METROPOLITAN SERVICE DISTRICT
527 S.W. HALL ST., PORTLAND OR. 97201, 503/221-1646

METRO

AGENDA SWPAC - SOLID WASTE POLICY ALTERNATIVES COMMITTEE

Date: October 24, 1983

Day: Monday

Time: 12:00 Noon - 2:00 p.m.

Place: Metro Offices, Converence Room A-1, A-2

I. Approval of September 19, 1983 Minutes of the meeting

II. For Information: Dennis Mulvihill

Analysis of the Yard Debris Steering Committee Report

SWPAC MINUTES

SOLID WASTE POLICY ALTERNATIVES COMMITTEE

September 19, 1983

Committee Members Present:	Shirley Coffin, John Gray, Robert Harris, Dick Howard, Dave Phillips; Chairman, John Trout
Committee Members Absent:	Paul Johnson, Delyn Kies, Gary Newbore, Mike Sandberg, Kelly Wellington, Edward Sparks
Guests:	Councilor Oleson, Bob Brown, Joe Cancilla, Jr., Dave Miller, David Sugtell

The meeting was called to order by Chairman John Trout at 12:12 p.m.

The Minutes of the August 22, 1983 meeting were approved as written.

AGENDA ITEM I Consideration of Options for Implementing Transfer Station in Washington County

Doug Drennen, Manager of Engineering in the Solid Waste Department, reported on the Regional Services Committee which met September 13th. The report was prepared as a result of the Washington County Transfer Station Committee that was formulated by the Council in July 1982. The Committee was comprised of representatives of local jurisdictions in Washington County to look at the implementation of a transfer station. The Committee concluded, in the seven meetings held, that Metro should begin immediately to begin action which would lead to a transfer station in Washington County based on the fact that other landfills are closing and other transfer stations are probably going to be necessary as a result of landfills either being restricted to transfer vehicles only or future landfill distance from the points of generation. Currently neither the Metropolitan Service District or Washington COunty have funds available to begin a landfill search in the county. The Committee concluded their work in July 1983, and said we should proceed with the transfer facility and be ready when the landfills close...primarily Hillsboro and Newberg landfill.

The Committee considered the options for implementing the facility and stated the Metro Council should review. They did not make a recommendation in this area but asked Metro to implement the facility expediently and at the least cost.

The Committee's three options are:

(1) Metro accepts franchise applications predicated on the construction of a facility by a certain date.

(2) Metro builds, owns and contracts operation of the facility as we did with the CTRC.

Option 3. Metro develops an RFP for a firm to design, build and operate the facility with a process similar to the E.R.F.

At the Regional Services Committee a fourth option was presented by Genstar Conservation Services, Inc., in conjunction with the Washington County haulers. This called for a franchise to be awarded to Genstar for implementation of this facility. The specifics of that proposal were not outlined but were composed of a summary of a cooperative effort between the vender and the haulers in Washington County for Metro to consider.

Several members questioned whether there was much difference between option one and option four. Dan Durig pointed out that a franchise would be issued under all options. The main difference between the RFP process and option one or four is that the RFP process would lay out specific standards that must be met versus a more reactive process of analyzing possibly only one application for a franchise.

Dennis O'Neil brought up the issue that currently the franchise ordinance prohibits the haulers from being involved in franchising.

Mr. Durig stated the attorney would review this process. There were two items in the franchise that do not appear to fit the proposal as we know it from the Genstar-hauler group. One is the hauler being involved, the other is the five-year limitation in the franchise. They've talked informally of lengthening that. Mr. Durig added there was a lot of work to be done on the issues.

Mr. Trout responded they looked into the matter of haulers being involved in landfills. The reason the prohibition was initially established had to do with the operation of St. Johns. The city had that out for contract and there became a definite problem in that area. The industry indicated to Metro at that time that where you had franchise collection it had no application.

Doug Drennen commented that the clause was drafted because of preferential treatment by the hauling company which operated the disposal site. A hauling firm could influence by directing traffic certain ways or by allowing their trucks to dump at certain stalls, etc. Consequently, one of the main issues was preferential treatment which would carry over into a transfer operation.

Mr. Trout remarked if you have thirty or forty companies you can wind up in that situation. You're looking here at an operator and a consortium of haulers, not an individual hauler, and it's still going to be operated by a contractor who is not in collection. You would not have that particular problem area.

Mr. Trout asked Dave Miller, from the Washington County haulers to talk about the fourth option. Mr. Miller declined because he had not been involved in those negotiations and was attending the meeting from an informational standpoint.

Councilor Oleson stated there was a general consensus from the majority of the Committee to try to develop the joint venture options in a way that would be more acceptable to the major parties involved. He asked if the SWPAC Committee would offer advice or reaction to the issue involved with Genstar and the haulers and also the issue involving public control over the project.

Mr. Trout asked for some feedback from staff regarding the fourth option presented at the Regional Services meeting.

Mr. Durig replied it needed further review and was a question of how you wanted to allocate risk, cost and control. The fourth option was really a franchise and though you would give up a certain amount of control you would also give up a certain amount of risk. Metro needs to see what the attorney has to say and what kind of approach would fit into what currently exists as a system. He also added he had serious concerns about awarding a five to six million dollar contract without a competitive bidding process. He strongly recommended some kind of competitive bidding.

Shirley Coffin said there was probably an intangible thing we can't measure, but it's very valuable in the fact that the Washington County folks have come forth to propose this so we would assume they would be happier with this arrangement than with the others. Good will would be generated in Washington County if we take this into consideration.

Dave Phillips concurred with her statement. He felt the important issue was what was going to generate the maximum amount of cooperation in getting this project going. He said if it took some changes to to facilitate a cooperative effort he would encourage that happening even though it may not mean as much control. He stated he wasn't as concerned over who owned the building as he was over the rates, and standards of service.

Mr. Durig responded that was the crux of the argument on how affectively you can write control into a document if you don't own the facility. There were many possibilities to consider before concluding the issues.

Mr. Trout replied he didn't see why Metro should have such concerns about control. If Metro is collecting user fees and other appropriate fees throughout the system then where is the concern? The concept that came out of the rate review committee was benchmark pricing and if you don't go above the benchmark you can charge what you want below it so where would Metro be concerned?

Mr. Durig said he was concerned with public service because that is why Metro is here. Our responsibility is to provide and make sure that solid waste facilities are in place and available to the public. We became involved because of the failure of the system that was out there to provide what was needed. At some point, through state statute and legislation, it was decided Metro should be in the business. Always being available to the public is his concern about control. Having the best possible price for the public is another thing that concerns Metro. If there was to be a falling out between any of the two or three parties involved in a joint venture or the facility was not available to the public because of a labor dispute or a clash between partners, as has happened to some joint ventures in other parts of the country, then Metro would always want to be sure that access was always available to the public and commercial haulers to that facility.

Mr. Durig said that in this country ownership implies much more access than trying to control conditions through a written agreement. He said he had operated probably 15-20 franchises during his career and you don't have nearly the control under franchising that you do when you actually own the building. You have to think about controls more for the bad times for that's the time for concern. For example, would somebody with money in the facility, such as ownership by the hauling industry, be as willing to follow Metro control as would somebody without money in the venture? That could possibly happen.

Mr. Trout commented that if Metro permits identify and call for it to be a public facility and available to the public, he thought it was enforceable.

