FIELD REPORT

MARKET SURVEY OF SOLID WASTE MANAGEMENT PORT-AU-PRINCE

SEPTEMBER 10 - 28, 1990

VOLUME I

Field Report No. 319
February 1991

WATER AND SANITATION for HEALTH PROJECT

Sponsored by the U.S. Agency for International Development
Operated by CDM and Associates

WASH Field Report No. 319

MARKET SURVEY OF SOLID WASTE MANAGEMENT

PORT-AU-PRINCE

SEPTEMBER 10 - 28, 1990

VOLUME I

Prepared for the USAID Mission to Haiti
under WASH Task No. 169

by
Philip Roark
Menajem Bessalel
David Dalmat
and
Kevin Murray

February 1991

Water and Sanitation for Health Project
Contract No. DPE-5973-Z-00-8081-00, Project No. 836-1249
is sponsored by the Office of Health, Bureau for Science and Technology
U.S. Agency for International Development
Washington, DC 20523

About the Authors

Philip Roark is the WASH manager for operations and maintenance and technology transfer. In that capacity, he has led many interdisciplinary teams on assignments primarily related to evaluations of integrated water and sanitation projects. He has 25 years of experience in international development and natural resource management with many years resident overseas as a project manager or staff hydrologist, primarily in Africa, the Middle East, and the Caribbean. He is fluent in French.

Menajem Bessalel has more than 30 years experience in civil engineering. He has previously worked in solid waste management in Ivory Coast, Zaire, and completed an earlier WASH assignment in Haiti. As an independent consultant, Mr. Bessalel has worked for a variety of engineering and development firms, as well as the World Bank, USAID, and other international development organizations. He is fluent in Spanish and French.

David Dalmat is an urban planner with extensive experience in Haiti and Guatemala. As an independent consultant he has worked in Haiti for the Cooperative Housing Foundation and the World Bank in composting and low cost sanitation.

Kevin J. Murray is a project manager in CDM's solid waste group. His primary responsibilities include development and design of solid waste management facilities and development plans. Mr. Murray has over 10 years of experience and has worked on projects in Southeast Asia, the Americas, and Europe.

Related WASH Report

Assessment of Solid Waste Management in Port-au-Prince, Haiti by Roman Semkow and Menajem M. Bessalel. WASH Field Report No. 292. January, 1990.

CONTENTS

Volume I

ACKNOWLEDGMENTS v
ACRONYMS vii
EXECUTIVE SUMMARY ix

1. INTRODUCTION 1
   1.1 Objective 1
   1.2 Methodology 1
   1.3 Background 3

2. SURVEY APPROACH 5
   2.1 Households 5
      2.1.1 Sampling Zones 5
      2.1.2 Sampling 10
   2.2 Commercial 11
   2.3 Industry 11
   2.4 Waste Collectors 12
   2.5 Compost and Recycling 12

3. WASTE PRODUCERS 13
   3.1 Households 13
   3.2 Commercial 17
   3.3 Industry 19
      3.3.1 Industries Surveyed 19
      3.3.2 Survey Results 19

4. WASTE COLLECTORS 23
   4.1 General 23
   4.2 Truck Operators 23
   4.3 Individual Collectors 25

5. COMPOST 27
   5.1 Definition of Compost 27
   5.2 Value of Compost 27
   5.3 Production of Compost 29
      5.3.1 Aerobic Composting 29
      5.3.2 Anaerobic Composting 31
      5.3.3 MSW Composting Systems 31
   5.4 UNACOM 32
   5.5 Future of UNACOM 33

5.6 Present Use of Compost 37
5.7 Pilot Project—Neighborhood Composting 39
5.8 Other Recyclables 39
5.9 Future of Composting 45

6. INSTITUTIONAL ANALYSIS 49
6.1 Establishment of SMCRS 49
6.2 Infrastructure 49
6.3 Personnel 49
6.4 Legislation 50
6.5 Finances 51
6.6 Future of SMCRS 51

7. MANAGEMENT ALTERNATIVES 53
7.1 Description of Recommended Approach 53
7.2 Waste Management Association 53
7.3 Establishing WMA 58

8. FINANCIAL ANALYSIS 59
8.1 Alternatives 59
8.2 Equipment for the Four Alternatives 60
8.3 Cost Elements of the Four Alternatives 63
8.4 Projected Annual Capacity of Equipment 64
8.5 Investment Requirements 65
8.6 Implementation 66
8.7 Cash Flow Analysis 67
8.8 Cash Flows 70
8.9 Financial Analysis for Small Business 74

9. ENVIRONMENTAL IMPACTS 75
9.1 Introduction 75
9.2 Existing Conditions 75
9.3 Environmental Benefits of Composting 78
9.4 Environmental Constraints of Composting 79
9.5 Collection System Impacts 80

10. CONCLUSIONS AND RECOMMENDATIONS 83
10.1 Present Conditions 83
10.2 Prospects for Change 83
10.3 Private Waste Management Association 84
10.4 Recycling, Composting, and Environmental Considerations 85
10.5 Next Steps 85

TABLES

1. Household Expenditures by Zone 7
2. Households Surveyed by Zone 10
3. Types of Businesses Surveyed 11
4. Types of Industries Surveyed 12
5. Daily Waste Production for the Metropolitan Area of Port-au-Prince 13
6. Expressed Willingness to Pay for Reliable Garbage Collection 16
7. Industrial Products Surveyed and Location 19
8. Summary of Industrial Survey 21
9. Private Companies - Survey Summary 24
10. Macronutrient Content of Two Haitian Composts 31
11. Budget - Rehabilitation of UNACOM 36
12. Potential Use of Compost 37
13. Buyers of Haitian Municipal Refuse Compost 38
14. Budget - Neighborhood Composting 42
15. Budget - Neighborhood Composting 44
16. Budget - Large Volume Composting and Transfer Station 46
17. SMCRS Personnel 50
18. SMCRS Monthly Funds 51
19. Alternative II: SMCRS with New Equipment 61
20. Alternative III: WMA 62
21. Alternative IV: WMA with Composting 63
22. Annual Nominal Capacity of Collecting Equipment 64
23. Summary of Initial Investment for Each Alternative 66
24. Five-Year Plan 67
25. Typical Landfill Leachate Quality Data 77

FIGURES

1. Metropolitan Area of Port-au-Prince 2
2. Port-au-Prince Population 6
3. Willingness to Pay for Waste Collection 15
4. Revenues: Present Willingness to Pay 22
5. UNACOM Composting 34
6. Neighborhood Composting - Partially Mechanized 40
7. Neighborhood Composting - Manually Operated 41
8. Proposed Organizational Structure of Waste Management Association 54
9. Landfill and Compost Sites 56
10. Waste Collection - Projected Payment for Groups 69
11. Alternative IV - Cash Flow - Base Program 71
12. Alternative IV - Cash Flow - Scenarios I and II 73

APPENDIXES

A. BIBLIOGRAPHY 87

B. PERSONS CONTACTED 89

C. CONSTANTS 91

VOLUME II

D. Financial Analysis Base Program

E. Financial Analysis—Scenario I

F. Financial Analysis—Scenario II

G. Household Questionnaire (Creole Version & French Version)

H. Household Survey Results

I. Commercial Questionnaire

J. Commercial Survey Results

K. Financial Analysis for Small Business

L. Sample Circulars for Garbage Collection Services

ACKNOWLEDGMENTS

Several individuals deserve particular recognition for their assistance in carrying out this task. Dave Eckerson along with Mike White from the HPN office of USAID/Haiti provided overall support.

The LOGOS firm provided the arduous work of carrying out the field surveys while laboring under most difficult conditions. They included Christian Bonaparte, who provided overall direction; Carole Roy, who was the survey manager; and field supervisors, Jean Claude Louissaint and Frantz Clement. Surveyors included Ossiny Turenne, Jim Adler Conge, Rene Benjamin, Jimmy Mennard, Julie Malvoisin, Roger Mouristit, Max St. Surin, and Agee Dumont. Assisting with the industrial and compost surveys were Franz Nelson and Edie Montlouis.

WASH staff involved in the report preparation included Betsy Reddaway, Joan Hoaglund, Sandra Dugan, and John Sequeira.

Special thanks is extended to the citizens of Port-au-Prince who patiently answered questions for the survey. Their answers have been invaluable in contributing to the solutions of solid waste management in Haiti.

ACRONYMS

APH	Average payment per house
EDH	Electrical Authority of Haiti
GOH	Government of Haiti
gourdes	Haitian currency (US $1 = 7 *gourdes*)
IDB	Inter-American Development Bank
IDAI	Institute for the Development of Agriculture and Industry
MSW	Municipal solid waste
NGO	Nongovernmental organization
SEN	*Societe d'Equipement National* (National Equipment Co., a private firm)
SMCRS	*Service Metropolitan de Collecte des Residus Solides* (Metropolitan Collection Service for Solid Waste)
SWM	Solid waste management
UNACOM	*Usine National de Compost* (National Compost Factory)
USAID	United States Agency for International Development
WASH	Water and Sanitation for Health Project
WMA	Waste Management Association (proposed)

EXECUTIVE SUMMARY

Objective of Assignment

The objective of this assignment was to carry out a survey of solid waste management (SWM) for households, businesses, and industries in metropolitan Port-au-Prince. A total of 404 households, 30 businesses, and 11 industries were surveyed as representative samples of waste producers. In addition, information was gathered from both the government agency and representatives of small businesses and individual entrepreneurs engaged in waste collection. The disposal of solid wastes was also studied with special emphasis on composting as a productive use for wastes and on the proper use of landfills. An analysis of several plausible scenarios has led to preliminary recommendations for the creation of a Waste Management Association to manage solid waste in the private sector. A financial projection was completed for each scenario.

