to actually remove the recyclables from his garbage load and the savings is directly related to the quantity of recyclables diverted.

The key reason for having weight reduction as the sole incentive is that combining a weight based disposal rate with a disposal discount would create conflicting incentives. Weighing provides an incentive to remove recyclables from garbage loads for curbside recycling or drop-off at a recycling depot before bringing the non-recyclable fraction to the transfer station for disposal. A disposal discount, on the other hand, encourages self-haulers to bring their recyclables to the transfer station along with their garbage.

Second, giving disposal discounts for bringing recyclables to the transfer station may not serve as an incentive to separate additional recyclable material from MSW but may instead simply be an incentive to take already separated recyclables to the transfer station.

A key point is that weight based rates and disposal discounts are not different *degrees* of the same kind of incentive. Rather they are different *kinds* of incentives that result in different kinds of behavior. With weight based rates the value is associated with the garbage and not the recyclables. By contrast, with a discount system the value is associated with the recyclables rather than the garbage. Recyclables now take on an additional value over and above the savings realized on garbage bills. This additional value derives from the fact that recyclables can be used by self-haulers in lieu of money to pay for disposal charges at Metro South.

The disadvantage of this alternative is that minimum fee customers will have no incentive to lighten their loads and thus will still have no incentive to recycle. It is estimated that

approximately one third of self-haulers presently fall into this category. However, assuming a fairly constant ratio of recyclables to garbage in loads of different weights, the third of the self-haulers that fall into the minimum fee category would account for less than a third of the recyclable material. Furthermore, it is anticipated that, with the new fee structure, there will be a decline in the number of light loads being self-hauled to the transfer station.

Summary

The alternatives for dealing with the recycling of source separated material brought to the transfer station along with MSW can be conceptualized relative to where in the process the recycling takes place.

Recycling at a separate site involves the complications of siting and constructing the facility. However, given the severe space and logistical problems associated with recycling at the transfer station itself, it could be the most practical and cost effective solution in the long run. Having the capability to accurately weigh recyclables regardless of the total weight of material to be disposed is a superior incentive in that the disposal rebate is proportional to the amount of material recycled. A major disadvantage is the high cost of siting, constructing, and manning such a facility. A second disadvantage is that operation of a recycling depot by Metro may be perceived as working at cross purposes to Metro's stated policy of promoting curbside collection as the preferred method of dealing with recyclables.

Recycling at the loop would avoid all of the complications and inequities, both real and perceived, inherent in trying to administer a disposal discount program. The problem with this alternative is that it poses a number of potential traffic flow and liability problems due to the proximity of the household hazardous waste facility.

Providing a recycling incentive at the fee booth can only be done through continuation of a disposal discount. The monitoring problems described above may allow self-haulers to claim the discount without really bringing in recyclables. Such a system also tends to overprice recyclables and has limited value as a recycling incentive in that, for flat fee customers, there is no advantage to separating out any more recyclables than the minimum necessary to qualify for a discount and there is no correlation between the volume of material recycled and the discount received. For weighed self-haulers there are two conflicting incentives. The advantage of this alternative is that it requires no structural reconfiguration in order to be implemented.

The weighing of recyclables on carts rolled over small scales set into the floor of the transfer station appears to be a relatively low cost solution requiring only marginal modifications of the procedures currently in use. However, this solution may pose insurmountable operational difficulties due to limited space both for queuing and for weighing recyclables within the transfer station.

A weight based disposal rate charged for all material self-hauled past the gatehouse is, by itself, an effective market driven incentive to recycle. Under such a system, the only way a self-hauler can realize a savings is to actually remove the recyclables from his garbage load and the amount of savings is directly related to the amount of diversion. A weight based disposal rate is also consistent with other elements of the region's recycling programs in that it encourages the use of curbside collection and depots.

A technical difficulty of this system is the limited scale sensitivity which precludes the weighing of loads of less than about 500 pounds. An operational disadvantage of a weight based system is that it requires transfer station users to have knowledge of how the system works. An uninformed self-hauler does not have an opportunity to recycle at no cost after arriving at the transfer station. A second disadvantage is that a weight based incentive is less visible than other alternatives and, for this reason, will be misperceived by some as not being an incentive at all.

Disposal discounts create an artificial and transferable value for recyclables. The result is not an incentive for further source separation but rather an incentive to acquire a predetermined quantity of recyclables to use as money for the payment of garbage disposal fees at the transfer station. These could be recyclables that the self-hauler had already source separated for curbside collection or had acquired from someone else (recyclables are, after all, are a free good placed at the curb by most of the self-hauler's neighbors).

Most of the recycling incentives discussed above pose serious problems for both the users and the operators of the transfer station. Upon further investigation some may prove to be infeasible. Given functional obsolescence of the Metro South transfer station, any option chosen will have to be a difficult compromise that balances the factors of the strength of the incentive to effect source separation with safety factors, cost, and operational feasibility.