Mr. Phillips said practically every franchise dealing with garbage has provisions in it whereby you can step in, in the event of some of these unforeseen circumstances you've talked about, and actually operate the facility--or in the case of collection, have the right to go out and take the trucks. These laws have been implemented in Oregon at least in one case. He was most concerned about carrying something off for Washington County and making it work as rapidly as possible.

Mr. Durig stated Metro was now trying to think through the many possible approaches and the plan for the outcome five or ten years from now where there may be a landfill and three transfer stations.

Mr. Phillips said the collectors also were concerned with the control issue and gave some time to discussion of going outside the jurisdiction of Metro and building a facility but they felt it would be better if all jurisdictions went together to make this work. However, if it's cheaper to operate privately, obviously they would look at the option of going outside.

Mr. Trout said the system allows transfer stations serving a single company. There's nothing to preclude all Washington County haulers from merging their companies and forming one company and going in and transferring their own.

Mr. Durig pointed out it was important to think of the kinds of things that could happen that would be both positive and negative for any of the options.

Mr. Trout stated the concerns of the Washington County haulers is that a facility built in the county have a cost as low as possible, yet have a facility that is sized adequately to handle not only commercial vehicles but the public and also that the design configuration be a good, workable operation.

Mr. Howard commented that from previous experience on this type of venture it would probably be 100 percent publicly owned but if the private sector were at least given a rather substantial say in its development they would have it up and running before the public folks got past all the problems it would seem to generate. There are some significant advantages to having private enterprise go out and do it. He had been hearing about a disposal/transfer operation in Washington County for many years and anything that was concrete would be an improvement.

Mr. Durig commented he'd worked both sides of the fence and it's a function of the kind of facility more than whose doing it. You go through exactly the same processes--get a land use permit, building permit, etc. He felt it was important that people have begun to agree that we should do something. A lot of work has gone into the issue by both Metro and local officials, committees, etc. All are to be commended because they've put a lot of time in bringing us to this point.

Mr. Oleson stated that Genstar made it clear that the joint venture could proceed even with the public ownership and competitive bidding. He added we need to come up with a proposal that allows them to go ahead in a way that's acceptable to all the parties concerned.

Mr. Durig declared Genstar felt very strong in their ability to compete with anybody they had to bid against on a competitive basis.

Shirley Coffin asked what kind of time line they were talking about and what kind of a facility?

Mr. Drennen answered they were proposing to analyze all these circumstances and draft a summary for the Regional Services Committee for their October 11th meeting. Mr. Durig added the key factor is to be ready when the Newberg and Hillsboro landfills close.

Mr. Drennen said the Newberg landfill will probably close sometime in October of 1984. The Hillsboro landfill permit is due to expire this year.

Mr. Brown replied they weren't going to let Hillsboro landfill close until it's full. It's based on the life of the site. Mr. Drennen estimated that it should last til the end of 1985 assuming waste flow at the high end of the predicted range.

Mr. Durig said the real need is to be sited at this point. We need a formal recommendation from Metro Council that the transfer station is needed. The Council needs to decide (1) What involvement do you want from the private sector and public sector? (2) Which mechanism do you want to use--Franchising or RFP process? We need to sit down and go through the logical process of pros and cons.

AGENDA ITEM III: Consideration of awarding contracts to construct a truck wash facility at CTRC

Doug Drennen stated staff proceeded, at the direction of the Council, to develop a design for the facility and obtained bids. One of the reasons the facility was not built into the original design was that it was to be part of the energy recovery facility and we had limitations from Oregon City on discharging any sanitary water into their sewer system from CTRC. Since the Tri-cities sewer project has proceeded, circumstances have changed. Therefore when we submitted for permits we submitted to the Tri-cities sewer sanitation district. They allowed us to go ahead with the facility with the provision to eliminate any intrusion of storm water. The only way we could proceed was to have some kind of roof protection. We bid out the construction with a roof included in the package. The total engineer's estimate for the project was $78,000. That was $48,000 for the base facility and an additional $30,000 for the roof. There were three bids for the base facility. The contracts were broken up, primarily because they were two different types of activities. We could get specialty companies and eliminate one general contractor as a more cost-effective way of doing it. The low bidder for the base facility--paving, concrete pad, storm under drains, was $66,229. The roof bid, which was just the roof structure itself, was $26,0000 for a total of $97,732. That was 19 percent above the engineer's estimate. This report was made to the Regional Services Committee and they did not make a recommendation. It is before the Coordinating Committee tonight. Right now we have no formal recommendation from the Council. We've asked the hauling industry to give us some indication of their support to proceed with this project.

Mr. Trout stated that Joe Cancilla, President of PRROS, had given him a letter to the Council from the Tri-county Council. The Haulers Association they represent had discussed the washrack issue. With due consideration to the initial cost of this project, it is felt the industry could live with the proposed increase of six cents per ton for five years as long as there are no unexpected or additional costs during that time. However, 2½ cents per ton for maintenance and upkeep is a more realistic figure after the five-year period is up. They appreciate being consulted on solid waste issues that are directly or indirectly affecting the industry and hope to see the practice continued. The letter was signed by Mr. Cancilla, by Clackamas County Haulers Association, Multnomah County Haulers Association, Portland Association of Sanitary Service Operators, Teamsters Local 281, Washington County Haulers, and Oregon Sanitary Service Inst.

Mr. Drennen pointed out that the six cents per ton was based on the engineer's estimate. The other cost involved with this is maintenance and the cost to purchase water and have that water treated. Currently the price of six cents is adequate, however, Metro is subject to laws by Tri-cities Sewer District and the Oregon City water rates, plus whatever the contractor charges to keep the maintenance up. So this is based on current fees and current costs. Tri-cities might be higher in three years based on these issues. They are unforeseen at this point.

Mr. Trout asked why we needed to cover it. Mr. Phillips answered that Treatment Plant Operators don't want storm water in the plant because they are processing water that shouldn't be going through and that costs money. They are also building the plant with federal money and it's mandated to separate their storm sewers. Mr. Cancilla added it's not just Oregon City, it's a statewide law for sewer systems specifically conforming to get the federal grant.

Mr. Drennen stated Oregon City wanted to keep the facility size down to a minimum and arbitrarily recommended we use three stalls there. We have appealed the condition . Four stalls would provide better traffic flow and eliminate potential backup. MBE requirements of the low bidder were being checked. It may be rebid.

Mr. Trout asked if Metro would like a consensus from the committee since they didn't have a quorum. Mr. Durig answered yes. A voice vote supported the building of the wash facility at CTRC unanimously. They recommended support of the wash rack at the CTRC facility.

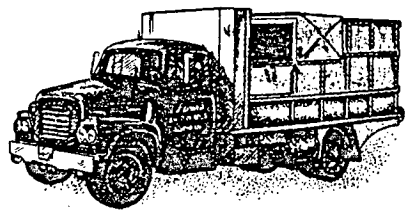
Mr. Trout declared there used to be a criteria for attendance and if it fell below a certain level members might be asked to resign so they could be replaced.

Dennis O'Neil said he believed three unexcused absences meant they were off the Committee. The selection process would soon begin for members whose terms would begin after the first of the year.

The meeting adjourned at 1:19 p.m.

