

CITY OF BURNABY

ENVIRONMENT AND WASTE MANAGEMENT COMMITTEE

HIS WORSHIP, THE MAYOR
AND COUNCILLORS

RE: ANNUAL REPORT ON BURNABY WASTE REDUCTION PROGRAMS

RECOMMENDATION:

1. *THAT* Council approve the elements outlined for the 2000 Waste Reduction Program.

REPORT

The Environment and Waste Management Committee, at its Open meeting held on 2000 February 08, received and adopted the *attached* report providing a summary of the City's 1999 waste reduction program and outlining the proposed 2000 program. The Committee advised that the blue box component of the program together with the yard waste collection, apartment totter system, depot operations, commercial recycling and the education components have provided Burnaby's residents and businesses with alternatives for waste reduction and decreased volumes of garbage in the single/duplex waste stream by over 40% from the level of 10 years ago. The Committee concluded by noting that the 2000 program is built on past successes which include all service components delivered in 1999 plus a number of refinements.

Respectfully submitted,

Councillor D. Johnston
Chair

Councillor C. Redman
Member

: COPY - CITY MANAGER
- DIRECTOR ENGINEERING
- DIRECTOR FINANCE
- DIR. PLNG. & BLDG.

Councillor B. Der
Member

TO: CHAIRPERSON & MEMBERS
ENVIRONMENT & WASTE
MANAGEMENT COMMITTEE

DATE: 2000 01 20

FROM: DIRECTOR ENGINEERING

FILE: 65-05-01

SUBJECT: ANNUAL REPORT ON BURNABY WASTE REDUCTION PROGRAMS

PURPOSE: To provide the Committee and Council with a summary of the City's 1999 waste reduction programs and an outline of the 2000 program


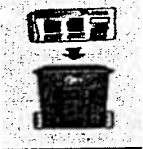



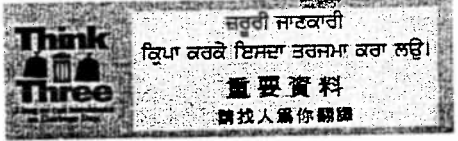
RECOMMENDATION:

1. **THAT** the Environment and Waste Management Committee forward this report to Council for approval of the elements outlined for the 2000 plan.

REPORT

1.0 INTRODUCTION

Since 1990, the City has committed to the delivery of an integrated waste reduction service to its citizens. The service started with the Recycling Depot on Still Creek Avenue and has grown to a comprehensive multi-sector (residential, commercial, institutional and industrial) program that includes the following key components:

 <p><i>Single Family Blue Box</i></p>	 <p><i>Multi-Family & Commercial Recycling</i></p>	 <p><i>Yard Waste Drop-off Center</i></p>
 <p><i>Curbside Yard Waste Collection</i></p>	 <p><i>School Education Unit</i></p>	 <p><i>Community Outreach Initiatives</i></p>

The 1999 City program continued to surpass earlier years' record in waste diversion and reduction. The purpose of this report is to provide the Committee and Council with a summary of the waste reduction activities carried out in 1999 and an outline of the 2000 program.

2.0 POLICY

The City has adopted an integrated waste management strategy in support of the Region's Waste Management Plan and the 50% waste reduction goal (combined residential, commercial, industrial, demolition and land clearing waste streams) of the Province.

3.0 SUMMARY OF THE 1999 PROGRAM

In 1999, the annual tonnage of garbage that was sent to the incinerator continued to decline. The historic trend of the City's single family garbage disposal volumes for the past 10 years is shown in Figure 1. While the garbage volumes decline, the City enjoyed increased participation levels in all waste reduction programs thus pushing the overall City recycling rate to a record high. A summary of the key waste reduction programs and their performance is given in the following:

3.1 *Curbside Blue Box (Single Family) and Toter (Multi-Family) Collection*

The Blue Box program was introduced to the single family sector in 1991. While the number of single/two family dwellings remain relatively constant over the years at approximately 36,000, the Blue Box volumes have increased 15% over the 9-year period. Figure 2 presents the historical trends of the single family curbside recycling collection volumes for the period between 1991 and 1999. In late 1998, the Province introduced the expanded beverage container deposit legislation which resulted in a significant diversion of the beverage container volume from the Blue Box. However the diverted container volume was offset by an increase in mixed paper/old corrugated cardboard recycling which helps to maintain a strong overall program.