Survey Results

The daily production of solid wastes in Port-au-Prince is estimated at 1,152 tons (1991). The capacity of Service Metropolitan de Collecte des Residus Solides (SMCRS), the government organization responsible for collecting these wastes, is less than one-quarter of this total. Temporary landfills within the city have encouraged a situation where only a small volume of waste is being transported outside while the rest accumulates visibly everyday.

Household

- Only about 24 percent of households receive waste collection service from SMCRS.
- Among those who receive service from SMCRS, the majority are dissatisfied.
- About 21 percent presently pay a total of $1.27 million per year for waste collection by private entrepreneurs.
- Most households dispose of waste themselves, primarily by dumping it in ravines or public areas, or by burning.
- About 48 percent are willing to pay for reliable waste collection at an average cost of $2.07 per week.

- Significant amounts of nonorganic waste are recycled but only minor amounts of organic materials are composted.

- A majority of households would be willing to participate in a community organization to manage wastes.

Commercial

- About 40 percent of businesses receive waste collection service from SMCRS.

- Of these, 48 percent are dissatisfied.

- 34 percent pay for waste collection by private entrepreneurs.

- The remainder dispose of waste by dumping it in public areas.

- 57 percent are willing to pay for waste collection at an average of $5.25 per week, or about $.45 per employee.

- 43 percent regularly purchase recycled items, especially paper/cartons and plastic containers.

- Few businesses are interested in participating in a community organization for waste management.

Industry

- All industries surveyed rely on their own means of waste disposal. Most use an old uncontrolled landfill about 25 km from Port-au-Prince.

- In terms of volume of waste disposed of within the city, industry is the least offender among the three groups.

- Industries presently spend an average of $1.45 per employee per month for waste disposal.

- 69 percent are willing to continue to pay for private collection services at the present level.

Waste collectors

- There are only a few formal entrepreneurs with trucks in the waste collection business at present but they expressed a great interest in expanded opportunities.

- Non-formal individuals with wheelbarrows who derive income from waste collection serve about 20 percent of households and 7 percent of businesses.

Compost

- Compost from municipal waste sources is not used at present.

- According to the survey, the potential market for compost is about 50 cubic meters per day.

- Although the market price of compost is probably less than the estimated production cost, the benefits in land reclamation and in reducing the landfill volume are significant.

Conclusions

The solid waste problem in Port-au-Prince is clearly of serious magnitude and therefore of significant interest to its citizens. SMCRS has inherent problems that even government support cannot overcome. The survey results show that people are willing to pay for proper services and that these services can be provided by the private sector at costs well within the range of estimated revenues from all zones of the metropolitan area.

A financial analysis of several scenarios, ranging from continuing with the existing government waste management agency to creating a private waste management authority indicates that the latter could provide complete waste collection with a positive cash flow. This report describes the institutional structure of such a privatized entity, the Waste Management Association (WMA).

Recommendations

1. The Government of Haiti should privatize its solid waste management system, adopting any of several possible management structures, preferably the one described in this report.

2. Inter-American Development Bank should consider funding the new Waste Management Association.

3. USAID should participate in establishing the institutional structure of the new authority and assist the private sector and community groups in becoming part of the institutional arrangement. It should support pilot projects in composting.

Chapter 1

INTRODUCTION

1.1 Objective

The objective of this assignment was to carry out a survey of solid waste management (SWM) in metropolitan Port-au-Prince (see Figure 1). A total of 404 households, 30 businesses, and 11 industries were selected as a representative sample of waste producers. Information on garbage collection was gathered from the government agency responsible for waste collection and from the private sector, including small businesses and individual entrepreneurs. Garbage disposal was studied with special emphasis on composting as a productive use for garbage and on proper use of landfills. Analysis of the data collected supports recommendations for investing the private sector with increased responsibility for the management of solid waste.

1.2 Methodology

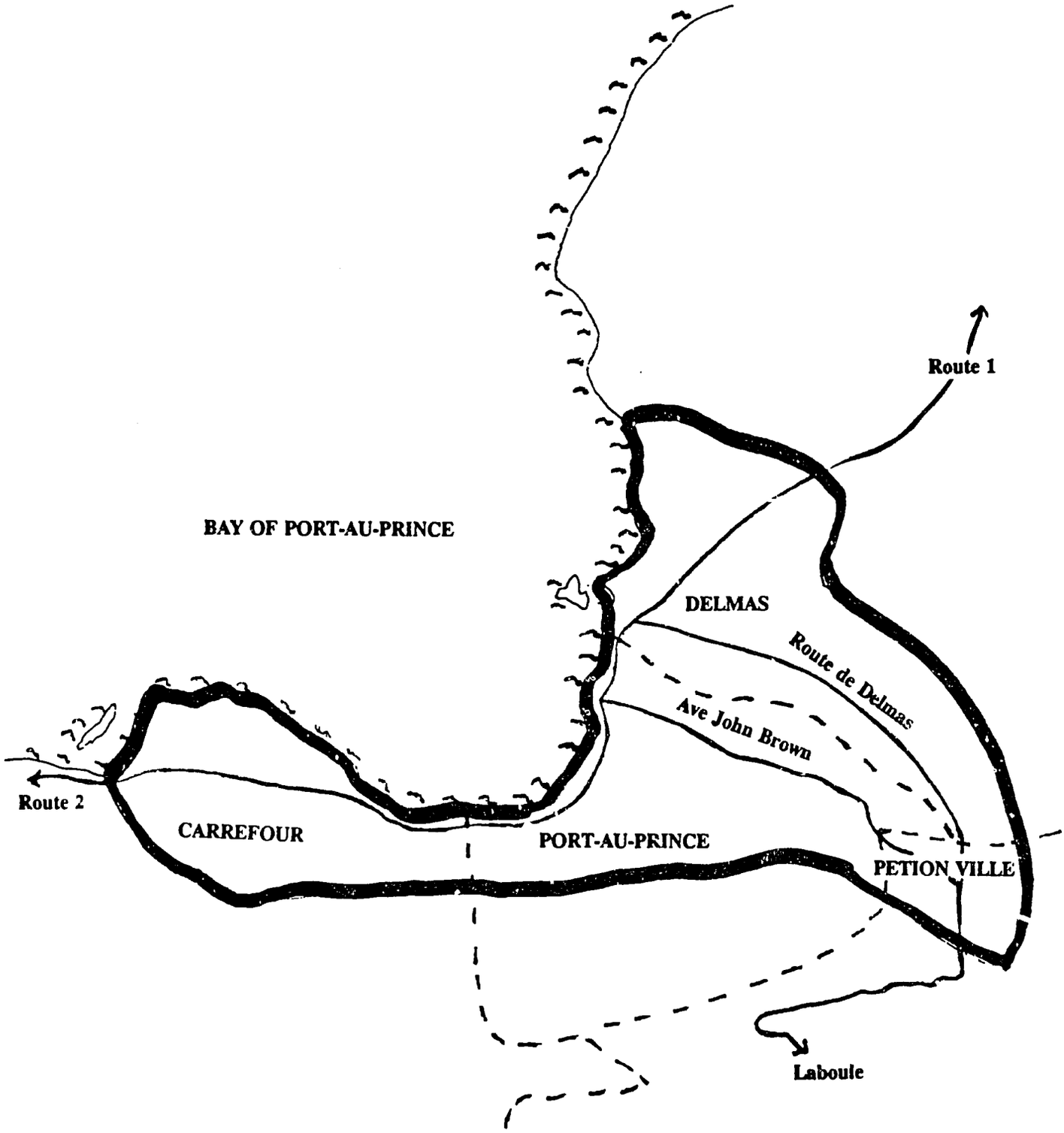
The field work in Haiti was carried out from September 10 to 28, 1990, and the analysis of data and the recommendations were completed thereafter in Washington. The WASH team comprised

Phil Roark	Team leader and management specialist
Mito Bessalel	Engineering/Financial
David Dalmat	Composting
Kevin Murray	Institutional/Environmental

The Haitian marketing firm of LOGOS, led by Christian Bonaparte, was subcontracted by WASH to carry out surveys for the household and commercial sectors and to assist in other areas. A questionnaire, translated into French and Creole, was used in the random sampling of 12 economic classes defined in the "Master Plan for Urban Port au Prince" (prepared by Lavalin International for the Haitian Ministry of Public Works, UNDP/Habitat in 1988). This report provided most of the background data in support of the present study.