Written by Bonnie Langford

WASHINGTON COUNTY
REFUSE DISPOSAL ASSOCIATION, Inc.
P. O. Box 23301 Tigard, Oregon 97223



October 11, 1983

Metropolitan Service District
527 S. W. Hall Street
Portland, Oregon 97201

Regional Services Committee October 11, 1983

Supplemental report by Genstar Conservation Systems and Washington County Refuse Collectors regarding a Transfer and Recycling Center in Washington County.

Genstar Conservation Systems (Genstar) and the Washington County Refuse Collectors (WCRC) have been requested to submit further information in connection with their report and proposal to the Regional Services Committee on September 13, 1983. Specifically, we have been asked to provide further description of our proposal for providing a Transfer and Recycling Center in Washington County.

Outline Description of Proposal

(1) Genstar and WCRC propose a joint venture to site, design, construct and operate the Washington County Transfer and Recycling Center (WCTRC).

(2) The joint venture is prepared to finance the capital requirements of the WCTRC.

(3) The facility will be designed to maximize the potential for recycling and to allow for other resource recovery alternatives as they become practical.

(4) The facility will be operated to serve the public and commercial refuse collectors.

Options for Implementing Proposal

Option 1: The joint venture will site, design and construct WCTRC and submit the facility to Metro for regulation under the provisions of an agreement relating to operations and regionalization of fees.

Prior to proceeding with this option, it is assumed that the technical requirements for the facility will have been identified by Metro.

Option 2: Metro will publicly advertise a special Council meeting to be held on a date certain (not later than November 30, 1983) to receive and consider submissions from parties interested in developing a Washington County Transfer Station. Presentations will be conceptual in nature, but contain sufficient data to allow Metro Council to determine whether private industry can satisfy the needs for such a facility. If Metro Council agrees that the private sector is responsive, then the Council will identify a private group with which it is prepared to contract for the needed services.

We hope that the foregoing information is sufficient additional detail to permit the Committee to evaluate the proposal. Representatives of the joint venture will be in attendance at the Committee meeting to respond to questions and provide further information if requested.

Yours very truly,

WASHINGTON COUNTY REFUSE COLLECTORS ASSOCIATION

By_____
Drew S. Ryan, Jr.
President

GENSTAR CONSERVATION SYSTEMS, INC.

By_____
W. Alex Cross
Vice President

eis

STAFF REPORT

Agenda Item No. _____

Meeting Date _____

CONSIDERATION OF YARD DEBRIS DEMONSTRATION GRANT REPORT

Date: October 17, 1983 Presented by: Dennis G. Mulvihill

FACTUAL BACKGROUND AND ANALYSIS

The problem is yard debris--limbs, brush, vines, leaves and grass--and how the 600,000 cubic yards which is generated each year in the metropolitan area is disposed of. As can be seen in Figure 1 (see Executive Summary, Yard Debris Demonstration Project Report, p. 2), most people either compost, give it to the garbage collector or self-haul it to the landfill. But some people burn it.

Burning is a problem because the Portland metropolitan area is designated a non-attainment area for National Ambient Air Quality Standards for total suspended particulates and the Department of Environmental Quality (DEQ) has identified open burning of yard debris as a significant controllable source of particulate air pollution.

To address this the Environmental Quality Commission (EQC) adopted a ban on backyard burning of yard debris in December 1980. Faced with possible legislative action, they lifted the ban in March 1981. The Legislature concluded that local governments did not have a reasonable means to dispose of the additional yard debris to be generated by the ban and adopted SB 327. The Bill prevented the EQC from re-instituting the ban until June 30, 1982. Thereafter, EQC could only impose a ban if such prohibition was necessary to meet air quality standards and alternative disposal methods were reasonably available to a substantial majority of the population.

Subsequent to this action, Metro was awarded a $265,000 grant from the Environmental Protection Agency (EPA) in January of 1981. The purpose was to "provide funding for the demonstration of usable alternative uses of yard debris to prevent the resumption of backyard burning and the loss of air quality benefits." "The demonstration program would be managed and evaluated by a regional coordinator and a Project Steering Committee made up of DEQ, Metro, City of Portland and other pertinent jurisdictions."

In May 1983 the Steering Committee issued a report on the Demonstration Program. "The purpose of this report is to evaluate the Yard Debris Demonstration project and outline collection, processing and market options which could be pursued in the

future."[1] Following this a public forum was held asking local jurisdictions, the hauling industry and citizens to evaluate the appropriateness of the report's findings and recommendations. (See attachments.)

The purposes of this staff report are to assess whether the goals and objectives of the grant project were achieved and to discuss future actions by Metro.

The project goals established by the grant were to "demonstrate publicly acceptable and feasible alternatives for the recovery of yard debris in the Portland metropolitan area. Based on the final evaluation of the project, to recommend an implementable regional yard debris recovery program."

To meet this goal the grant established the following objectives which needed to be achieved:

1. "Demonstrate that a total ban on backyard burning in the Portland metropolitan area can be implemented without placing an additional burden on the area's scarce landfill capacity."

2. "Demonstrate that special processing techniques can convert the yard debris waste stream into a valuable usable resource."

3. "Provide a better information base to implement a viable alternative program on a permanent basis."

Based on information found in the report and the results of the public forum, it has been determined that the demonstration of the goals and objectives was not totally achieved.

The information used to arrive at this conclusion is developed below. It includes a discussion of what needed to be demonstrated, what was demonstrated, economic factors to consider, and public forum results and concludes with policy options.

A regional yard debris recovery program is composed of three elements: collection, processing and markets/reclamation. The information base created by the grant contains adequate information on only two-thirds of the equation, collection and processing.

"According to the grant request work scope, the strategy was to process the material into several possible products. Once the products were established, markets would be developed and (hopefully) the private sector would take over the operation with

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[1]A Demonstration Project for Recycling Yard Debris, March 1983, p. 3.

Metro supplying the waste material."[2] Some buyers were developed in the fuel, soil additive and ornament markets, but they were either very limited in volume needs or a cheaper product became available.

The processors involved in the Demonstration project have suggested that the problem is one of volume, and claim that "sufficient markets can be developed to move all the finished product."[3] Supply and demand factors control this development.

The supply/volume of the material is dependent on public participation, seasonal fluctuation, storage space and processing time. The demand for the material relates directly to the dependability of a specific supply, uniform content and the price of competing products. Processors feel that if public participation and a dependable supply are delivered by government, they can handle the remaining factors and develop the markets. It was not demonstrated by the yard debris project that diversion efforts or other methods instituted by government could deliver an adequate supply or that the effort would create a stable market.

The lack of developed markets limited achievement of the project's objectives; consequently, the goals could not be achieved.

- Because the processors are not able to guarantee accepting yard debris material for an indefinite length of time, a burning ban's impact on the landfill could not be assessed (objective 1). It is worthy of note that if the 13 percent (84,784 yd^3) burned each year was diverted to St. Johns its closure would be hastened by 25 days over the next five years.

- Conversion of yard debris into a "valuable usable resource" was partially accomplished. The converted material is usable as a soil additive compost and fuel, but it is not valuable enough to justify processing it on a large scale; there is a limited demand for the product at the price needed for processing (objective 2).

- The flow of yard debris that can be expected using different collection systems does "provide a better information base" (objective 3). It would provide some of the information necessary to recommend an "implementable regional yard debris recovery program."