The multi-family toter collection program started in 1993 and the program continues to see increases in recycling tonnages. A summary of the multi-family recycling volumes in the past 7 years is given in Figure 3. Approximately 19,400 units are using the Burnaby program which represent 90% of all multi-family units serviced by the City.

Since 2000 January 1, the City has retained the services of Crown Packaging in Burnaby to process all recyclables collected from the Blue Box and Toter programs. The Crown Packaging plant (next to the GVRD Incinerator) processes all paper products collected under the City program on site and re-manufactures them into other paper based products.

Based on the 1999 collection data, it is clear that the Provincial container deposit system has a positive impact on the Blue Box program and the City continues to experience the success of the Blue Box and Toter programs through increased recycling participation by its citizens.

3.2 *Curbside Yard Waste Collection*

The curbside yard waste collection program is available to all single family and duplex residents in Burnaby during the full growing season from late March to the end of November. The program collects all yard and garden wastes in clear plastic bags and bundled brush in three-foot lengths. The materials collected are delivered to a composting facility in Richmond for processing and marketing.

The yard waste collection program continued to gain popularity in 1999. It offers Burnaby residents an alternative in recycling and further diverts waste from the incinerator. In 1999, approximately 6,800 tonnes of yard waste were collected at the curbside, an increase of 23% over the 1998 level. The City currently has a contract with Fraser Richmond Bio-Cycle Ltd. for the processing and marketing of the yard waste materials. The contract had an estimated 3-year expenditure of \$945,000 and is due to expire on 2000 August 31. With the success of the yard waste program in the past two years, the City was able to reduce disposal costs at the incinerator, however, the actual cost of processing and marketing yard waste materials has increased and exceeded the contract estimate. At the end of December 1999, the actual expenditure on yard waste processing is approximately \$1.04M and the projected total contract cost to 2000, August 31 is approximately \$1.3M. The additional funds required for the yard waste processing contract are available within the operating budget and are far below the savings gained in reduced refuse tipping fee.

3.3 *Recycling Depot and Yard Waste Drop Off Center*

The City Recycling Depot remains a popular place for Burnaby residents and businesses who have committed to reduce waste disposal. Approximately 1,730 tonnes of materials were processed through the Recycling Depot in 1999. A wide variety of materials including soft plastics, scrap metal, used motor oil, car batteries and appliances are accepted at the Depot. In late 1999, a container was also established for used clothing in connection with the Salvation Army program. A detailed breakdown of the materials collected at the Depot in 1999 is given in Figure 4.

The Yard Waste Drop Off Center received approximately 4,900 tonnes of yard waste in 1999. Composters, although approaching the saturation level in Burnaby, remain an item sought after by home owners. In 1999, approximately 250 composters were sold which brings the total number of composters sold to about 8,300 since the beginning of the City composter program.

3.4 Commercial Sector Recycling

Since approximately 1994, the City has provided recycling service to schools and civic buildings. In early 1999, the City expanded the recycling collection service to Burnaby businesses who are customers of the City's waste collection program. In the first year of the commercial sector operation, approximately 30% of Burnaby's commercial based customers have signed up for the service. The expanded service has diverted additional recyclables from the incinerator and provides businesses with an alternative to meet the GVRD's disposal ban on office papers and cardboards. The 1999 combined commercial and institution recycling volume including telephone directories was approximately 500 tonnes.

A summary of the commercial/institution sector recycling is given in Figure 5.

3.5 Communication and Education

In 1999, several communication and education programs were delivered and they were:

3.5.1 News Columns/Articles and Community Events

- Three articles on recycling and yard waste composting were published in InfoBurnaby.
- Twelve newspaper columns on waste reduction, reuse and recycling were published in Burnaby NOW.
- Participation in community events such as Environment Week, Hats Off Parade, Rivers Day and Discovery Day.

3.5.2 School Education Program

In 1999, 37 Burnaby elementary classes participated in the City's environmental learning unit "*Cut the Garbage*". The unit includes a classroom kit on recycling facts that the teachers can use in the class and a student take-home survey of recycling habits. Thirteen classes have completed a student home survey and returned the results to the City. The program is well supported by the teachers and the School Board. The program allows us to bring the waste reduction message directly to the students and to heighten awareness of the City's environmental goal. The student home survey results also help the City to shape future communication and education direction. A summary of the student survey is included in Appendix A.

