BEFORE THE COUNCIL OF THE
METROPOLITAN SERVICE DISTRICT

FOR THE PURPOSE OF APPROVING PROJECTS FOR THE ONE PERCENT FOR RECYCLING PROGRAM 1990-91 FISCAL YEAR	))))	RESOLUTION NO. 91-1385 Introduced by Rena Cusma, Executive Officer

WHEREAS, A One Percent for Recycling Program was established by Ordinance No. 88-250B on July 14, 1988, to foster implementation of innovative recycling projects and programs; and

WHEREAS, An Advisory Committee was created to develop criteria and guidelines for the One Percent for Recycling Program; and

WHEREAS, Recommended criteria, guidelines and a Request for Proposals were adopted by the Council of the Metropolitan Service District on September 13, 1990, (Resolution No. 89-~~1233~~ 1167); and

WHEREAS, The Advisory Committee received and evaluated 39 proposals and interviewed 12 proposers; and

WHEREAS, The Recycling Advisory Committee has recommended 10 projects to be funded, in addition to Phase II of the OMSI Recylotron exhibit funded at $60,000 for a total of 11 projects during this funding cycle; and

WHEREAS, Four hundred and seven thousand dollars ($407,000) for recycling projects is available this fiscal year to fund projects; 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 Council of the Metropolitan Service District, as provided in Section 5.04.050 (a) of the Metro Code, approves the projects recommended by the One Percent for Recycling Committee as shown in Exhibit A.

ADOPTED by the Council of the Metropolitan Service District this 24th day of January, 1991.

Jim Gardner

Jim Gardner, Deputy Presiding Officer

JM:ay
January 7, 1991
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SOLID WASTE COMMITTEE REPORT

CONSIDERATION OF RESOLUTION NO. 91-1385, FOR THE PURPOSE OF APPROVING PROJECTS FOR THE ONE PERCENT FOR RECYCLING PROGRAM 1990-1991 FISCAL YEAR

Date: January 17, 1991 Presented by: Councilor McLain

Committee Recommendation: At the January 15, 1991 meeting the Committee voted 4-0 to recommend Council adoption of Resolution No. 91-1385. Voting in favor were Councilors Gardner, McFarland, McLain and Wyers. Councilor DeJardin was excused.

Committee Issues/Discussion: Judith Mandt, Assistant to the Solid Waste Director, presented the report from the 1% for Recycling Committee. The 1% Committee recommended funding eleven projects, for a total amount of $407,000.

With regard to funding a proposal for a vermiculture project, Councilor Gardner asked whether the product would compete with the product from the Riedel Mass Composter. Dan Holcombe, Oregon Soil Corporation, said the vermiculture product is aimed at a specific, limited market, and will not be competing with the Composter product.

With regard to funding a proposal to encourage recycling in a local business district, Councilor McLain asked whether businesses had been surveyed to gauge their wilingness to participate. Stephen Engel, Project Coordinator for Waste Matters Consulting, said there had been informal contacts, but not a survey. Leigh Zimmerman, Associate Solid Waste Planner, indicated that there was a strong interest in recycling in the targeted community.

With regard to funding a proposal to develop an education project for grades K-6 in Clackamas County schools, Councilor McLain asked how distribution would be handled. Ms. Mandt explained that the project will be conducted in North Clackamas School District No. 12. However, she thinks the project will have universal application and can be reproduced, although there are no plans to do so in this grant.

STAFF REPORT

REPORT ON RECOMMENDATIONS OF THE ONE PERCENT FOR RECYCLING ADVISORY COMMITTEE FOR FISCAL YEAR 1990-91.

Date: January 7, 1991 Presented by: Judith Mandt
Leigh Zimmerman

This staff report presents the recommendations by the 1% For Recycling Advisory Committee for the 1990-91 funding cycle and constitutes the 1% For Recycling Project List. This year, $407,000 is available for the Program.