The grants goals, objectives and work scope directed that a supply of yard debris be created first then develop a market. This strategy is at odds with information contained in Metro's Waste Reduction Plan. The Waste Reduction Task Force in developing their recommendations (which subsequently became Metro's Waste Reduction

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[2]A Demonstration Project For Recycling Yard Debris, March 1983, pg. 2-20.
[3]Mark Hope, Waste By-Products, Memo, August 11, 1983.

Plan) found from their studies "that the marketing of the material (yard debris) defined the other system components of collection, storage and processing."

This theme was repeated in the California Waste Management Board's "Municipal Composting Handbook." "To ensure a successful composting program it is essential to perform an end use survey in the initial planning stage. The survey should identify how much compost can be marketed and used by the community, the product quality required for each designated end use and a realistic market value for the product. The market survey will help define the size, the processing requirements and the economic feasibility of the operation."

Discussion and testimony at the public forum focused on the issue of "publicly acceptable and feasible alternatives." There was general agreement that yard debris should not be burned if there are collection or other alternatives available. However, it was made clear that "publicly acceptable and feasible alternatives" (see grant goals) for the recovery of yard debris are, to a significant degree, determined by cost, not just by the availability of a collection system as suggested by the number 1 finding in the Report (see Executive Summary, p. 4). As one county administrator observed, "If our analysis (of the Report) is correct, the demand for service is only generated by a free program with easy access (see attachment). Those 'free' programs represent a significant cost to the sponsoring public agency which is ultimately borne by the taxpayer. Given the current economic health of most governments in the Metro region, we doubt that yard debris will receive serious consideration in any local government budget. You must ask yourself whether or not the findings of the report suggest that there is a public demand. We would suggest that it will be very difficult to justify, based on the data gathered by the Steering Committee."[4]

Two other messages came out of the public forum:

- Collection and processing alternatives need to be more adequately developed and priced before a required program is designed and implemented.

- More promotion and public education of the yard debris problem and solutions is needed.

A successful regional yard debris program must include the cooperation of the local jurisdictions, so, the concern over the adequacy of the information on collection and processing alternatives issued at the public forum needs to be addressed. The Yard Debris Steering Committee's Report's recommendations placed the

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[4]Clackamas County testimony at public forum on results of curbside collection demonstration portion of Report. This statement was corroborated by several local jurisdictions' and public testimony.

development of additional information and action on the local jurisdictions. Given current fiscal pressures, Senate Bill 405 and undeveloped markets for processed yard debris, their reluctance to spend any money experimenting is understandable.

Three elements may change this attitude.

- A market contract that is contingent upon the delivery of a certain supply for a certain price.
- The experience of having developed their own recycling plan as required by Senate Bill 405.
- The March 1984 election on a sales tax.

This concludes the assessment of the grant, but a broader discussion of yard debris is also necessary. Metro's responsibility for yard debris is not limited to this grant. The Waste Reduction plan states that the long-term goals will be met by "assuring the handling, processing and reclamation of all separated yard debris." In essence, the goals of the plan and of the grant are the same (see attachment).

The information generated by the yard debris project was incomplete for purposes of demonstrating achievement of the grants goals and objectives. The results do suggest that a regional yard debris recovery system is feasible and identified missing elements/role options for Metro beyond promotion, education and conducting the demonstration project.

The key policy question that has evolved out of the yard debris demonstration project is whether Metro should proceed immediately with the development and implementation of methods to increase the supply of yard debris (diversion ordinance, franchise ordinance, rate incentives, technical assistance, support funds, promotion and education) or conduct a feasibility study of the markets potential. (How much might be marketed and used for what purpose and what the prices of competing products are.)

Arguments for each option are developed below.

Immediate:

- The material can be processed into another usable form and because the raw material is abundant, the markets will develop if there is confidence in the supply. Even if the markets fail, the material can be landfilled or the unsold processed yard debris could be bought and used as final cover.
- The fact that processors have spent over $100,000 for equipment, is a demonstration of their belief in the future of the product and intent to receive and process yard debris and wood waste in the future.

Feasibility Study:

- The combined costs of collection, processing and marketing will determine whether the material can be recycled on a large scale. It determines the public's participation level, resulting volumes and whether processed yard debris will be purchased instead of a competing product. This information is not available.

- Effective alternatives are available to increase the supply, but the most significant question for all involved is whether the market will be there in time also. A feasibility study would remove as much of the risk as possible.

An additional element to consider in either method described above is found in SB 405, Oregon's 1983 Recycling Opportunity Act; specifically, the definition of recyclable material. According to the bill, recyclable material means:

> "any material or group of materials that can be collected and sold for recycling at a net cost equal to or less than the cost of collection and disposal of the same material."

A prospective market's interest in large volumes of processed yard debris is, in addition to cost, based on their confidence in the supply system; can a constant supply of yard debris be expected for a reasonable length of time? Inclusion of yard debris as a recycable material, under the rules for implementing SB 405, would be one method of generating confidence. A market's interest should be easier to develop and maintain because the price that has to be met in order to receive a constant supply of yard debris is known. DEQ has just begun their work on the necessary rules that must be adopted by January 1, 1985.

There is a broader policy question that must be addressed before concluding the yard debris question: If a limited amount of money is going to be spent on increasing recycling, where is it most effectively used? The Systems Planning effort will produce information that allows a comparison of roles, costs and gains. If the results of that process shows yard debris to be a high priority, then the policy question developed by the preceeding anaylsis becomes relevant. In the interim, there is a need to protect the investment made in the present yard debris recovery system and Metro's promotion and education efforts should be continued.

EXECUTIVE OFFICER'S RECOMMENDATION

The results of this project will be useful to those agencies responsible for air quality.

The information and supportive data produced by this project is excellent for use in Metro's System Plan development. It will help determine how to address the yard debris issue.

- The burning ban is not the key issue for Metro. Yard debris has a substantial impact on landfills. Landfill life could be extended approximately 20 days per year if all the material currently being buried were diverted. If all the material being burned were diverted to the landfill because of a burning ban, approximately five days of landfill life would be lost each year.

- The collection/separation system and markets needed for a diversion are not sufficiently developed.

- The project demonstrated effective promotion and education methods of use. The FY 1983-84 yard debris budget is aggressively applying this knowledge to support the existing system and protect the investment made in this issue.

All activities by Metro are consistent with the FY 1983-84 budget and the Waste Reduction Plan. No action is required.

COMMITTEE CONSIDERATION AND RECOMMENDATION

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INTRODUCTION

The problem is yard debris--limbs, brush, vines, leaves and grass--and how to dispose of over 600,000 cubic yards (cu yd) which is generated each year in the metropolitan area. As can be seen in Figure 1, some people burn their yard debris and some illegally dump it on the side of the road. Most people either compost, give their yard debris to the garbage collector with the rest of the garbage, or haul it themselves to a landfill.

The Portland metropolitan area is designated a non-attainment area for National Ambient Air Quality Standards for total suspended particulates (TSP). The Department of Environmental Quality (DEQ) has identified open burning of yard debris as a significant controllable source of particulate air pollution in the Portland metropolitan area. Thus, a need has been identified to develop alternatives to open burning. Landfilling is not an acceptable alternative since capacity is strained at present.