Figure 1

METROPOLITAN AREA OF PORT-AU-PRINCE



1.3 Background

Solid waste management (SWM) in Port-au-Prince has become a problem of extreme proportions. USAID/Haiti, believing privatization would solve the problem, accepted a proposal from a Haitian nongovernmental organization (NGO) that was evaluated by WASH in December 1989. Key findings of this evaluation, "Assessment of Solid Waste Management in Port-au-Prince," WASH Field Report No. 292, January 1990, were:

- An estimated 1,000 tons of solid waste are generated daily in Port-au-Prince.
- Much of this is being disposed of in unauthorized or temporary landfills in the city.
- Service Metropolitan de Collecte des Residus Solides (SMCRS), a public institution, is officially responsible for waste collection and treatment.
- The equipment owned by SMCRS is generally in poor condition and sufficient to move only about one-quarter of the total volume of waste.
- Some parts of the city, notably the more affluent neighborhoods, receive solid waste removal services from the private informal sector.
- Residential solid waste removal alone may be a multimillion dollar industry.
- Waste removal by the private sector appears efficient but disposal at unauthorized sites exacerbates SWM problems.
- The accumulation of waste has caused significant indirect economic losses because of increased traffic congestion, clogging of urban drainage systems, air pollution from burning, and probable increases in water-borne and vector-related diseases, and direct losses to the commercial and tourist industries.

The assessment concluded that the privatization of SWM was needed but that the NGO proposal contained some major errors and unfounded assumptions. The Mission rejected the proposal and asked WASH to carry out a survey to define the market for waste collection by private entrepreneurs. The survey, which was the basis of the present assignment, was to address the following questions:

1. What is the size of the market willing to pay for waste collection and how much is it willing to pay for specific services?

2. What is the optimum breakdown of geographic units (franchise markets) for waste collection?

3. What are the size and composition of the private sector presently engaged in solid waste collection?

4. How much interest do trucking companies have in expanding into the waste collection business?

4. What is the market, size and value, for compost?

5. What are the incentives for private sector management of the landfill operation?

A follow-on study, based on the results of the survey, will determine:

- The most appropriate institutional framework and the role of government for maximizing private involvement

- The most appropriate regulatory framework and enforceable regulations

- The need to assist private entrepreneurs participating in this arrangement to obtain loans

- Whether other donors (for example, the Inter-American Development Bank with an interest in safeguarding past and planned investments totaling almost $80 million in urban drainage) would cooperate in developing solutions to SWM

- A feasible timetable and additional resources needed for shifting from public to private management of SWM

Chapter 2

SURVEY APPROACH

Several groups have roles of varying significance in SWM. There are three groups of waste producers—household, commercial, and industrial. There are two types of private sector waste collectors—small businesses with trucks, and individual collectors equipped with only hand tools. Users of waste products, including compost and other materials gathered from the waste stream, are also of interest. Each of these groups required a different survey approach, which the following sections describe.

2.1 Households

Most emphasis was placed on this group presumed to be the biggest producer of wastes and also the most unknown in terms of its interests. A questionnaire designed by WASH and modified by LOGOS (Appendix G) asked questions relating to waste production, existing level of collection service, and interest in change. It was translated into Creole, field tested and modified further, and given to a team of 8 surveyors and 2 field supervisors after instruction and practice in carrying out the survey. Surveyors were given a photo card identifying them as employees of LOGOS who were carrying out a survey of waste management and a T-shirt emblazoned with the Creole words for "Port-au-Prince....Clean." Most of the surveyors were experienced from previous assignments with LOGOS.

Particular attention was given to representative sampling since Port-au-Prince is an unusually heterogenous city with many neighborhoods having rich and poor living next to one another.

2.1.1 Sampling Zones

The 1988 study by Lavalin International (*Plan Directeur d'Urbanisme de Port-au-Prince*) was used to divide the city into 12 zones based on levels of expenditures for housing, transportation, food, health, education, energy, and water. This division was considered to be the most useful baseline information available for the survey. Zones 1 through 7 cover neighborhoods in descending order of economic affluence, with 1 being the richest and 7 the poorest, zone 8 covers government housing, where income levels are about the same as zone 7, zones 9 and 10 include downtown businesses, and zones 11 and 12 are evolving neighborhoods with a small percentage of the total population.

The population (numbers of households) for each zone is shown in Figure 2. The key characteristics of each zone are shown in Table 1 and described in the following sections.

Figure 2

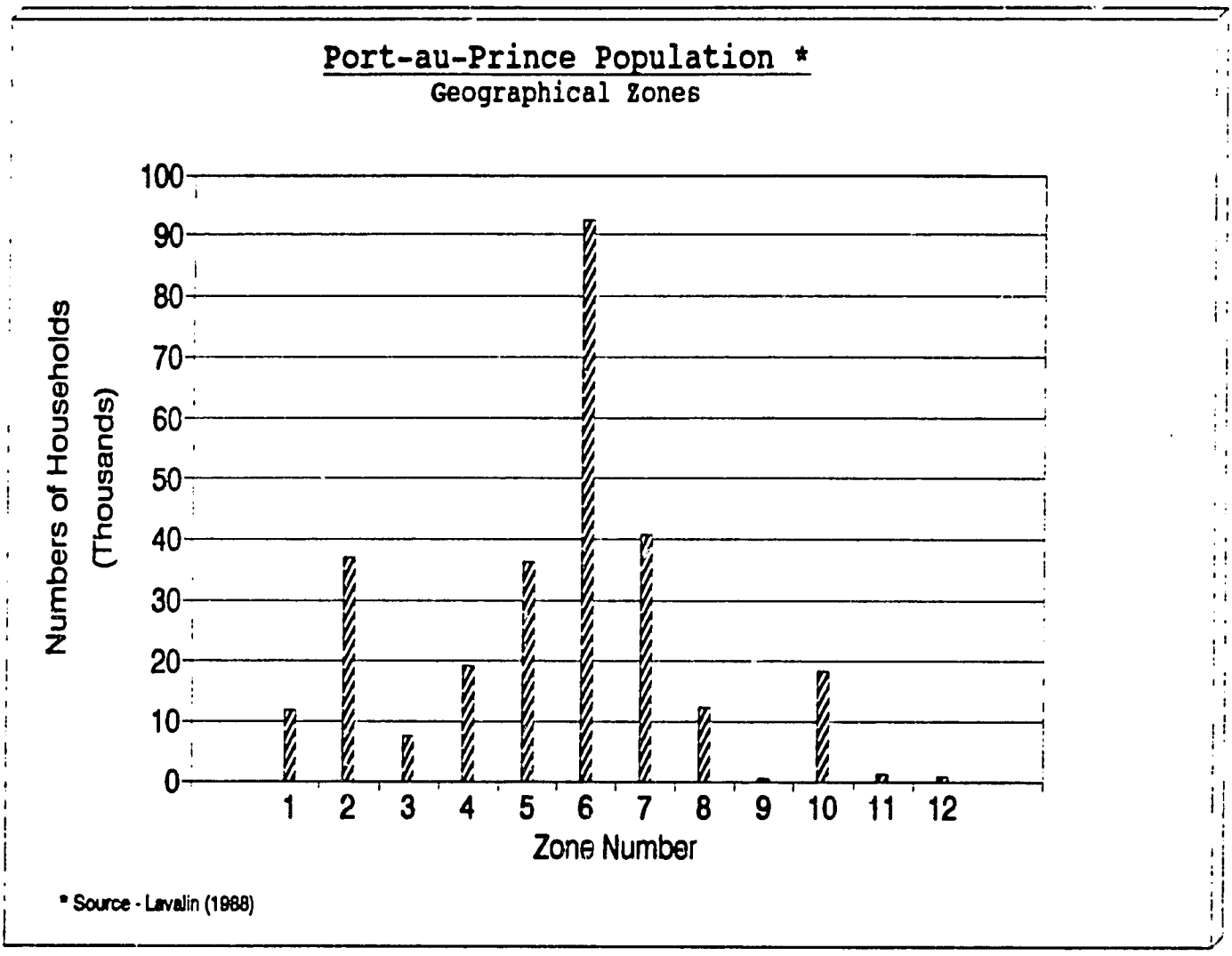

Port-au-Prince Population *
Geographical Zones
Numbers of Households
(Thousands)
100
90
80
70
60
50
40
30
20
10
0
1
2
3
4
5
6
7
8
9
10
11
12
Zone Number
* Source - Lavalin (1988)

Table 1

Household Expenditures by Zone
(in US$)

Zone	Rent	Trans.	Food	Health	Educ.	Energy	Water	Total Expen.
1	144.30	21.20	255.53	20.54	36.44	12.43	28.05	518.50
2	67.61	18.67	199.07	19.04	35.71	8.80	16.56	365.45
3	51.42	11.81	197.89	17.10	25.95	14.65	10.60	329.42
4	41.71	15.89	206.12	15.78	30.64	5.69	14.70	330.51
5	29.85	10.50	166.70	15.43	25.41	7.81	8.72	264.43
6	24.70	7.76	127.74	12.61	19.03	4.52	5.45	201.80
7	15.40	7.57	116.06	7.59	10.69	11.39	4.17	175.57
8	12.70	14.34	110.86	24.11	10.35	11.20	3.22	186.77
9	44.56	16.76	174.75	28.51	31.66	7.92	16.98	321.14
10	37.97	12.46	142.45	25.11	23.25	6.11	9.96	257.30
11	86.21	19.28	212.76	19.40	35.88	9.68	19.35	402.56
12	67.61	18.67	199.07	19.04	35.71	8.80	16.56	365.45

Source: Lavalin (1988)

Table 1 (cont.)