History: The program was established in the 1988-1989 fiscal year; this is the third funding cycle. An advisory committee serves in a review capacity to solicit proposals and make recommendations for the project list. The committee is comprised of seven members, two from each of the three counties and appointed by the Executive Officer, and the chair, who is a Metro Councilor appointed by the Presiding Officer. The committee began meeting in the summer to review and revise the program criteria and guidelines for the 1990-91 fiscal year. These criteria and guidelines as well as the Request For Proposals were presented to and approved by the Council, September 13, 1990. Proposals were solicited for a period of 45 days with advertisements placed in newspapers of local circulation. There were 39 proposals submitted by the proposal deadline of 4:00 p.m., November 1, 1990 totaling approximately $2.6 million.

The proposals, which were divided into the two categories promotion/education and waste reduction, were reviewed during November and December. The committee was assisted by Solid Waste and Public Affairs staff in conducting the proposal evaluation; a standard evaluation tool was used to score assigned points to the proposals, based upon the extent to which the program objectives identified in the criteria and guidelines were met. Emphasis was placed on projects featuring market development for recycled products and/or source reduction, or "precycling." The committee continues the policy of requiring that the proposer's identity be withheld until the review process is completed. This is done in order to protect objectivity and to ensure that proposals are evaluated solely on their merits. Following evaluation, the committee selected 12 proposals for further consideration. Interviews were conducted in Metro offices December 5 and 12.

The committee selected 10 projects from this group for a program total of $347,000. Phase II of the OMSI "Recyclotron" project will be funded at $60,000, bringing the total to $407,000.

At the conclusion of each project, an evaluation will be conducted by the proposer and Metro staff using evaluation methods identified in the contract Scope of Work. Conclusions

from these assessments will be complied into a report for the Council and other interested parties.

The proposals that have been selected by the committee for funding are shown as Attachment A attached to this report.

EXECUTIVE OFFICER'S COMMENTS

The proposals recommended for funding by the 1% For Recycling Committee meet the criteria established for this year's program. As such, they represent the Projects List Specified in Metro Code Section 5.04.050(a) for this program for the 1990-91 fiscal year.

Attachment A

TWO-YEAR PROJECTS

OMSI
Oregon Museum of Science and Industry
4015 SW Canyon Road

$60,000

Project Coordinator:
Cory Samia

Waste Shed: Region Wide

Project: Phase 2 of "Recyclotron" and Related Computer Game
Promotion/Education

This continues an educational project funded in two phases; $40,000 was requested for phase 1 using 1989-90 fiscal year funds and $60,000 was requested for the next year to conclude the project in phase 2. The project will develop an interactive sculpture exhibit and related computer game called the "Recyclotron". This Rube Goldbergesque exhibit will be built and installed in the Global Issues Hall of the new OMSI facility, scheduled to open in spring 1992.

This machine will be an exhibit of solid waste production. The "Recyclotron" integrates solid waste, recycling and landfilling into one see-at-a-glance contraption. The viewer will observe household office and industrial trash handling by watching garbage units traveling in the "Recyclotron". Some units will go to the landfill, some will go to recycling centers. Some will return for immediate reuse while others will remain inert until all of the units are used up and the "Recyclotron" is started again. To activate the machine, the viewer is asked to make choices concerning waste disposal on the computer. The idea is to bring the garbage/recycling experience home by providing choices to personalize the viewer's involvement.

During Phase 1, research was conducted, and development and design of the computer program for the exhibit was initiated. Phase 2 will complete the design, construction, and installation of the "Recyclotron." Progress on phase 1 to date is on schedule. We are very encouraged by the enthusiasm and initiative of OMSI staff. We have been included in all stages of development; cooperation and consultation is excellent. The timeline proposed for this project was 24 months; it is expected to be complete by June, 1992.

ONE-YEAR PROJECTS (In order of dollar amount funded)

Oregon Soil Corporation — $93,000
17810 SW Bunker Oak Road
Beaverton, OR 97006

Project Coordinator:
Dan Holcombe

Waste Shed: Multnomah County/Portland

Project: Vermiculture Technology
Waste Reduction

This project will result in construction of a vermiculture plant to demonstrate the technological viability of using red tiger and other hybrid worms to process biodegradable waste materials into a product for agricultural use. Vermicompost is currently in high demand in the nursery industry and the technology is very simple. Worms are cultivated to consume select wastes such as produce, prepared food (restaurant waste), and yard waste. Droppings from the worms are then screened from the material in which the worms are cultivated, and sold as a soil supplement.