In December 1980, the Environmental Quality Commission (EQC) adopted a ban on backyard burning of yard debris. Metro received an Air Pollution Control Program Grant in February 1981 to develop acceptable ways to dispose of yard debris which would have been generated by the ban. The EQC lifted the ban in March 1981 because the Commission was faced with possible action by the Oregon Legislature to lift the ban. The Legislature was concluding that local governments did not have a reasonable means to dispose of additional yard debris. The Legislature then adopted Senate Bill 327 which prevented the EQC from re-instituting the ban until June 30, 1982. Thereafter, EQC could only impose a ban if such prohibition was necessary to meet air quality standards and alternative disposal methods were reasonably available to a substantial majority of the population.

PROJECT SCOPE

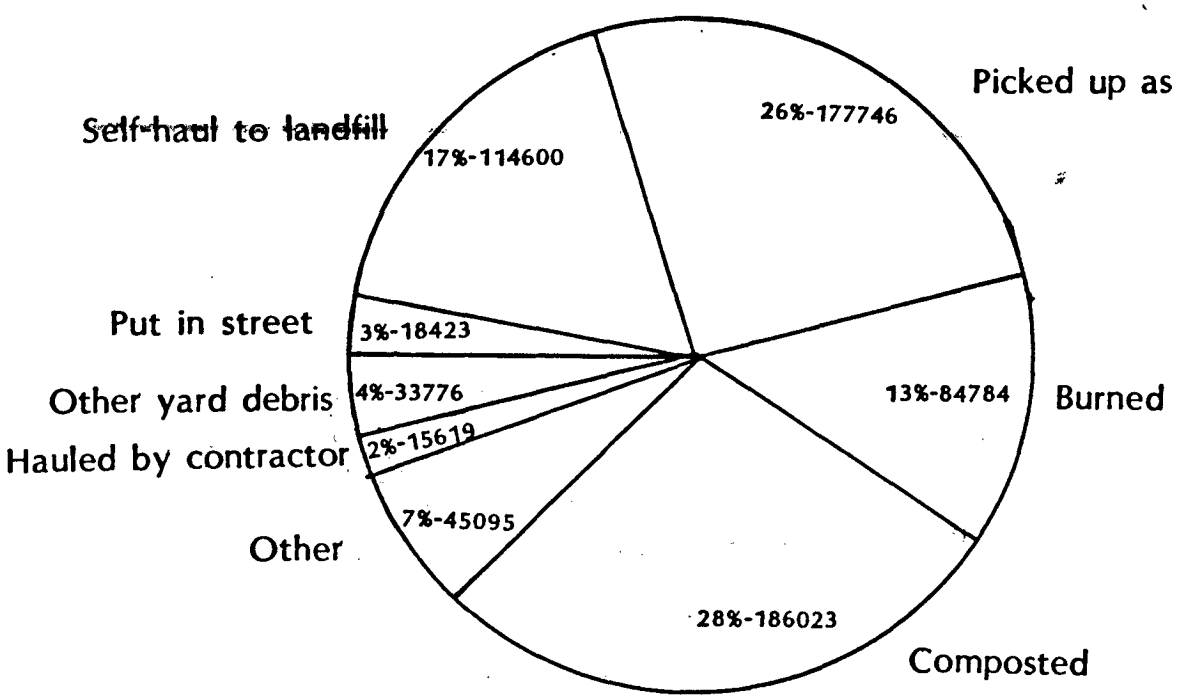
The objectives of this project were: 1) to demonstrate that a total ban on backyard burning in the Portland metropolitan area can be implemented without placing any additional burden on the area's scarce landfill capacity; 2) to demonstrate that special processing techniques can convert the yard debris waste stream into a valuable, usable resource; and 3) to provide a better information base to implement a viable alternative program on a permanent basis.

The project goal was:

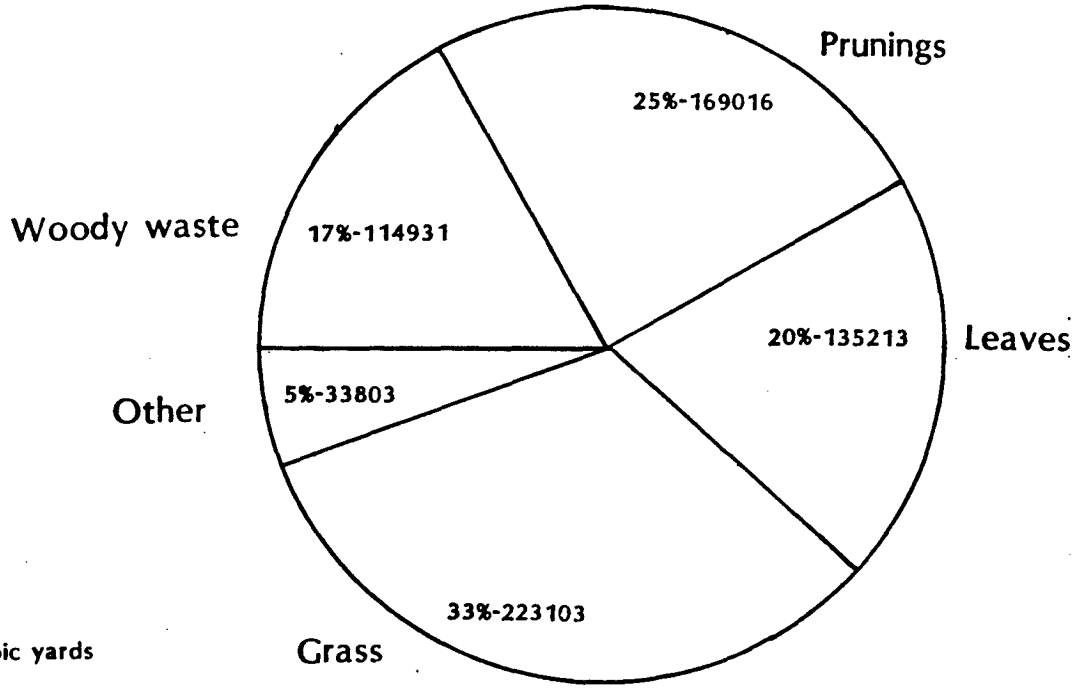
> To demonstrate publicly acceptable and feasible alternatives for the recovery of yard debris in the Portland metropolitan area and to recommend an implementable regional yard debris recovery program.

The work plan was based on the following assumptions:

What happens to yard debris?



What is yard debris?



Values in cubic yards

Source: DEQ Survey, 1979

METRO

YARD DEBRIS QUANTITIES

FIG. 1

1. There is an immediate need for a cost-effective system to adequately handle increasing amounts of yard debris due to a possible yard debris burning ban by DEQ.

2. Pressures on existing landfills discourage the continued disposal of increased volumes of material.

3. A workable solution must be based on proven examples of yard debris recovery programs, either locally or in other parts of the U.S.

4. There is a need to determine the volume and composition of yard debris as part of developing a comprehensive long-range program and market.

5. If there is an educational campaign, there will be an increase in the level of participation by the general public to do their own composting. Given either a homeowner's inability or unwillingness to compost/mulch green waste, a comprehensive program may have to address both green waste and wood waste (twigs, branches and tree limbs).