Zone	Characteristics	Examples of Neighborhoods	% of Households	Avg. Expend. for Housing/Mo.
1 Superior	Residential, very light density Individual houses, superior construction	Peguy-ville, Village Lamothe	4.29	$518
2 Medium	Residential, very light density Individual residences, good quality construction	Bois Verna, Petion-ville	13.40	$366
3 Intermediate	Heterogenous housing Medium density, without planning Good quality construction	Haut Delmas	2.70	$329
4 Lower A	Residential, medium to high density Planned housing Mediocre quality construction	Bas Peu de Chose, Fontamara	6.95	$331
5 Lower B	Residential, high density Mediocre quality construction Unplanned	Bolosse, Bel Air	12.44	$264
6 Squatter	Residential Permanent type housing on difficult sites (steep slopes, ravines) Mediocre quality construction Unplanned	Fort Mercredi, Saint Martin	33.53	$202
7 Precarious	Residential, very dense Very poor quality construction, Bidonville Housing from scavenged materials	La Saline	14.78	$176
8 State Housing	Social low-income housing	Cite Soleil, Raquette	4.42	$187

Table 1 (cont.)

9 Downtown Business	Commercial Little infiltration of squatters	Rue des Miracles, Rue du Centre	0.21	$321
10 Deteriorated Downtown	Extremely dense Small houses of mediocre quality Craft, repair, and sales activities	Boulevard Jean Jacques Dessalines, Rue Chareron	6.63	$257
11 Changing types 1&2	Same as 1&2	Parts of Delmas and Petion-ville	0.43	$403
12 Changing type 4	Residential type 2 changing to 4	Parts of Carrefour	0.23	$365

2.1.2 Sampling

A total of 404 household questionnaires were completed, the number for each zone being based on the percentage of population for that zone (Table 2).

Table 2

Households by Zone

Zone	Total No. of Households	No. of Households Surveyed	% of Households Surveyed
1	11,818	21	5.20
2	36,919	39	9.65
3	7,419	13	3.22
4	19,142	28	6.93
5	34,260	52	12.87
6	92,351	143	35.40
7	40,707	53	13.12
8	12,165	28	6.93
9	578	1	0.25
10	18,268	23	5.69
11	1,197	2	0.50
12	630	1	0.25
Total	275,454	404	100.00

Surveyors began with a randomly chosen address within the zone and then, for example, sampled every other household on the south side of the street until their quota for that zone was completed. The sampling instructions were changed each day to ensure unbiased selection. Supervisors oversaw the surveyors, who reported that respondents generally were most cooperative, with very few refusing to take part. The questionnaire took about 30 minutes to administer and each surveyor completed about six each day over a 10-day period (September 15-24, 1990). The questionnaire contained 41 questions, many of which were leading questions designed to give the respondents an understanding of the survey's intent. Most questions required only a yes or no response. The sample of 404 households represents about 0.14 percent of the total households in Port-au-Prince.

2.2 Commercial

The commercial survey was directed at a cross-section of businesses (Table 3) and used a questionnaire (Appendix I) similar to the one for the household survey. One LOGOS employee carried it out by randomly selecting businesses within the commercial zones of Port-au-Prince, Delmas, and Petion-Ville. It was administered in French or Creole depending on the preference of the respondent. Again, most respondents were cooperative and interested in speaking about the waste problem.

Table 3

Types of Businesses Surveyed

Business	Number Surveyed
General stores	6
Supermarkets	2
Hardware	2
Electronics/music	2
Clothing	2
Hotels	2
Construction materials	2
Restaurant/bar	6
Hospitals	2
Other	4
Total	30

2.3 Industry

Because of the specialized nature of industrial wastes, the technical considerations in industrial production, and the sensitive nature of waste disposal, the industrial survey was carried out by two engineers, one from WASH and the other from LOGOS. The questionnaire was administered in French primarily. A total of 10 industries and an industrial park, chosen to represent a typical range of industrial products with characteristic wastes, were surveyed (Table 4).

Table 4

Types of Industries Surveyed

Poultry	Printing
Leather	Oil
Baseballs	Newspapers
Plastic shoes	Distillery
Leather shoes	Miscellaneous (The industrial park includes a variety of manufacturers, primarily in textiles.)
Sugar	

Although assurances were given that no names would be reported in the survey, two firms chose not to participate. Otherwise, the interest in the survey was quite satisfactory.

2.4 Waste Collectors

There are two types of collectors: small entrepreneurs with trucks who charge households a weekly fee and usually dispose of the waste at the temporary landfills, and individuals with shovels and wheelbarrows who charge a weekly fee and generally burn or dispose of wastes in unauthorized sites such as ravines or open areas. Two entrepreneurs and five individuals involved in waste collection were interviewed informally without a questionnaire, primarily to cross-check responses from the household survey. City employees who sweep streets and pick up wastes were not included in the survey. The same engineers who completed the industrial survey conducted these interviews.

2.5 Compost and Recycling

The objective of the compost survey was to reach existing and potential compost users to ascertain their interest and needs, primarily in the horticultural and gardening sectors near. Port-au-Prince. Consideration was also given to rehabilitating the existing compost factory and to involving community organizations in composting.

A WASH specialist in composting and a LOGOS agriculturalist carried out informal interviews. In addition, questions relating to recycling were included in the household, commercial, and industrial questionnaires.

Chapter 3

WASTE PRODUCERS

The key findings of the surveys carried out for the three producers of waste—households, commerce, and industry—are outlined in the following sections.

3.1 Households

Waste Quantities

1. The total estimated wastes produced daily within the metropolitan area of Port-au-Prince are indicated in Table 5.

Table 5

Daily Waste Production for the Metropolitan Area of Port-au-Prince

Year	Waste Production* (in tons)	Population **
1991	1,152	1,965,218
1992	1,241	2,118,500
1993	1,338	2,283,748
1994	1,441	2,461,880
1995	1,554	2,653,907

* Assessment of Solid Waste Management in Port-au-Prince, Haiti. WASH Field Report 292. Jan. 1990.

** Projection from *Plan Directeur de la Ville de Port-au-Prince*. LAVALIN. 1988.

2. The average quantity of wastes disposed of by households is 6 kg every two days or 0.5 kg/person/day.

Waste Disposal

3. About 76 percent of households do not receive public waste pickup services (neither SMCRS nor mayor's office).

4. Among those who do receive SMCRS service, most say it is poor.

5. Methods of waste disposal by percentage are: 34 percent in ravines or open spaces; 8 percent by burning; 21 percent on streets; 6 percent at collection points on streets; and 28 percent, did not wish to specify the means they used.

Payment for Services

6. Presently, 21 percent of households pay for garbage pickup—1.5 percent use private companies and 19.5 percent use individuals.

7. The average expenditure for those who pay is $1.56/month/house which amounts to a total of $1.27 million per year.

8. Almost half, 48 percent, of households expressed a willingness to pay for reliable garbage pickup at their home or nearby collection point.

9. The average of what they were ready to pay was $2.07/week/house. (Figure 3 provides a breakdown of willingness to pay by amount.)

10. There was little difference between zones in willingness to pay. Even within poorer neighborhoods, zones 5-8, 42 percent of households indicated that they were willing to pay an average of $1.85/week/house.