While the product, which is currently being produced in small quantities in the metro region is in high demand, the market has had slow success because the supply is limited. This is a little understood technology, leading to difficulty in securing capital for development. It is, however, technically feasible and produces a very high quality fertilizer. An existing plant owned by this proposer is currently in operation and produces vermicompost. However, its size limits the amount of material that can be consumed and processed. Funding made available through this project will permit the proposer to install and test the continuous flow reactor design he has proposed. This is a major innovation in vermiculture; if the operation is successful, it can be scaled up to a full-sized commercial reactor, and could result in moving this technology from a lo-tech, small batch process to a commercially viable process.

This project will be constructed in cooperation with Riedel Environmental Technologies, the company that constructed Metro's composter facility. The plant is targeted to come on line shortly after the Composter facility is in operation and will consist of a 2,500 ton continuous flow reactor constructed on a site adjacent to the Composter facility made available by Riedel to the proposer for this purpose. A 4,000 square foot building will house the reactor and other mechanical components of the plant. Riedel will provide 1,000 tons of raw Dano material and an additionally 1,500 tons will be secured from the region's waste stream from restaurants and produce suppliers contracted by the proposer.

The project schedule calls for a March 1 start date with site development, construction, and testing completed by mid-June. Acquisition of breeding stock and harvesting and testing will be completed by early October. December through March will be spent

preparing and marketing the product for availability for spring markets in 1992.

A vermiculture project was submitted to the committee in the first year of funding but was not selected. The committee deemed this to be sufficiently innovative, and found that the connection with Riedel added a strengthening dimension to the proposal that had previously been lacking. This project has the added virtue of producing no residue and has established markets by submittal of letters of intent from purchasers. There is optimism and potential that once this pilot project proves the viability of this technology, a larger plant or other plants could be constructed using private capital to assist in reducing waste that must be landfilled and to produce a usable product for which there is a continuing demand in the marketplace.

The term for this project is one year from start up date.

City of West Linn
4100 Norfolk Street
West Linn, OR 97068

$40,000

Project Coordinator
Ed Druback

Waste Shed: West Linn

Project: The "Most Liveable City Program" - Precycling Campaign
Promotion/Education

This 1% grant will fund a "precycling" campaign in the city of West Linn. This promotion and education project, similar to one conducted in Champaign, Illinois, promotes precycling in all segments of the community by establishing "model" stores, churches, shops, homes, etc. To become a "model," a business or other organization will work with program staff to develop standards that incorporate the reduce, reuse and recycle components of the state hierarchy for waste management. The purpose of the "Most Liveable City Program" is to develop community-wide support for precycling.

Examples of standards to achieve "model" designation include 1) a copy shop that gives a discount for two-sided copying, uses recycled paper and provides in-house recycling for high-grade papers; 2) a church or service organization that uses washable cups, prints on recycled paper and has in-house recycling of other materials; and 3) a homeowner who uses reusable shopping bags, buys in bulk and buys products with recyclable packaging.

West Linn has about 400 businesses, many of which are home occupations. This project could cover almost all of these in the first year. Schools, dry-cleaners, real estate offices, bike shops and newspapers are examples of specific organizations/shops that would be eligible for "model" status.

Metro's grant will pay for two part-time promotion and education specialists and for flyers, advertising, and other promotional needs. The committee recommends this project because it proposes a creative/innovative approach to promoting precycling--an area the 1% program targeted this year. The standards that are developed can be used to expand the program to other areas of the region.

The project is proposed to begin in March and will continue for six months with follow-up evaluation.

Waste Matters Consulting
and Becker Projects
8000 NW Sixth Ave., #210
Portland, OR 97209

$39,980

Project Coordinators:
Stephen Engel and
Charlotte Becker

Waste Shed: Portland

Project: Recycling in a local business district
Promotion/Education and Waste Reduction

This 1% project will carry out a comprehensive commercial recycling program in the Northwest Portland Business District bounded by I-405, Vaughn, Burnside and NW 30th Avenue. The objectives of the program are to increase waste reduction by providing promotion/education, waste audits and common-area collection bins, as well as working with haulers to establish collection routes and long-term service. As a result of the project, the grantee will develop a "model" for other similar business districts.