6. According to DEQ, open burning contributes to the particulate non-attainment status for the Portland Air Quality Maintenance Area (AQMA). According to the EQC and the DEQ, if viable alternatives to open burning are not available, a burning ban would be difficult to initiate and administer.

With a Coordinating and a Steering Committee of local officials, the Yard Debris Demonstration Project was conducted from May 1981 to September 1982. Metro was the coordinating agency for the project. Collection and processing alternatives were demonstrated to recover, process yard debris into marketable products. The demonstration project was conducted in several phases and an evaluation was completed for each. The purpose of the Phase Evaluations was to present the data on the collection and processing alternatives. The Phase Evaluations are in Part 2 of this report. The discussion and analysis of the alternatives are presented in Part 1.

PROJECT DESCRIPTION

The purpose of this report is to evaluate the Yard Debris Demonstration Project and outline collection, processing and market options which could be pursued in the future. The Demonstration of recovery processes and collection systems occurred in several phases over a 1-1/2 year period. The initial phase in May 1981 sought to recover only woody yard debris in a region-wide clean-up week. Shredding Systems, Inc., a processing service, demonstrated that with minor modifications, a mobile shredder could produce a marketable fuel product. In Phases II, III and IV, Waste By-Products, Inc., a waste recovery firm, showed that a Medallion 910 Grinder could process all types of yard waste into

salable fuel. McFarlane's Bark, Inc., a bark and wood products firm, improved their existing receiving site and purchased a hammermill as part of their composting demonstration. Toward the end of the project, Grimm's Fuel Co., a bark and wood products firm, started receiving yard debris and began producing a compost material. The processing alternatives demonstrated are outlined below and summarized in Table 1.

Shredding Systems, Inc.: Mobile shredding to "hog" fuel (correct usage is "hogged" fuel, but common usage is "hog" fuel).

Waste By-Products, Inc.: Mobile grinding to hog fuel. Pre-grinding, screening and magnetic separation, grinding to hog fuel and compost.

McFarlane's Bark, Inc.: Hammermilling, screening and composting in large stockpiles to compost products.

Grimm's Fuel Co.: Hammermilling, screening and composting in windrows to mulch/compost or hog fuel products (proposed).

Six collection alternatives were demonstrated in Phases II, III and IV. On-call and on-route curbside collection by private haulers and municipal crews were conducted. Two clean-ups were also held. A summary of collection alternatives demonstrated are in Table 1.

Case Study 1: Oregon City - On-route curbside collection by city crews.
Case Study 2: Lake Oswego - On-call curbside collection by franchised hauler.
Case Study 3: West Linn - On-call curbside collection by city crews.
Case Study 6: City of Portland - Neighborhood clean-ups.
Case Study 7: City of Beaverton - City-wide clean-up by city crews and franchised haulers.
Case Study 8: Southeast Portland - On-route curbside collection by non-franchised hauler.

FINDINGS

This section summarizes the results of the analysis of the Yard Debris Demonstration Project.

General

1. It has been demonstrated that with an adequate collection system, recycling of yard debris into hog fuel, mulch and compost is a publicly acceptable and feasible alternative for the recovery of yard debris in the Portland metropolitan area. Although an area-wide collection is not now in place, it has been demonstrated that feasible collection alternatives are available, or can be made available.

2. It has been demonstrated that it is less expensive to process and recover yard debris than landfill the material.

   Total costs for processing yard debris, exclusive of revenues from fees or marketed product, is $1.48-$3.45 cu yd. The cost to landfill is about $3.00 per cu yd.

3. As a result of the demonstration project, three processing centers were established as a viable alternative to burning or landfilling of yard debris. The alternatives are available to citizens, commercial landscapers and collectors who want to dispose of source separated yard debris and/or wood waste.

   The processing demonstration project was a success. Most of the project effort was made in the processing alternatives and as a result, Waste By-Products in North Portland, McFarlane's Bark, Inc. in Clackamas and Grimm's Fuel Co. in Sherwood have set-up sites to receive and process yard debris and wood waste.

4. It has been demonstrated that mixed yard debris can be processed into marketable products.

   It has been demonstrated that mixed yard debris can be processed and sold as hog fuel for use in industrial boilers. It has been demonstrated that mixed yard debris can be processed into a compost product. The two processors who will market the product expect to sell all the compost produced from their operations. Two hog fuel markets were identified in the project--Weyerhaeuser Corp. in Longview, Washington, and Willamette Industries in Albany, Oregon. They have paid for hog fuel produced in the project. Although McFarlane's and Grimm's market compost material at their sites, not enough information has been generated to determine the levels of demand for the product. McFarlane's and Grimm's are currently developing products from the yard debris processed during the demonstration.

5. The three processing centers conveniently serve a majority of the region when convenience is defined as a condition where a user is within a 20-minute one way trip of a processing center.

   Three current processing sites are conveniently located in the region. They are located on or near major highways and are

   Author's Note: At the time of publication, a fourth site started receiving yard debris. The Wood Yard, Inc., a bark and wood products company in Aloha, will contract with a processor to produce hog fuel. The Wood Yard will deliver hog fuel to the supplier of their unprocessed bark. They say they could receive 10,000 cu yd of yard debris each month. This site would serve the Aloha, Beaverton, Hillsboro, Cornelius, Forest Grove area in Washington County.

generally accessable to a majority of residents in the region. However, according to traffic analyses, areas of Washington County and East Multnomah County are lacking convenient processing sites.

6. It was found that the four processors were willing to to take substantial risks (costs of equipment, site development, etc.) to participate in the demonstration project.

   All processors who participated in the project purchased equipment and/or developed processing sites. All have spent well over $100,000 for equipment with the intent of receiving yard debris and wood waste in the future. In addition, processors with sites committed labor and material from other parts of their operations, and risked having to dispose of stockpiled material if products could not be marketed. Some reasons risks were taken:

   - Processors were encouraged by EPA funding and DEQ support
   - Environmentally conscious
   - Processors were in wood or waste processing business

7. In 1983, the three established processing centers will be capable of receiving and processing all the yard debris generated in the region.

   On the basis of on-site storage, unloading spaces, site access and safety, the three processing sites could receive well over 600,000 cu yd of yard debris this year. Because of their small site, Waste By-Products must continue to sell and remove their material. McFarlane's and Grimm's, however, could accept and process over 400,000 cu yd of yard debris and store over 20,000 cu yd of compost.

8. To cover costs, Grimm's Fuel Co. must receive and process 5,350 cu yd per month of yard debris (64,200 cu yd per year); Waste By-Products needs 6,000 cu yd per month (72,000 cu yd per year); and McFarlane's needs about 5,000 cu yd per month (60,000 cu yd per year) for a total of 196,200 cu yd annually.

9. 196,200 cu yd of material could be generated annually, if the following occurred:

   - divert all yard debris currently self-hauled by the public to landfills (100,000-115,000 cu yd);
   - divert all yard debris currently hauled by landscapers (14,000-16,000 cu yd); and
   - divert all yard debris currently being burned (76,000-85,000 cu yd).

   From the data and interviews, the three processors need substantial yard debris and wood waste to continue operating. Waste By-Products, who produces a hog fuel product, needs more than just yard debris to sustain operations. They need wood

waste from commercial sources to improve the fuel value of the (sometimes very wet) yard debris.

10. Of the six collection alternatives demonstrated, on-route curbside collection by the private hauler was most effective in terms of economics, efficiency and public convenience.