11. The total willingness to pay is remarkably high, $18.5 million annually.

Figure 3

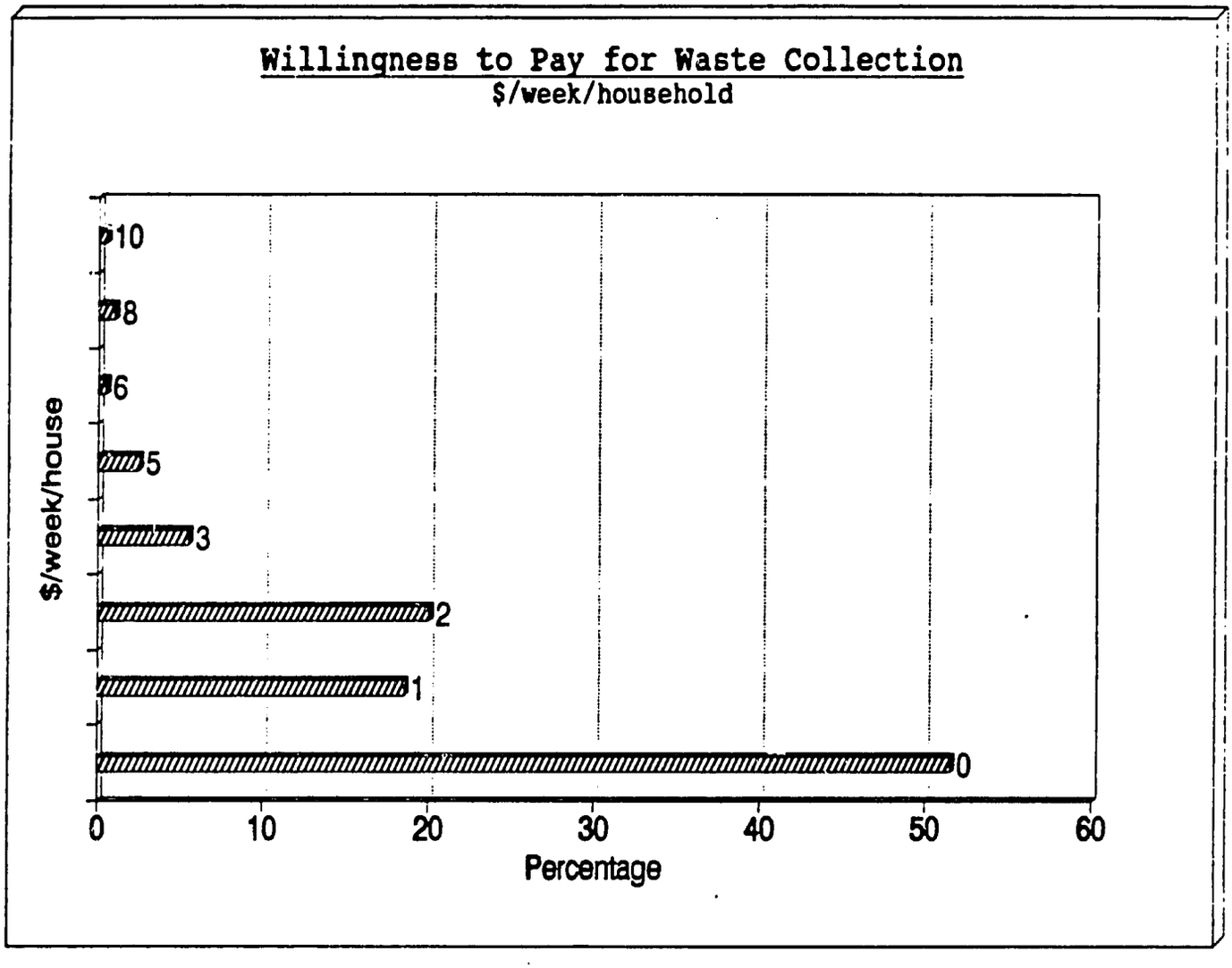

Willingness to Pay for Waste Collection
$/week/household
$/week/house
10
8
6
5
3
2
1
0
0
10
20
30
40
50
60
Percentage

Table 6

Expressed Willingness to Pay for Reliable Garbage Collection
(number of households)

Zone	Dollars per Week 10	8	6	5	3	2	1
1	1	0	0	3	1	7	9
2	0	1	0	1	4	9	1
3	0	0	0	0	2	3	4
4	0	0	0	3	1	10	6
5	0	0	0	1	6	17	14
6	0	0	0	3	6	11	20
7	0	0	0	1	1	10	18
8	0	1	0	1	1	2	6
9	0	0	0	0	0	0	0
10	0	0	1	1	3	16	4
11	0	0	0	0	0	0	0
12	0	0	1	0	0	0	0
Total	1	2	1	14	25	85	82

Average per house = $2.07/house/week

Recycling

12. The percentages of households that recycle specific products are: 14 percent wood, 66 percent bottles, 26 percent orange peels, 85 percent big plastic bottles, 49 percent cans, and 25 percent cartons.

13. The percentages of households that purchase recycled products are: 8 percent wood, 35 percent bottles, 6 percent orange peels, 32 percent tin cans, 57 percent big plastic bottles, and 13 percent cartons. There is a greater tendency among poorer neighborhoods to purchase recycled products, particularly wood and cartons.

14. About 8 percent of households purchase top soil, and 4 percent purchase fertilizers, primarily in the more affluent zones (1-4).

15. Only slightly more than 2 percent return organic wastes to soils, while 1 percent practice composting.

16. Cesspools are cleaned an average of once every two years by groups: 27 percent bayakou*, 9 percent health service, and 9 percent private firms.

Community Participation

17. Overall, 65 percent would participate in a community organization to dispose of wastes, and an even higher number, 81 percent, in poorer neighborhoods (zones 5-8).

18. Virtually everyone, 97 percent, expressed interest in receiving specific information about proper waste disposal and recycling.

Survey Characteristics

19. In the household survey, 66 percent of respondents were women. The average household size was 6.1 persons (as compared with the official census average of 6.7 persons). A significant number of respondents, 35 percent, were unemployed.

3.2 Commercial

Waste Services

1. The most common means of waste disposal by businesses is in plastic bags (37 percent) and barrels (30 percent); the rest use pans or buckets.

2. About 57 percent dispose of waste daily, the rest less frequently.

3. Public agencies (SMCRS or mayor's office) serve only 40 percent, and most of these customers receive service only once per week.

4. 48 percent rate SMCRS service as poor, 43 percent as acceptable.

5. 27 percent of businesses employ private firms; 7 percent employ individuals for waste disposal.

Payment for Service

6. Those who use private services pay an average of $17.33/month.

---

* "Bayakou" is a term for people who specialize in cleaning cesspools.

7. A majority, 57 percent, indicated a willingness to pay for reliable collection service.

8. These indicated they would pay an average of $5.25/week or about $0.43/employee/week.

9. Asked to suggest improvements in waste collection, 47 percent wanted SMCRS to do a better job, 67 percent were not in favor of community action in waste collection.

Recycling

10. About 43 percent do not dispose of organic wastes.

11. About 43 percent regularly purchase recycled items, chiefly paper/cartons and plastic containers.

12. Only one business, a hotel, purchased top soil, fertilizer, and compost.

13. A large number of businesses, 70 percent, are not willing to separate garbage.

14. About 27 percent of businesses have no cesspool. Of those who do, most pump it out once a year.

15. About 23 percent employ bayakou and 17 percent use the Health Service for cleaning cesspools.

Community Organizations

16. Most businesses, 67 percent, are not in favor of having community groups collect wastes.

17. A large number, 90 percent, think others are not knowledgeable about waste disposal but 80 percent think of themselves as knowledgeable.

18. Most, 70 percent, would like more information, particularly about recycling. They suggest using all mediums—radio, TV, newspapers

Survey Characteristics

19. Of businesses in the survey, 50 percent have fewer than 5 employees; 13 percent have 6 to 10; 17 percent have 11 to 25; and 20 percent have more than 26 employees.

3.3 Industry

3.3.1 Industries Surveyed

Table 7 lists the industries selected for the survey on the basis of type of product and locations.

Table 7

Industrial Products Surveyed and Location

Product	Location
Chicken	Petion-Ville
Leather	Carrefour
Baseballs	Cite Soleil
Plastic Shoes	Chancerelles
Sugar	Chancerelles
Leather Shoes	Chancerelles
Printing	Port-au-Prince
Oil	Chancerelles
Newspapers	Port-au-Prince
Distillery	Port-au-Prince

In addition, the manager of an industrial park that presently provides rental facilities to 32 manufacturers was interviewed. Construction of 16 additional facilities is scheduled to be completed early next year.

3.3.2 Survey Results

Waste Disposal

1. About 63 percent of industries collect and dispose of wastes themselves.

2. Much waste is disposed of in Titanyn, the old unmanaged landfill site about 25km north of Port-au-Prince.

3. Smaller industries burn their wastes on their premises.

4. The average amount of garbage produced for each industry is 0.5 ton/day

5. Of the three sectors, industries are the least likely to dispose of solid waste in the streets of Port-au-Prince. However, burning and disposal in an unofficial site is a common practice.

Community Participation

6. The industrial sector expressed concern and interest in improving its solid waste management.

7. Industries believe that community organization and education of the population through the media will be beneficial.

Recycling

8. The industrial sector already recycles 70 percent of its waste.

Payment for Service

9. The present cost of collection and disposal of industrial waste averages $1.45 per employee per month.

10. If garbage collection and disposal are privatized, 68 percent of the industries are willing to pay about the same as they now pay.

11. The manager of the industrial park indicated that in order to provide an adequate service to the facilities, he prefers to continue with the same system. Tenants pay $0.10 per square foot of occupancy per month for the collection.

12. A summary of the industrial survey is provided in Table 8.

For each category, comparison of present payments with willingness to pay is shown in figure 4.