The applicants plan to survey all businesses within the designated area, to perform a waste evaluation of approximately 500 businesses and more detailed waste audits of at least 60 businesses. They will work with offices, industrial clients, retail stores and restaurants to analyze a variety of recyclable materials, including glass, paper, plastics and metals. Corrugated cardboard, office paper and computer paper will be emphasized. A final report will be prepared that will recommend approaches to increasing recovery in this business district and others.

The proposal has waste reduction and promotion/education components. It has the potential to divert approximately 500 tons of waste per year from the landfill. Although Metro currently has a commercial recycling program, this project will supplement, not duplicate, these activities Metro's current focus is training and education for local governments to perform waste audits. Metro is requiring cities and counties to implement a uniform commercial recycling program as part of the Year Two Annual Waste Reduction Programs.

Metro's waste audits have mainly been for large businesses. There has not been sufficient staffing to handle small businesses or to cover a large area such as that proposed in this project. The

results of this project should provide a useful model for local governments as they develop their programs and at the same time target a large part of the waste stream that can be recycled.

The 1% advisory committee recommends this program because it offers an innovative approach to commercial recycling by targeting businesses in a high density local business district, including many small retail establishments. The person-to-person contact within a socially-conscious community should result in significant waste reduction and serve as a catalyst for a self-sustaining program.

The project is scheduled to begin in March and continue through December, 1991.

Environmental Plastics
18574 South Hwy 99E
Oregon City, OR 97045

$35,400
Project Coordinator:
Stanley Kezar

Waste Shed: Region Wide/Clackamas County

Project: Cleaning system for contaminated plastics
Waste Reduction

This project will design and fabricate a cleaning system for post consumer and post industrial plastic materials at an existing plastics recycling plant in Clackamas County. This system would enable recycling of materials that can't be recycled because they are contaminated with dirt or other materials such as food, and thus they are landfilled. This project targets dirty polystyrene foam and dirty low density polyethylene (LDPE) packaging, two items for which there is a good demand for recycled product and of which there are high volumes, when compared with other components, of the waste stream.

Post industrial polystyrene foam and LDPE packaging materials contaminated with such materials as paper, glue, and food, and used agricultural film would be washed in the cleaning system and processed for reuse.

This system will consist of a shredder-pre washer, cold water washer, hot water rinse, air classifier, dewatering screw and densifier. A variety of plastics can be run through the system, thus increasing recycling of other plastics as well. The system is expected to be capable of processing 240,000 pounds (120 tons) of dirty plastic per month, for a total of 1,440 tons diverted from landfills for the one-year duration of this project. Once the system is on line and in production, and has been proven, the proposer expects to market the system to other reprocessing companies for incorporation into their plants. Thus, this project can be expected to contribute to the recycling of thousands of tons of material over the long term.

The proposer has 14 years experience in the plastics recycling industry and operates a plant in Oregon City. He has assisted in the start up of three plastics reprocessing plants, two of which incorporated limited cleaning systems for industrial scrap. Using his own design, he and his staff will fabricate the machine at his plant. Using his own personnel will ensure quality control and assure that all specifications are met; this will also assist in controlling costs.

There is presently no capacity in the region for recycling contaminated plastics. Literally thousands of cubic feet of plastic film are disposed by the nursery industry alone for agricultural use; once the film has been used in the field on the ground and on greenhouses, it is covered with dirt. This process will provide a place for these materials to be taken so that they can be recycled and processed into new product.

There is demand for reprocessed plastic material. The proposer has stated that all materials processed through the cleaning system are pre-sold. The proposer currently has as clients several major nationally-known plastics reprocessors who have indicated that they will consume all the plastics the system is capable of producing. With the passage of laws coming into effect in other states, the demand for post consumer and post industrial recycled plastics has significantly increased and may outstrip the supply of this material.