3.5.3 Ethnic Communities Outreach Program

In 1999, the City delivered 10 workshops on waste reduction through the Burnaby School District adult ESL classes and S.U.C.C.E.S.S. The purpose of the program is to reach Burnaby residents with English as a second language to encourage recycling participation that otherwise might be lost due to language or cultural barriers.

A total of 145 ESL adult students took part in the workshops which were conducted through the Association for the Promotion and Advancement of Science Education (APASE), an organization supported by Environment Canada and the Ministry of Environment, Lands and Parks.

3.6 Recycling Participation Survey

In a six-week period in 1999 April and May, a curbside survey of garbage and Blue Box set out was conducted in two single family areas with a total of approximately 250 households. The purpose of the survey was to determine the frequency of residents using the curbside garbage and recycling collection services and to allow the City to identify necessary service improvements in order to meet the changing needs of the community. Key findings of the survey are summarized as follows:

On any given collection day :

- More than 80% of households set out garbage
- Less than 10% of households set out more than 3 bags of garbage
- Approximately 45% of households set out the Blue Box
- Approximately 30% of households set out yard waste

Based on the small sample survey, it can be concluded that a majority (greater than 90%) of households is in conformance with the "Think 3" program. If future community trend continues to show strong participation in the waste reduction program, a "Think 2" program may become an achievable goal. In Section 4 in this report, discussion on the 2000 programs is presented with the view to further enhance the community waste reduction effort.

4.0 PROPOSED 2000 WASTE REDUCTION PROGRAM

Enhanced effort in waste reduction activities remains the focus of the 2000 Waste Reduction Program. In 2000, staff are proposing a plan that is built on past successes which include all service programs delivered in 1999 plus the following refinements:

4.1 *Curbside Yard Waste Collection*

In past years, the curbside yard waste collection program covered the period from April to November. In view of the increased acceptance of the curbside service, the 2000 program will commence on March 13 and extend to December 1. It is expected that the extended period would provide a greater diversion of compostable materials. Broader coverage of the yard waste program will be provided through the community newspapers and City publications to increase general awareness.

4.2 *Yard Waste Drop Off Center*

In 1999, the City Yard Waste Center processed approximately 4,900 tonnes of yard waste, an increase of 96% from the 1998 volume of 2,500 tonnes. The increase is primarily attributed to higher usage by the commercial landscapers. The current fee schedule for the Center is \$10.00 minimum charge for a standard pick up load and \$5.00 for each additional cubic yard. In order to create a more equitable user fee system and better cost recovery for the operation, it is proposed that a weight scale be installed on site and the user charges be calculated on the basis of weight. Subject to Council's concurrence of the proposal, an amendment to the current fee schedule contained in the Solid Waste Bylaw would be required. The proposed fee schedule would apply to all users of the facility and the changes would include :

- \$48/tonnes GST inclusive (\$4.80/100Kg)
- No minimum charge
- Free for Burnaby residents only with a load of 50 kg or less. Limited to one free visit per day

The revised fee schedule would encourage Burnaby residents to use the yard waste facility for small loads during off season and establishes a rate for bulk yard waste that is closer to the current market rates.

4.3 *Community Outreach*

Communication and education is an integral component of the City's solid waste management program. The purpose of the C & E program is to inform the citizens better about available services and to gain greater acceptance of the waste reduction initiatives as part of the community culture.

The 2000 program will include the following key components:

- Enhance the school education program and modify the learning unit for ESL classes
- Expand the work with non-profit community groups to deliver workshops and materials on 3 R's in a manner accessible to residents with English as a second language

- Develop campaigns to recognize and congratulate residents and businesses for their efforts in waste reduction
- Explore and develop additional communication tools such as posters, brochures and workshops on yard waste recycling

The target deliverable of the outreach and education program is to achieve a further 5% diversion of the single/duplex family waste stream to yard waste recycling.

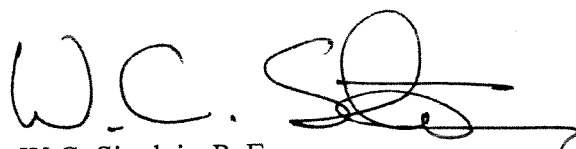
4.4 *Refuse Disposal Survey and Alternate Yard Waste Collection Protocol*

In 2000, an expanded single family survey will be conducted to obtain further data on waste disposal habits and to identify areas for possible recycling service improvements. The survey will allow the City to assess future needs in the waste management service and to refine the management direction to meet the community need. A small pilot residential area will be selected to test the use of marked containers instead of clear bags for yard waste collection. The pilot project would allow staff the opportunity of assessing the feasibility of replacing clear bags with reusable containers.