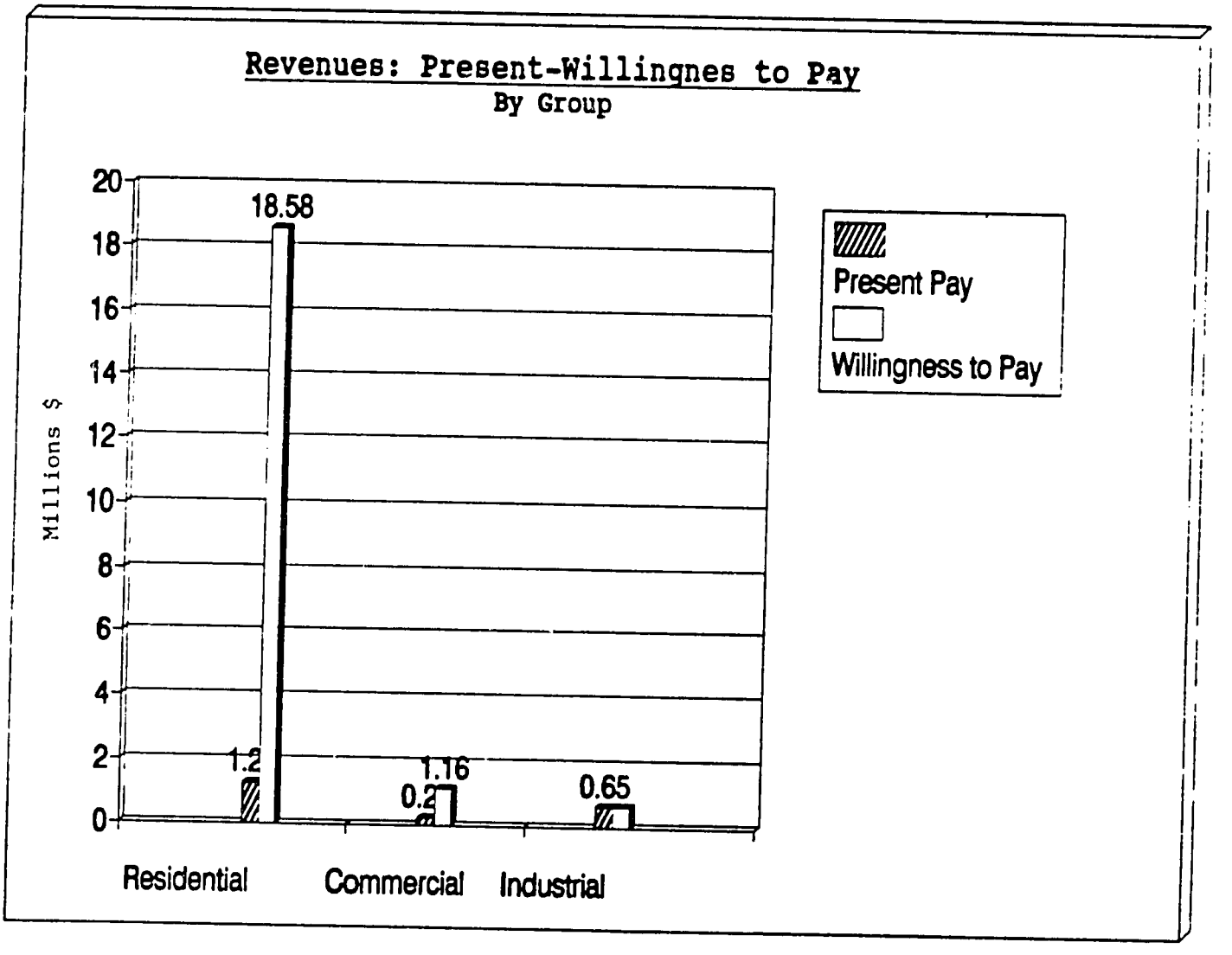
Table 8

Summary of Industrial Survey

Industrial Product	Type of Waste		Collector	Disposal Means	Cost	No. of Employees
	Organic	Non-Organic			(US $ /mo.)	
Poultry	y	n	Self	On-site	n/d	15
Leather**	y	y	Self	Burn/sea	80	110
Baseballs	y	y	Private	—	200	300
Shoes-Plastic *	n	y	Self	Old Landfill	n/d	1000
Sugar	y	n	Self	Burn	n/d	6000+
Shoes-Leather **	y	y	Self	Burn	750	750
Printing	y	y	Private	---	200	170
Oil	n	y	Private	---	300	200
Newspapers **	y	y	Public	---	80	30
Brewery **	y	y	Self	Burn	150	150
Industrial Park	y	y	Self	Old Landfill	8000	5000***

+ Willing to pay only for non-recyclable material, no estimate given
* Visual Inspection
** Willing to Pay
*** Charges $0.10 per sf for garbage collection

Figure 4


Revenues: Present-Willingnes to Pay
By Group
Millions $
20
18
16
14
12
10
8
6
4
2
0
18.58
1.2
1.16
0.65
Present Pay
Willingness to Pay
Residential
Commercial
Industrial

Chapter 4

WASTE COLLECTORS

4.1 General

The two groups of private sector waste collectors — small businesses with trucks that haul wastes primarily to temporary landfills and individual collectors with wheelbarrows that dump wastes in ravines and open areas — were surveyed informally.

The questions they were asked concerned:

- Area served and type of customers
- Other activities of business
- Collecting capacity
- Place where garbage is disposed of
- Number of locations served
- Frequency of collection
- Charges
- Separation and process of recyclable material
- Level of satisfaction with business
- Major constraints (road conditions, traffic congestion, other)

4.2 Truck Operators

Table 9 summarizes the responses of the two companies interviewed. A sample circular offering garbage collection services appears in Appendix L.

The responses indicate that:

- In affluent areas such as Petion-Ville, many residents and commercial businesses are currently paying for garbage collection service.

- Trucks used are small (pickup size) of 2-3 cubic meter capacity.

- Private companies are willing to take their loads to the official landfill.

- One of the companies provides plastic bags for households to separate wastes.

- Both companies indicated that they are interested in expanding their business.

- One company had developed preliminary plans to produce compost.

- The main constraints to collecting garbage are the deteriorated street conditions, traffic congestion, and security.

Table 9

Private Companies—Survey Summary

Question	Company 1*	Company 2
Service and type of customers	No preference	Residential
Main Business	No	No
What is the collecting capacity T/d	20	20
How many locations	200	135
How many collections are performed /week	2	2
How much are the charges** for the service/mo	$ 18	$ 10
Location of disposal	Titanyn	Titanyn
Recycling of waste material	None	None
Level of satisfaction with business	Like to expand	Like to expand
Major constraints	Roads, traffic, security	Roads, traffic, security

* Indicated that with proper financial assistance they could mange the entire collection and disposal of the garbage produced in the city. Also as part of expansion, they proposed to produce compost.

** A third company advertises collection of garbage for $12/mo.

4.3 Individual Collectors

Four individual collectors were interviewed in zone 3. The sample was smaller than anticipated because the irregular working hours of these collectors make them difficult to find. The responses indicate that

- Individuals collect about 300 kg/week of waste.
- They each serve only about five households by providing twice a week service.
- Payment is $2/week/house.
- Bottles are separated and sold.
- Collectors dispose of waste at common pickup points.
- Collectors view their job as temporary and would prefer a permanent job with a small firm.
- Streetsweepers (employees of the mayor's office) also provide waste collection services for a fee in competition with individual collectors.

Chapter 5

COMPOST

5.1 Definition of Compost

As compost is sometimes confused with fertilizers, soil enhancers, manure, sludge, and other products intended to improve crop production, this chapter is intended to clarify the nature of compost and the process of composting. Composting is the slow decomposition of solid wastes by mixed populations of micro-organisms that yields a stabilized residual organic material when temperature and moisture conditions are favorable for microbial activity. As most organic matter is susceptible to microbial decomposition, it is technically feasible to compost organic refuse or municipal solid waste (MSW). The principal objective of composting is to produce a humus-like material that can be used as a soil conditioner.

5.2 Value of Compost

Compost is beneficial for crop production because it supplies primary plant nutrients, trace elements, and organic matter to the soil. The application of compost to marginal agricultural soils at rates equivalent to the nitrogen requirement of the crop often produces significantly higher yields than commercial inorganic fertilizers applied alone. This is because the organic matter contained in the compost improves the physical properties of the soil. whereas crop response to inorganic fertilizers is dependent upon favorable soil conditions. Compost improves the soil's physical condition by

- increasing the water holding capacity
- enhancing aggregation
- increasing soil aeration
- improving permeability
- increasing water infiltration
- decreasing surface crusting
- improving soil tilth

Compost increases the ability of sandy soil to retain water and renders it less droughty. In heavy-textured, clayey soils, the added organic matter will increase permeability to water and air, improve aeration, and minimize runoff. In turn, these soils will have a greater capacity to store water for plants. Addition of compost to clay soils has also been shown to reduce compaction and increase the rooting depth.

Previous Page Blank

The addition of organic matter to soils that already have an adequate amount will not produce a crop response but is of value for maintaining the productivity of the soil. The greatest value of compost is in improving soils that are deficient in organic matter. In very deficient soils, the addition of compost can make the difference between a marginal or no crop and a good crop.

Although many of the benefits of compost can be obtained by applying the uncomposted agricultural residue directly, there are certain benefits that are unique to compost. Composting will enhance the acceptability of agricultural wastes for land application by

- killing weed seeds
- rendering the waste unattractive to insects
- reducing the population of flies, white grubs, and other insect pests
- reducing odor emission from the waste
- killing pathogens if the process has been managed to achieve adequate temperature

Composting will also enhance the value of the agricultural waste by

- reducing the weight and volume of the waste
- improving the handling and storage characteristics so that the waste can be applied in a more efficient and timely manner
- lowering the C/N ratio so that decomposition in the soil does not temporarily tie up available soil nitrogen
- converting the organic matter to a more stable form that will last longer in the soil
- buffering the pH of the waste to near 7

When composting is incorporated in an MSW management system, there are benefits other then agricultural. A composting operation could serve as a transfer station and as a volume reduction facility. Since 65 percent of the refuse in Port-au-Prince is suitable for composting, there would be considerable savings in both transportation costs and the volume of material going to the landfill.