    Costs for a one-time pick-up of yard debris by a private hauler including disposal varied from $4.50 - $5.25 per loose cu yd and $2.50 - $8.00 per participant. The range of costs was large because of the difference in collection methods, housing density and yard debris generation per household of the collection alternatives. City sponsored clean-ups with voluntary labor and donated equipment were the least costly collection alternatives demonstrated. Low resident voluntary participation and small quantities of yard debris recovered were generally experienced when demonstrating collection alternatives.

11. Yard debris was received uniformly from March through November.

    With a few exceptions, flows of yard debris were generally consistent except in the winter months (December, January, February) when flows fell off. Quantities of yard debris in Phase II (October-February) averaged over 1,000 cu yd per week and in Phases III and IV (March-September), average quantities increased to 1,400 and 1,700 cu yd per week (in first nine weeks) respectively. High flows were experienced in July and August when backyard burning was prohibited. The current rate is about 6,000 cu yd per month.

12. There were problems with contamination of yard debris during the demonstration project and it was found that the best way to prevent contamination of the compost and hog fuel products was to thoroughly inspect unloading of yard debris.

13. As a result of recoverying over 65,000 cu yd of yard debris during the demonstration project (10 months), over 8,000 cu yd of landfill space was saved.

    This savings is equivalent to increasing the St. Johns Landfill life over four days. Over $36,000 in disposal costs would have been spent if the demonstration project had not been conducted.

Promotion

1. Promotion/public information efforts significantly increased calls to the Recycling Switchboard.

2. Highest interest (demonstrated by calls to the Switchboard) was generated when posters/brochures/flyers were widely distributed during an intense campaign. Mass media by itself resulted in lower level of interest.

3. According to a questionnaire survey, more participants learned of the program by radio ads than by newspaper ads.

4. The number of calls to the Recycling Switchboard increased just after new television spots were aired.

5. The number of calls to Switchboard increased during spring and fall, and decreased during winter and summer months.

6. Frequent news releases leading to news stories produced an increase in calls and a decrease of calls was expereienced during periods when no news releases were issued.

RECOMMENDATIONS

Citizens (generators, transporters, disposers)

All citizens in the region should use available recovery alternatives to recycle yard debris.

1. Citizens who generate yard debris should compost yard debris on their property rather than disposing of the material.

2. Citizens who generate yard debris, and who do not have separate collection alternatives available, should try to keep yard debris separate from garbage and consider either contracting with a hauler to collect separated material or self-hauling the material to a processing center.

3. Citizens who need ground cover or soil additives for their gardens should purchase mulch or compost from the processing centers producing this material from yard debris.

4. Citizens who do not have separate collection of yard debris should encourage their local jurisdictions to provide service.

5. Citizens who do not have separate collection of yard debris should consider conducting small neighborhood projects and contracting with a hauler to collect material and take it to a processing center.

Local Jurisdictions (generators, transporters, collection authorities, disposal and fire districts)

All local jurisdictions should identify options for the collection of source separated yard debris and provide for those options if feasible.

1. Local jurisdictions should thoroughly investigate all collection alternatives to determine which would be most effective for their local situation. Local jurisdictions who start collecting yard debris should conduct the service on a trial basis to get information on costs within their system.

2. Local jurisdictions which generate and transport yard debris should keep the yard debris separate from garbage and take it to processing centers.

3. Local jurisdictions which are currently collecting separated yard debris using city crews should consider continuing this service.

4. Local jurisdictions which have collection franchise authority should consider having their hauler collect separated yard debris by sponsoring neighborhood clean-ups, or by conducting on-route or on-call collection projects.

5. Local jurisdictions with disposal authority should consider diverting separated yard debris from solid waste facilities.

6. Local jurisdictions with disposal authority should enforce scavenger dumping of yard debris and open burning regulations.

7. Local jurisdictions without franchises should consider organizing neighborhood clean-ups and/or contracting with private hauler(s) to conduct on-route or on-call collection projects.

8. Local jurisdictions which need ground cover or soil additives for public areas should consider purchasing mulch or compost from the processing centers producing this material from yard debris.

9. Local jurisdictions located far from processing centers should consider establishing temporary sites for receiving yard debris during times of high generation. Stockpiled yard debris could then be processed by mobile processing equipment and transported to processing centers or to markets.

10. Local jurisdictions should support regional and state public awareness efforts by assisting with the distribution of promotion and education materials.

Regional (disposal authority)

Metro should take appropriate measures to keep existing processing operations viable.

1. Metro should divert separated yard debris from their solid waste facilities.

2. Metro should enhance public awareness of composting, yard debris collection projects and the processing centers by conducting a comprehensive promotion program. Metro should consider promoting the use of yard debris garden products.

3. Metro should consider including yard debris as a material to be recovered in residential recycling programs proposed by Metro.

4. Metro should assist local jurisdictions in locating and siting temporary yard debris receiving/processing sites if requested by local jurisdictions.

State (disposal authority)

DEQ should take appropriate measures to keep existing processing operations viable.

1. DEQ should take steps to divert separated yard debris to processing facilities.

2. DEQ should enhance public awareness of composting, yard debris collection projects and the processing centers by assisting Metro in its promotion and education efforts. DEQ should consider promoting the use of yard debris garden products.

3. DEQ should periodically inspect processing centers to determine whether they are safe and environmentally sound.

4. DEQ should provide financial incentives (tax credits, etc.) to assist processing centers.

Commercial Haulers (transporters)

Commercial haulers should participate in the efforts of citizens and governments to recycle yard debris.

1. Commercial haulers with or without collection franchises should work with local jurisdictions to organize separate collection of yard debris.

2. Commercial haulers who offer drop box service should inform customers that they could save money on the disposal charge if only yard debris or wood waste was disposed.

3. Commercial haulers should determine which regular customers produce contamination-free loads of yard debris and wood waste.

4. Uncontaminated loads of yard debris should be taken to processing centers rather than disposed at landfills.

Processors (disposers)

Processors should continue to process and sell yard debris brought to their sites and they should continue to develop and sell the yard debris garden/fuel products.

1. Processors with sites should consider contracting with commercial haulers to receive loads of pure yard debris or wood waste.

2. Processors with sites should work closely with Metro, DEQ and local jurisdictons to inform them of project needs.

3. Processors with sites should ensure that their operations are safe and environmentally sound and are in accordance with local regulations.

4. Before making significant supply commitments, processors who produce compost or mulch products should be certain about the compost process; product consistency (quality); and production rate.