The term of this project is eight months from start up date.

John Inskeep Environmental Learning Center/ $34,400
Northwest Resource Conservation Institute
19600 S. Molalla Avenue Project Coordinator:
Oregon City, OR 97045 Gerald Hermann

Waste Shed: Region Wide

Project: Alternative Building Materials Reuse Program
Waste Reduction and Promotion/Education

This 1% For Recycling grant will allow the Environmental Learning Center to construct a processing center for salvageable building materials at its campus in Clackamas County. The grant will also provide funds to work with local government officials and the Home Builders' Association to amend building codes/design review standards to encourage reuse of certain building materials in construction projects.

The project should divert approximately 750 tons of building materials from disposal sites. Youth training and work release employees will sort and process the materials collected from approximately 150 drop boxes for construction/demolition debris.

They will de-nail, remove paint and cut down to standard lengths, as required. The salvaged materials will be reused, often in conjunction with lumber made from recycled plastics, for special projects such as bus shelters, benches, signage and picnic tables, and for home building applications.

This project also includes an outreach program for government officials and home builders. The Environmental Learning Center will consult with planners and architects to establish new building code compliance standards that permit reused and reprocessed building materials. They will conduct seminars throughout the Metro region, in cooperation with the Home Builders' Association, to promote the use of salvaged building materials and recycled plastic products. They will produce a "how-to" flyer and a directory of materials and applications.

The grantee is providing approximately $30,000 of in-kind support. Metro will provide partial payment of personnel costs, processing center building improvements and training/outreach seminars. The committee recommends this project because it addresses the "reuse" level of the state hierarchy and it targets construction/demolition debris which comprises 16 percent of the region's waste stream. In addition, the project tackles obstacles to reuse/recycling of building materials: the need to amend building codes and to educate home builders.

Project start-up is planned for April 1991 and will continue through December.

Gale and Associates
Howard Grabhorn and Anne Gale
591 NW Queens Ct E.
Hillsboro, OR 97124

$29,770

Project Coordinator:
Anne Gale

Waste Shed: Washington County

Project: Baled wood chip product to recycle wood from construction/demolition debris **Waste Reduction and Promotion/Education**

This project will separate wood from construction/demolition debris that would normally be landfilled and develops a baled wood chip product to be used for erosion control. This wood chip product can replace hay bales or plastic fencing currently being used to control erosion. Both of these products are landfilled after a construction project is completed. The wood chip bales can serve as ground cover or a soil amendment after a project is over.

The project should divert 11,714 tons of material from the landfill. One of the principals, Howard Grabhorn, already receives loads of construction/demolition debris at his limited purpose landfill in Washington County. As part of this proposal, he will grind,

separate and recycle the wood from this material. He already has the equipment required to separate and process the wood waste and has tested various grinds of material. Once the wood is removed from the rock, concrete, dry wall, etc. it will be ground into pellets and baled using either metal wiring or biodegradable cloth bags. It will then be marketed to potential users in the county.

The Unified Sewerage Agency's Surface Water Management Program establishes soil erosion control as an integral part of the $500 million clean-up of the Tualatin River. The applicant intends to market the wood chip product to the USA and to builders for erosion control at new construction sites. In addition to diverting material from the landfill, the grantee contends that this product is more economical and environmentally sound than existing soil erosion control techniques.

The grantee is providing approximately $38,000 of in-kind funds for equipment and processing costs. Metro's grant will pay for promotion and marketing of the new wood chip product. The 1% advisory committee recommends this project because it develops an innovative, economically viable product from recycled materials. It also targets construction/demolition debris at a facility already receiving this waste for disposal. Therefore, the supply of material and processing ability exist and the likelihood of long-term viability is enhanced.

This is a one-year project that is scheduled to begin in April, 1991.