From 1980 to 1983, MSW compost was field tested in Port-au-Prince and laboratory tested by the U.S. Department of Agriculture in Beltsville, Maryland (Dalmat, 1982). The field tests showed that the compost, when properly processed, greatly increased the quality and quantity of cotton (100 percent increase in bowl production), potatoes (150 percent increase in harvest and a slightly larger potato), beans (50 percent increase) and squash (100 percent increase in harvest). The laboratory studies showed that there was no statistical difference

in the effect on plant growth (dry weight) between the compost-peat or compost-soil potting mix and a commercial potting mix.

5.3 Production of Compost

5.3.1 Aerobic Composting

Most commercial composting operations are aerobic. Aerobic composting depends on the growth and activity of a mixed population of bacteria and fungi that thrive in the presence of oxygen. Most organic waste materials have suitable indigenous populations unless they have been subjected to high temperatures or other treatments that render them sterile, in which case an inoculum would be needed. When microenvironmental conditions are favorable, these micro-organisms will grow and aerobic decomposition proceeds. The microbes utilize the organic materials for available carbon, nitrogen, and other nutrients. As the activity proceeds, heat is generated through biochemical oxidation of the organic matter in the respiratory functions of the micro-organisms. The increase in temperature depends on the size and shape of the organic material, the microbial population, the availability of nutrients, and the aeration rate. Eventually, the micro-organisms utilize the available nutrients and organic carbon, converting them into the more stable forms of carbon dioxide and water. When decomposition slows sufficiently, cooling occurs. There are seven parameters that must be at optimum levels for composting to proceed rapidly, effectively, and efficiently:

i) **Temperature**—Microbial activity causes a temperature increase and at about 40°C goes from the mesophilic to the thermophilic stage. At this temperature the mesophilic micro-organisms are inhibited while the thermophiles become very active. The most rapid rate of decomposition usually occurs around 55°C. Composting temperatures above 60°C are beneficial for killing pathogenic micro-organisms and weed seeds. Most aerobic composting methods maintain temperatures in the range of 55° to 80°C.

ii) **Aeration**—Natural or forced aeration of compost several important functions: it supplies oxygen to the aerobic micro-organisms; it removes excess heat and water vapor; and it removes carbon dioxide, ammonia, and other gaseous products of the decomposition process. Depending on processing needs and objectives, the aeration rate may range from 5 to 50 m^3/mt of organic matter. Particle size and initial and final moisture content all influence aeration rates.

iii) **Moisture**—Water is essential for the metabolic processes of the micro-organisms. Below about 40 percent moisture content, the decomposition rate will be inhibited. However, if the moisture content is above 60 percent, there may not be sufficient pore space for adequate air movement and anaerobic conditions may result.

iv) **Carbon:Nitrogen Ratio**—The micro-organisms require carbon (C) for growth and energy, and nitrogen (N) for protein synthesis. Rapid and efficient composting is achieved with C:N ratios of between 25 and 35. Lower ratios can result in the loss of N as ammonia, while higher ratios can lead to longer composting times. The final C:N ratio of the compost should usually be less than 15.

v) **pH**—Although the optimum pH for rapid aerobic thermophilic composting is somewhere between 6.5 and 8, the wide spectrum of micro-organisms in composting offers in a wide latitude of pH (4 to 12) over which many organic materials can be effectively composted. Regardless of the initial pH, the composting process buffers the wastes toward neutral pH (7) as the process approaches completion.

vi) **Particle Size**—Aerobic activity occurs very close to the surface of the particles exposed to oxygen. Thus size reduction by shredding may accelerate the rate of decomposition by increasing the surface area for microbial attack. However, as particle size decreases, so does the size of the voids which are essential for aeration. Thus, a compromise is necessary. The optimum size varies, depending on the method of managing the process and the waste materials.

vii) **Combining Materials (Co-Composting)**—Rarely will waste material have all the characteristics within the optimum range for rapid aerobic composting. Thus, it is frequently advantageous to combine two or more waste materials. For instance, refuse will have a high C:N ratio and a low moisture content while sewage or latrine wastes will have a low C:N ratio and a high moisture content. In the right proportions the mixture would be readily compostible. Research carried out by Dalmat in the early 80's compared compost produced from municipal refuse with co-composted refuse and sewage (see Table 10).

Table 10

Macronutrient Content
of Two Haitian Composts

Nutrient	Municipal Refuse %	Municipal Refuse and Sewage %
N	0.2	1.7
P	0.17	1.4
K	0.45	1.0

5.3.2 Anaerobic Composting

Anaerobic decomposition occurs in the absence of oxygen and requires different types of micro-organisms with different metabolic processes. The temperature for this process remains near the ambient temperature as little heat is produced. Since no aeration is necessary, the upper limit for moisture content is not critical to maintain porosity. Decomposition rates are slower, usually requiring 6 to 12 months instead of the 6 to 9 weeks typical of most aerobic composting methods.

5.3.3 MSW Composting Systems

MSW composting is the management of a biological process designed to convert the organic fraction of the MSW into compost. It can be either "high tech" or "low tech". The larger the non-organic fraction of the MSW, the more "high tech" the system is likely to be. because the MSW contains more recyclables. This is usually true in a more developed country or more affluent region, where "high tech" options are feasible. Management/administration requirements and local environmental conditions are also very important in selecting a system.

An MSW composting system in Haiti can range from the simplest process used by the farmers in Kenscoff to something as machine-intensive as a UNACOM, compost factory, established in Port-au-Prince with imported equipment. In Kenscoff, the farmers collect all the agricultural residue from their farms, mix it with animal manure and organic house wastes, and make small compost piles. They periodically turn the piles to aerate the compost and increase the microbial activity and also to break down the material into smaller particles that provide more surface area for composting to take place. This same method

could be use for MSW composting in Port-au-Prince, primarily for individual homeowners and possibly in neighborhood operations in areas like Cite Soleil. The Kenscoff farmers do not produce sufficient compost to meet their own needs although MSW could potentially supply their needs and much more.

5.4 UNACOM

UNACOM (Usine National de Compost) was an example of a high tech approach to composting. The UNACOM factory used a process called the PRAT composting system, designed for Northern Europe and other regions of similar climate and industrialization. The mayor of Port-au-Prince and the Ministries of Finance and Planning authorized the purchase of the composting plant for over $5 million in an effort to solve some of the solid waste disposal problems of the city. The mayor handed over the plant to the Societe d'Equipement National (SEN) when the original contractors left before the equipment was installed and operational. SEN was able to complete construction and operated the plant from March 1980 to September 1984. It produced about 39,000 metric tons of compost during this period, averaging about 45 metric tons per operating day. The design capacity of the plant was 250 metric tons per day. The plant employed 32 people and used 0.7 megawatts of electricity. (Total production of electricity for Port-au-Prince outside peak operation is about 65 to 70 megawatts.)

The project suffered from a lack of quality control. Most users had problems with the product. For example, horticultural nurseries found the compost reduced growth of their stock. One nurseryman had a sample of compost he had purchased that had the density of heavy soil, which was unlike any of the compost seen at the processing facility. An employee of another nurseryman, who felt the product was great for his stock, tore open his hand on a large piece of glass when mixing the compost into a potting mix. Part of the problem appears to have been the practice of selling unscreened or not fully cured compost.

At a garden club meeting in 1981, attended by professional landscapers and many serious home gardeners, samples of excellent quality were passed around to people who could not believe they had come from the same municipal composting facility from which they had vowed never again to order. It appeared that drivers sent to the plant would purchase "brut" compost (unscreened and sometimes uncured) at a cheaper rate and share the difference with the salesman.

Another problem was that SEN was directly under the Institute for the Development of Agriculture and Industry (IDAI), whose purpose was to establish profitable industrial and agricultural enterprises and whose philosophy was never to give anything away free. SEN was not allowed to offer samples to the Department of Agriculture or any organization for

field testing, and thus was denied the most effective way of promoting the compost. Any future composting operations must be integrated into a solid waste management system and not viewed as a for-profit enterprise.

Many of UNACOM's problems could have been eliminated by a quality control program. A municipal waste composting project must analyze its product regularly for toxic ingredients that could jeopardize consumer confidence. Sales should be carefully controlled to eliminate dishonest transactions and the release of inferior materials. Quality and consistency are the keystones of a successful composting program.

The composting plant had another problem that contributed to its closing. The PRAT process it followed pre-composted the garbage in aeration cells at temperatures not high enough for efficient decomposition to occur. This resulted in large infestations of flies and bad odors which, although mostly confined to the interior of the composting plant, fed rumors that UNACOM was responsible for all the fly and odor problems at the airport.

Ultimately, the for-profit motive of management, the poor quality control, the fly and odor problems inherent in the PRAT system, and the fact that UNACOM was never incorporated into the waste management system combined to make the closing of the composting plant inevitable.