5. Processors with sites should consider joint marketing of products.

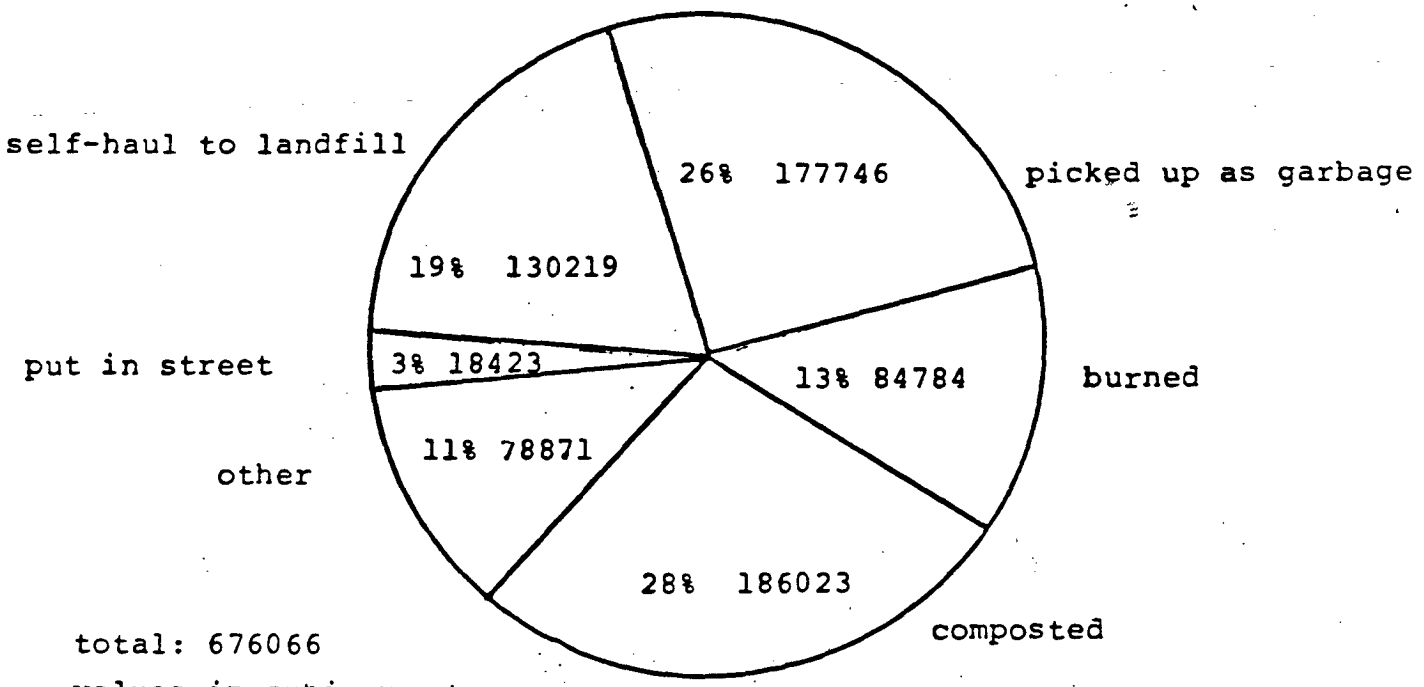
TABLE 1

Program Summary

Phases	Dates	Collection Alternatives	Processing Locations	Yard Debris Quantities	Level of Participation	Promotion
I (woody waste only)	May 16-24 1981 (1 week)	West Linn - Rossman's Sanitary Service Troutdale - Edwin O. Ege Sanitary Service City of Portland - Clean-ups	St. Johns Landfill Rossman's Landfill Obrist Pit	1,613 cy. yds.	610	News Releases Flyers Brochures PSA TV PSA Radio Newspaper Ads
II	October 23-February 28 1982 (19 weeks)	Case Study 1 - Oregon City Case Study 2 - Lake Oswego (2 collections) Case Study 3 - West Linn	St. Johns Landfill (Case Study 4) McFarlane's Bark (Case Study 5)	20,743 cu. yds.	5,657	Radio Spots Brochures Newspaper Ads PSA Tags News Releases
III	March 1-June 30 1982 (17 weeks)	Case Study 6 - City of Portland Clean-ups Case Study 7 - Beaverton Clean-up Case Study 8 - Waste-Go Services (S.E. Portland)	St. Johns Landfill McFarlane's Bark	24,141 cu. yds.	16,758	Radio Spots News Releases Brochures Presentations
IV	July 1-September 30 1982 (13 weeks)	-	St. Johns Landfill Waste By-Products McFarlane's Bark Grimm's Fuel	18,336 cu. yds.	6,608	Presentations

WC:bb
12/9/82

YARD DEBRIS FACTS



total: 676066
values in cubic yards
source: DEQ survey 1979

LANDFILL IMPACTS [1]

If all yard debris currently landfilled were diverted from the landfill, the landfill life would be extended by 20 days per year.

If the 84,784 yds^3 of yard debris currently being burned were diverted <u>to</u> the landfill due to a ban on backyard burning approximately 5 days of landfill life would be lost each year.

[1] 15000 yds^3 of yard debris is the equivelent of one days refuse received at St. Johns landfill.

WASTE REDUCTION GOAL

The Metro waste reduction goal is to decrease solid waste volumes by reducing the amount of solid waste generated by reclaiming materials instead of disposing of them.

Long-term Goal -- Reduce the amount of solid waste disposed by 83 percent:

- by assuring the handling, processing and reclamation of all separated yard debris;
- by reducing the residential and commercial solid waste by 30 percent through the recovery of all available recyclable materials; and
- by reducing the remaining residential and commercial processible solid waste by 75 percent through resource recovery.

Short-term Goal -- Reduce the amount of solid waste disposed by 56 percent (in 1985):

- by assuring the handling, processing and reclamation of 40 percent of all separated yard debris;
- by reducing the residential and commercial solid waste 2 percent per year by recovering one-third of all available recyclable materials (approximately doubling the amount of recyclable materials currently being recovered);
- by reducing the remaining residential and commercial processible solid waste by 66 percent through resource recovery.

YARD DEBRIS RECOVERY PROJECT

The Task Force recognized that Metro involvement in a yard debris recovery project was justified due to the potential impact of a ban on backyard burning on the regional solid waste disposal system. Several options are available in developing a project; however, the Task Force realized that the marketing of the material defined the other system components of collection, storage, and processing. Recommendations by the Task Force assigned responsibility and operation to the private sector and held the waste generator accountable for system costs.

PUBLIC FORUMS

PUBLIC FORUMS FOR REVIEW OF THE STEERING COMMITTEES RECOMMENDATIONS WERE HELD AS FOLLOWS:

DATE: August 18, 1983

TIME: 3:00 p.m. - 5:00 p.m. and 7:00 p.m. - 10:00 p.m.

PLACE: Metro Council Chambers

NOTICES MAILED: 400 throughout region

INDIVIDUAL CONTACTS BY STAFF - 18 cities and counties administrators

SPECIAL INTERESTS CONTACTED - waste collectors materials processors

MEDIA RELEASES - 3 releases to 50 media sources each time

WRITTEN RESPONSES RECEIVED: FOUR FROM LOCAL JURISDICTIONS
NINE FROM PRIVATE CITIZENS

ATTENDANCE: APPROXIMATELY 80

Metro should be active in the following project elements:

- develop an educational program for citizens in home composting of yard vegetation;
- promote collection by existing private hauling systems;
- develop convenient centralized facilities for material storage, possibly offering a location at area disposal sites for storage and processing;
- promote processing through composting and chipping in the following priorities: 1) utilization at the residence; 2) neighborhood utilization projects; 3) central processing facilities; and 4) disposal of processed material;
- assist in seeking markets for the collected and processed material, possibly providing coordination for a regional effort.

In order to utilize the material at the source, the Task Force stressed the need to first undertake a household compost education project. The key to the use of the remaining material is Metro's assistance in securing markets for the processed material. In addition, Metro should develop convenient storage facilities at area disposal sites.