5.0 CONCLUSIONS

Since the launching of the City recycling program in the early 1990's, the residential garbage disposal tonnage has been declining from approximately 40,000 tonnes/year in 1989 to an all time record low of 23,100 tonnes in 1999. The Blue Box program together with the yard waste collection, apartment toter system, depot operations, commercial recycling and the education programs have provided Burnaby's residents and businesses with alternatives for waste reduction and decreased the volumes of garbage in the single/duplex family waste stream by over 40% from the level of 10 years ago.

In 2000, the City will continue to seek more effective means of further reducing the waste stream in both the residential and commercial sectors while maintaining system cost efficiency. Greater community outreach and education efforts will be made with the goal of diverting a further 5% of the single/duplex waste stream to yard waste recycling. We will continue to update the Committee and Council on the progress of the waste reduction initiative and on any new plan direction that would help to bring the City to a higher level of waste reduction goal.


W.C. Sinclair, P. Eng.
DIRECTOR ENGINEERING

LSC:jh
Attach.

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cc: City Manager
Director Finance

APPENDIX A

Summary of the Student Home Survey Component of the “Cut the Garbage” Learning Unit

Participated Elementary Schools:

Armstrong School
Buckingham School
Cascade Heights School
Chaffey-Burke School
Gilmore Community School
Gilpin School
Kitchener School
Rosser School

Total Number of Student Home Surveys Completed: 268

Key Survey Results:

- Average number of garbage cans set out by each family in one week:
2.3
- Average number of students who recycled:
258 (96% of students surveyed)
- Average number of students who recycled telephone books:
251 (94% of students surveyed)
- Average number of student families who used backyard composters:
128 (48%)
- Average number of student families who recycled/composted yard waste:
196 (73%)
- How many students reminded other people in their homes about the 3 R's:

All the time	48	(18%)
Sometimes	178	(66%)
Never	31	(12%)
No response	11	(4%)

- When it comes to reducing garbage, how many students rated their family as:

1	We do nothing	2	(<1%)
2		28	(10%)
3		61	(23%)
4		110	(41%)
5	We do a lot	64	(24%)
	No Response	3	(1%)

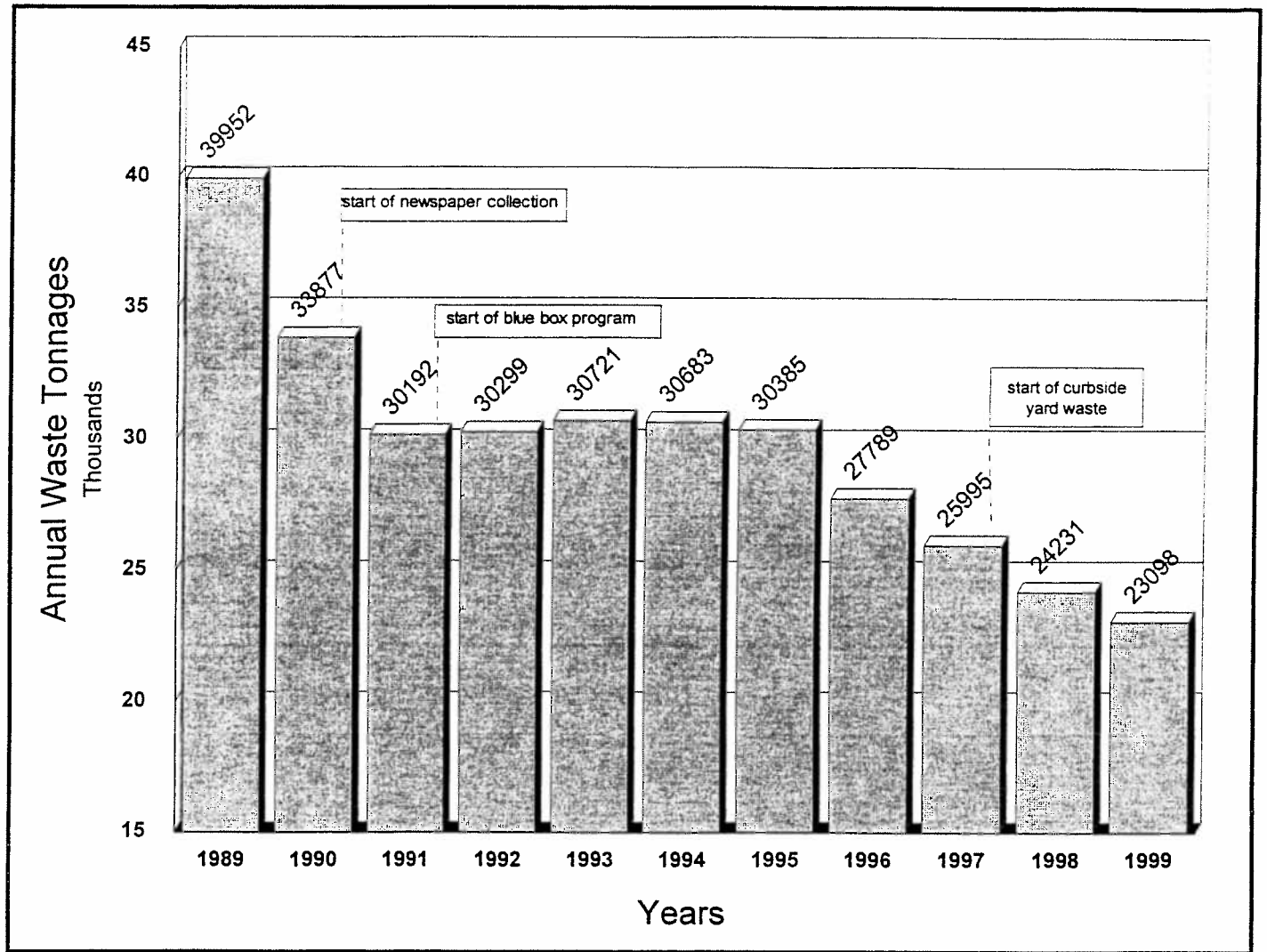


Figure 1