Babyland Diaper Service
5224 NE 42nd
Portland, OR 97218

$28,050

Project Coordinator:
Steffanie Anderson

Waste Shed: Region Wide

Project: Reusable cloth bags to replace plastic disposable bags used for diaper delivery and pick up
Waste Reduction

Babyland Diaper Service provides at-home and institutional delivery and pick up of cloth diapers in the metropolitan area. This project would provide funds for them to purchase 5,000 nylon taffeta bags to use in delivery and pick up of diapers from their customers. The reusable cloth bags will replace disposable plastic bags currently being used by the company. The company currently serves 4,000 residences, 4 hospitals, and 10 daycare centers in the metropolitan area. On a yearly basis, 416,000 bags, or about 17 tons of plastics that are not recycled are being disposed by this proposer. They seek to reduce their waste and conserve resources by providing reusable cloth bags to clients, thus

responding to customer complaints about one-time-only use plastic bags.

The company will purchase 5,000 nylon taffeta bags to distribute to customers, about 1/3 of the customer volume they serve. The estimated life of the bags is two years, thus this project will result in diverting about 34 tons of plastic from the landfill. Using these bags for this portion of their customer base will enable them to determine how practical a solution these bags actually are and to allow for this small company to gear up for the scale of change in operations this alternative may represent.

The committee believes that this is an innovative proposal because it tests a bag that is currently not known to be used for this purpose. If it proves to be an appropriate design and material for full commercial use, they expect to convert their full service base. The committee also recognizes the educational value this proposal represents, because the change will be advertised as a waste reduction endeavor.

The term of this project is two years from start up date.

O'Neill & Company
806 SW Broadway, Suite 400
Portland, OR 97205

$19,000

Project Coordinator:
Debbie Palermini

Waste Shed: Washington County

Project: 1991 Street of Dreams Construction Recycling Project
Waste Reduction and Promotion/Education

This is a cooperative project with the Homebuilders Association of Metropolitan Portland, and Northwest Natural Gas. A recycling demonstration project will be conducted on site during construction of the 1991 Street of Dreams, located this year on Bull Mountain in Washington County. A workshop will also be developed and offered to all homebuilders to acquaint them with recycling methods they can employ themselves and with recycled products available for home construction.

The objective of this proposal is to find ways to break down the barriers to recycling in the construction industry and find cost effective ways to avoid disposal of reusable materials as waste. The proposer will develop a simple brochure entitled, "How and Where to Take Construction Debris" which will help builders and subcontractors determine the costs and logistics involved in getting materials to the proper locations. Brochures will be distributed through the Homebuilders Association and through the construction supplier network of lumber yards, manufacturers, permit counters at local jurisdictions, etc.

This method, as well as direct notification, will also be used to announce a one-day workshop for homebuilders on "How, Where, and Why To Build With Recycled Materials." The workshop will be conducted as part of the West Coast Homebuilders conference scheduled for this spring, and will have as a major theme the changing resource base of building materials. A directory of the kinds of recycled building materials that are available and where to purchase them will be included as part of the workshop.
Vendors will be invited to display and discuss their recycled products, which would include such items as plastic lumber, new insulation products, recycled landscaping materials, recycled waferboard panel construction, etc.

The proposer will coordinate setting up a construction site recycling operation. The contract hauler will provide containers and builders will be encouraged to recycle their construction debris. On-site assistance to the builders and subcontractors on separating materials will be provided by intern students from Portland State University under the direction of Jerry Blake.

Promotion is an important aspect of this proposal. Approximately 100,000 people visited the Street of Dreams in 1990, a number that is expected to be repeated in 1991. Over 800,000 consumers will be reached by the promotional campaign that is planned for the 1991 event. Northwest Natural Gas will publicize the pilot recycling project as part of their promotional campaign. A special kick-off event will be sponsored by Northwest Natural Gas to announce the pilot; exhibit and displays focusing on "how to" and "why" recycle will be featured. This effort will be coordinated with Metro's Public Affairs staff and 1% Well Spent! will be acknowledged on all display materials.

At the conclusion of the project, an evaluation will be conducted to determine the amount of construction debris that was diverted from disposal facilities, the types and quantities of materials recycled and where and how they were delivered. A random sample survey of Metro area builders will be conducted to determine remaining barriers to waste reduction and recycling in the residential construction industry and revealing attitudes toward recycling. The proposer will assess the potential for continued efforts and suggest ways for ongoing homebuilders' participation to encourage and increase further recycling in this industry.