Annual Single Family Waste Stream Volumes
1989 to 1999

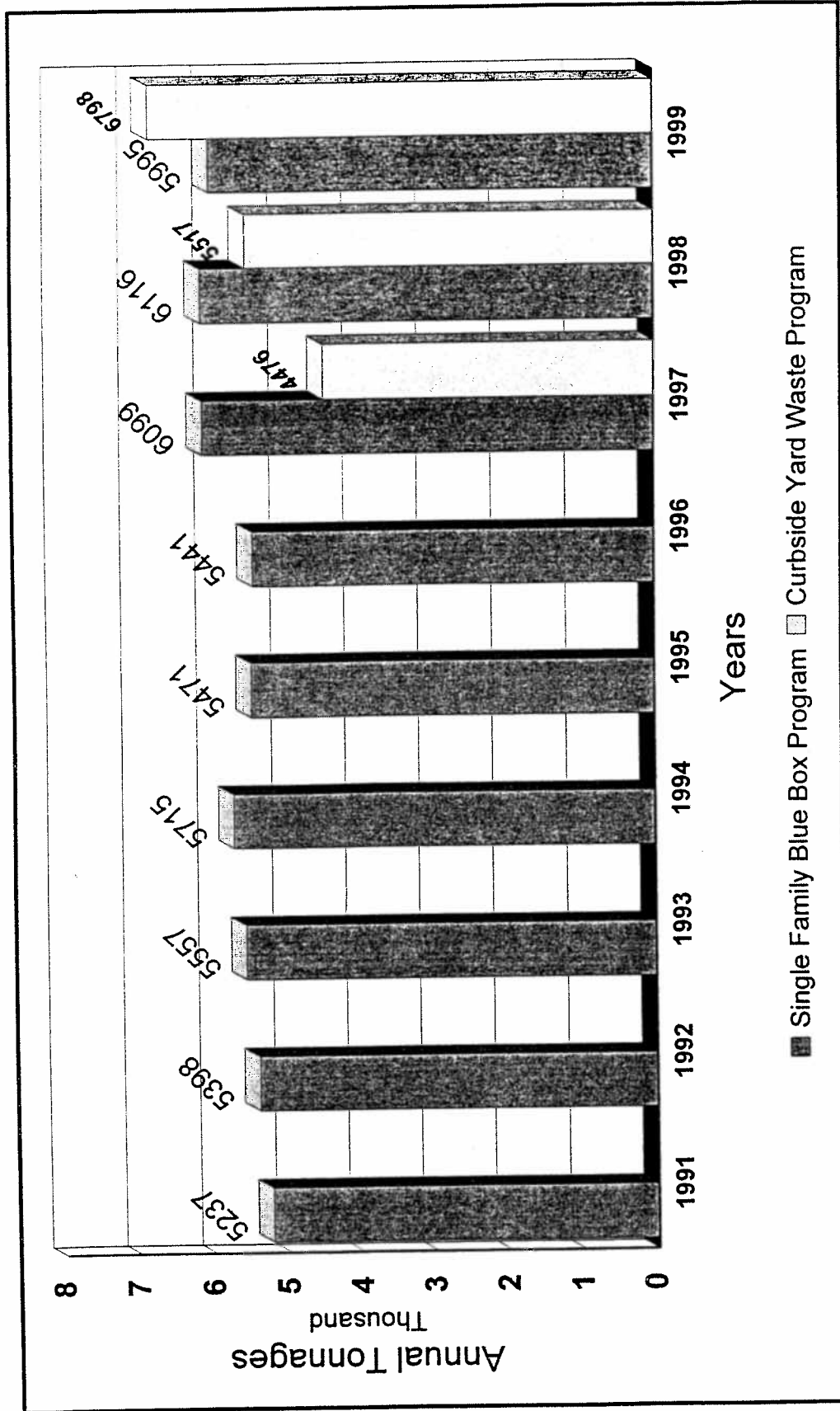


Figure 2
Single Family Curbside Recycling Volumes-Blue Box and Yard Waste
1991-1999

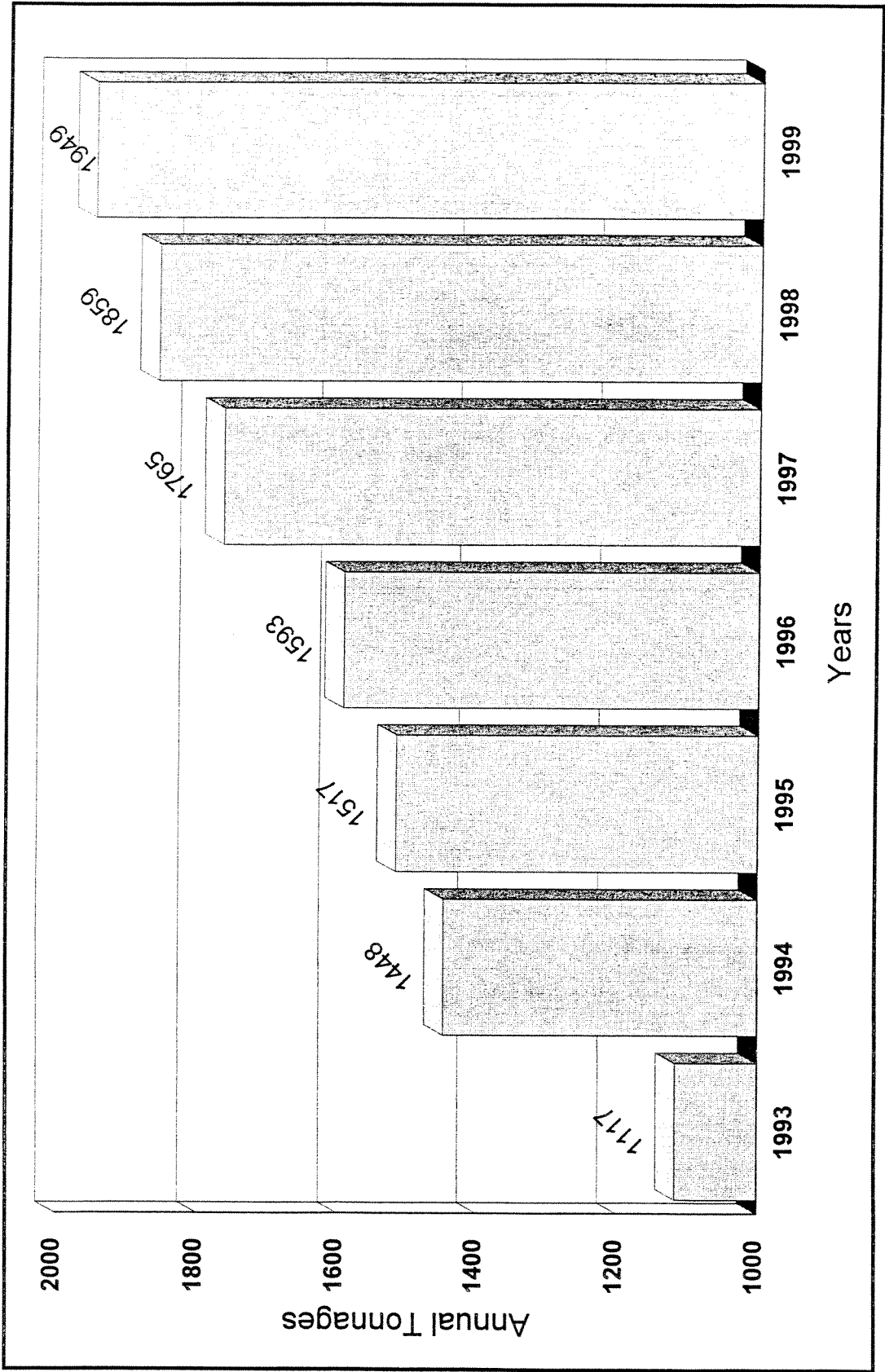


Figure 3
 Multi-Family Recycling Volumes
 1993 - 1999

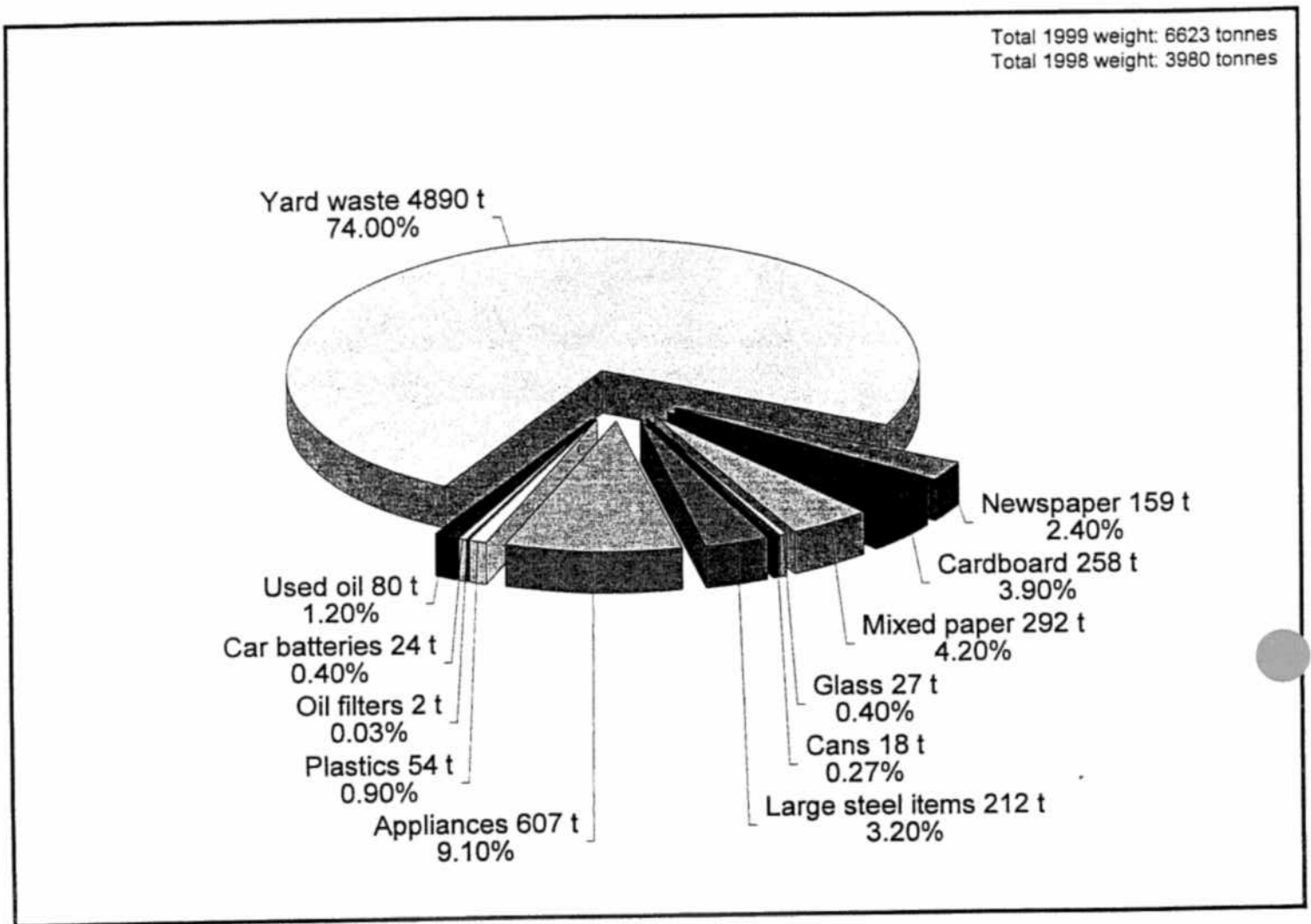


Figure 4

Materials Collected at the Recycling Depot and the Yard Waste Drop off Centre
1999 (January - December)