The term of this project is ten months from start up date.

O'Neill and Company
806 SW Broadway, Suite 400
Portland, OR 97205

$17,400

Project Coordinator:
Margaret Norton-Arnold

Waste Shed: Portland

Project: In-Store Plastics Recycling, Durst's Thriftee Market
Promotion Education

This 1% grant will fund an in-store plastics recycling program at Durst's Thriftee Market in Portland at 21st and NW Glisan. The objective of the project is to demonstrate a successful supermarket recycling program for plastics and to encourage other stores in the Metro area to establish similar programs.

Durst's Thriftee Market currently has bins available to receive HDPE milk jugs and bottles as well as polystyrene and polypropylene food containers. The store delivers plastics weekly to Sunflower Recycling Cooperative for processing and marketing. The biggest problem with the current program is sorting of different types of plastics. The proposed project will address this and other barriers to plastics recycling, including processing and marketing issues.

Specifically, the grantee will survey customers to identify who is recycling at the store. They will calculate the store's actual costs and benefits for the current program and inventory what is being recycled. Next, they will design and implement an educational campaign for customers and conduct a second survey and inventory to determine its effectiveness. Educational techniques that will be used include in-store displays, "shelf-talkers" and labels to identify recyclable plastics, printed information on grocery bags, bag inserts, advertising and labels for recycling bins.

Finally, the grantee will work with the Public Affairs Department to prepare 100 handbooks containing the results of the study, copies of educational materials and practical information on how to set up a program, such as how much space to allocate and where, and how to measure costs and benefits.

The 1% committee recommends this project because it offers a different and innovative approach to plastics recycling through grocery stores. It also addresses a major obstacle to plastics recycling which is proper identification and sorting of materials. It is a small-scale project, which has the support of the store owner and has a processor to market the materials collected. They are offering approximate $5,000 of in-kind services. Other stores in the area have also expressed interest in establishing similar programs using the results of this pilot project.

This is a seven-month project scheduled for start-up in May, 1991.

Earth Aid
9877 SE 33rd Avenue
Milwaukie, OR 97222

$10,000

Project Coordinator:
Mary K. King

Waste Shed: Clackamas County

Project: Earth Aid Kits and Boxes, an education project for grades K-6 in Clackamas County schools **Promotion/Education**

This is a proposal to produce kits to be distributed to elementary school teachers that will contain prepared instructions/lesson plans to supplement education curricula in the classroom. The kits will contain materials, activities, songs, skits, and lessons that teach the recycling, pre-cycling, and responsible consumerism message.

At the present time, there are few to virtually no materials in the schools pertaining to waste reduction and recycling for teachers to use, other than what Metro has produced in recent years. The puppet shows and the excellent teachers' kits already produced, however, are not sufficient and additional materials are needed in all the schools. This particular proposal concentrates on schools in the Clackamas County School District. If successful, it could be expanded to other school districts in the region.

Teachers will be provided with a grade-level specific, proactive environmental curriculum that provides one lesson per grade level for each week of the school year. The kits will be contained in large green boxes displaying white crosses to emphasis the message Earth Aid kit (playing off the familiarity of the red first aid kit). Lessons would be geared to simple preparation and offer a cross section of disciplines: math, language, science, social studies, music, art, etc. Lessons would be printed on 5x7 cards, color-coded to the disciplines and number-coded to the recycling emphasis. Cards for independent student participation and lessons for the computer may also be included as designs for the kits progress.

This project is proposed by a teacher in the Clackamas School District who plans to take a 6-month sabbatical to work on this project. She has the cooperation of her employer in this effort and will have assistance from the school district in distribution. The objective of this project is to communicate at the elementary school level the importance of the environmental ethic and integrate environmental education into the general school curriculum on an ongoing basis through high quality activities. The proposer originally requested $6,000 for this project. The committee, however, believed so strongly in the importance of this endeavor, that they increased the amount to $10,000, to provide more assistance in preparation and to make more kits available to a larger number of students.

This project is expected to be complete by June 1992.