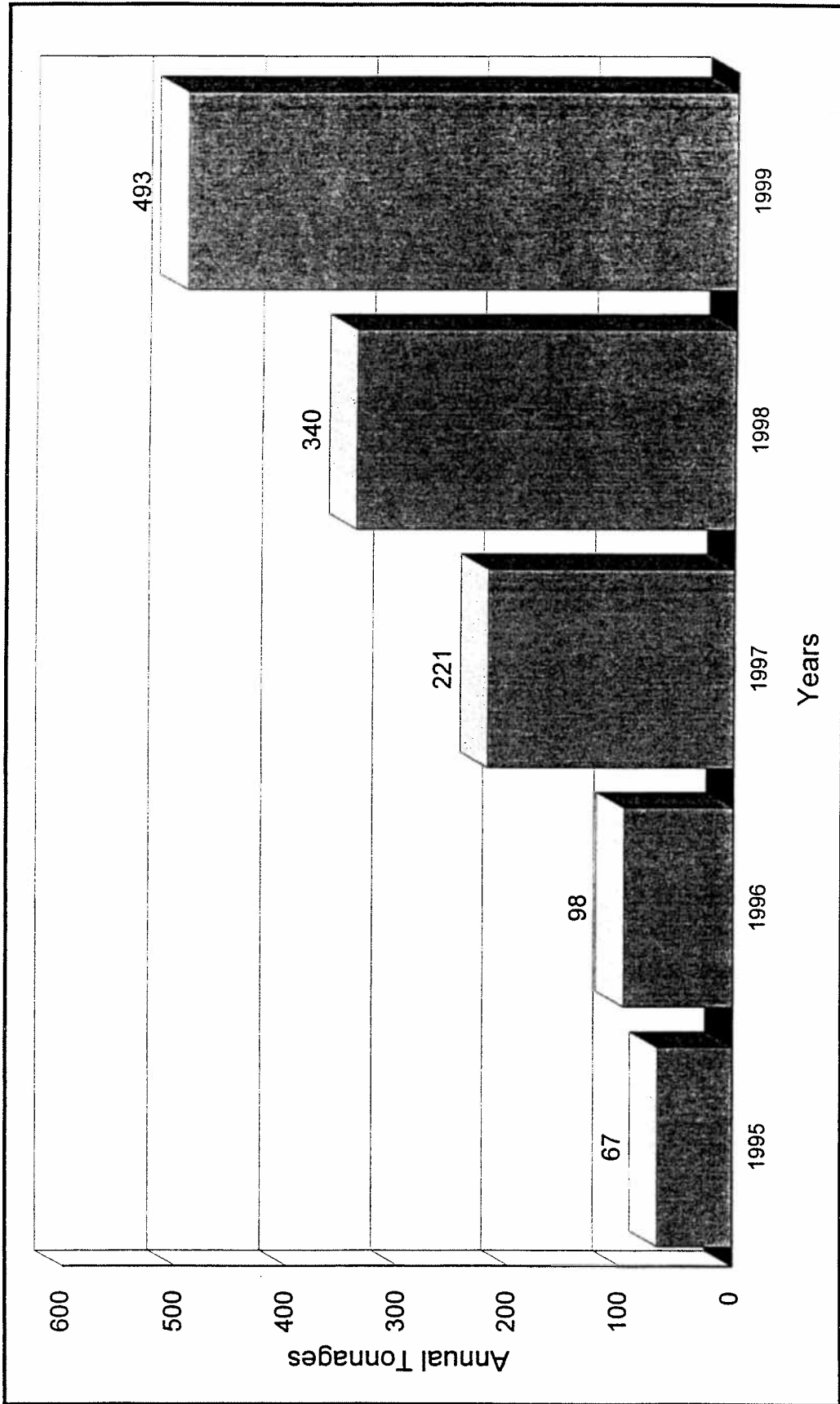


Figure 5
 Commercial & Institution Recycling
 1995-1999