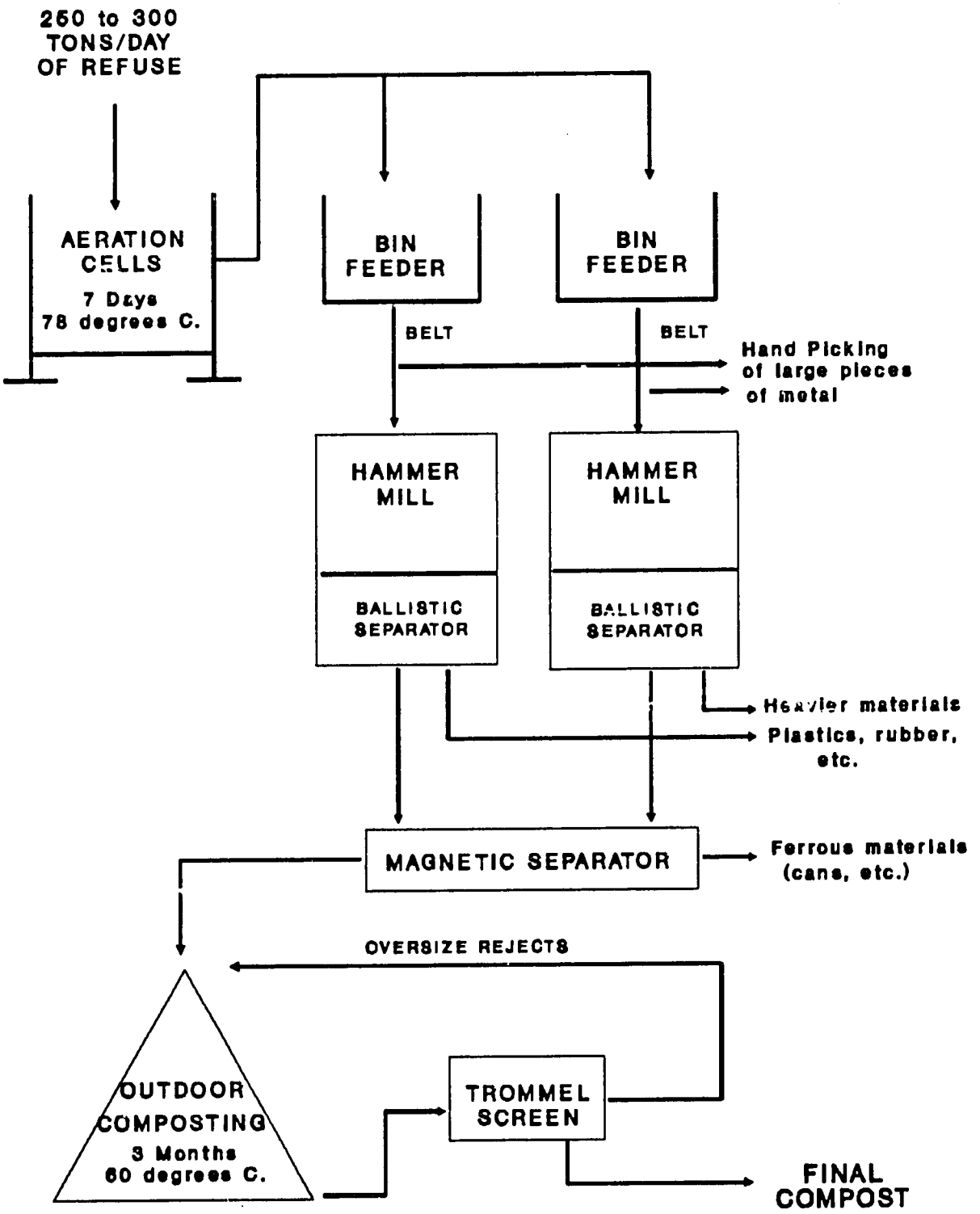
5.5 Future of UNACOM

Most of the equipment at UNACOM, with the exception of the tromell, which is worth restoring and using in a large composting operation (100 metric tons or more per day), is unsuitable for Haiti. In spite of this it appears that the plant represents sufficient resources that could be used effectively if several design changes are made. These changes are outlined below and Table 11 provides the estimated costs of rehabilitation.

> **Front End**——The present two-line configuration (Figure 5) will be retained for reliability. Adjustments will be made to take advantage of the experience gained in operating the plant.

Figure 5

UNACOM COMPOSTING



A receiving area or tipping floor will be used instead of the train cells. The collection vehicles will unload directly onto the floor. The refuse will be inspected visually and any harmful or undesirable elements will be removed. The tipping floor will also provide temporary storage so that deliveries can be held to provide a reasonably even rate of input to the processing units.

Refuse will be moved from the tipping floor to the feeder bins by front-end loaders. It will be shredded in the hammer mills, go to the magnetic separator, and then be transported by front-end loaders to one of the seven wings for composting.

Composting Process—Composting will occur in two stages. The first stage will employ the Beltsville Aerated Static Pile process, proven and energy-efficient technology that takes 45 to 60 days. The second stage will provide the curing. The aerated piles will be broken down and the partly composted material will be moved by front-end loader to curing piles outside. Curing ensures organic stability and the destruction of pathogens, weed seeds, worm eggs and fly larvae while the formation of compost continues.

Finishing Process—At minimum the compost must be put through a coarse screen to remove undesirable material before it is sold. For higher-value markets, like the home market where aesthetics are important, further size reduction, bagging, and even blending with peat moss and fertilizer are necessary. Matching the compost to the market will increase both customer satisfaction and revenues (assuming the extra steps are justified by market prices).

Table 11

Budget
Rehabilitation of UNACOM

Capital Budget

1. Repair reusable UNACOM equipment	$50,000-100,000
2. Redesign UNACOM building	30,000
3. New material handling equipment (3@120,000)	360,000
4. Aeration system	10,000
5. Site preparation	40,000
Total	$ 490,000

Operating Budget
($/year)

Labor		
1. Skilled		$19,875
2. Laborer		7,100
3. Watchmen		3,285
4. Supervisor		18,500
	Total	$48,285
Energy		
1. Gas		$12,720
2. Electric		71,000
	Total	$83,720
Capital Cost Annualized (6 years)		$75,000
Total	Annual Operating Costs	$207,005
	Compost Produced M^3	63,600
	Cost/M^3	$ 3.25

5.6 Present Use of Compost

The survey yielded important information about the present use of compost. There are no organizations using MSW-derived compost even though more than 10,000 metric tons are stockpiled at the UNACOM compound. Several of the vegetable growers in Kenscoff are producing their own compost from manure and agricultural residues. Operation Double Harvest, an agricultural development project, produces a bagasse-enriched compost mix known as Haiti Mix. A 100-pound bag of "Haiti Mix" costs $12 to $15 depending on the percentage of peat moss. Fewer than 200 bags are sold a year.

Table 12 presents estimates of the potential demand for compost based on interviews conducted by the WASH team.

Table 12

Potential Use of Compost
(in m^3/day)

Small-scale farmers in Kenscoff	25-40
Agribusiness in the Cul de Sac	150-200
Agribusiness in the Leogane	100-150
Agro-industry suppliers	5-15
International projects for reforestation and watershed management	150-200
Landfill cover	75-150
Horticulture	1-5
Home owners	1-2
Total	507-762

According to the interviews, the quality of the compost will be the key to any purchasing. Most of those interviewed had either used the UNACOM product or knew of the quality control problems at the plant. Most felt that the price of $11 per cubic meter f.o.b. UNACOM was too high. Because of the costs of transportation packaging, and reselling, they felt the new compost ideally should sell for about $3 per cubic meter at the plant, permitting agro-industry to buy compost and package it in bags for sale to small farmers at a profit. Selling the compost to the vegetable farmers in Kenscoff would be practicable if the quality was assured and the price was $1 a *grand sac* (100 pounds).

International projects for reforestation and watershed management have never used compost from UNACOM even though an FAO consultant wrote this in a 1980 to FAO and USAID:

> "The ultimate success of land reclamation and reforestation programs in Haiti will depend upon the availability and proper use of organic amendments, such as the compost produced by UNACOM. Stabilized organic matter in compost would provide a longer-lasting beneficial effect on soil physical properties (i.e., increased water retention and availability, increased aeration and aggregation, and increased erosion control) than uncomposted materials. To ensure maximum success in reforestation programs, both the planted and inter-planted areas should be amended with compost or other organic amendments."

International projects for reforestation and watershed management should become a major target for the marketing of any new MSW composting operation. Such projects stand to gain the most from using compost, would potentially be the single largest purchaser, and can most afford to purchase and transport the compost.

The findings of the survey support the data compiled by Dalmat statistics for purchases in 1981-2 (Table 13). There is a large potential for the sale of compost if the price is low enough to attract customers.

Table 13

Buyers of Haitian Municipal Refuse Compost
May 1981 - April 1982

User	No. of Sales	Sales Volume (in tons)	Avg. Vol./Sale (in tons)
Home *	135	225	1.7
Ornamental Horticulture	52	367	7.1
Public Agencies	5	432	86.4
Agriculture	11	163	14.8

* Includes small purchasers not identified.

5.7 Pilot Project—Neighborhood Composting

In order to demonstrate the feasibility of neighborhood composting a pilot project is recommended and described herein. The purpose of the pilot project is to show that composting can be a viable enterprise using labor intensive methods. In addition to recycling neighborhood wastes important employment benefits would accrue.

The pilot project will consist of two separate operations. The first will be traditional small-scale partially mechanized operation very similar to what was described in the redesign of UNACOM (Section 5.5). The major differences are that the output would be comparatively small, the shredder and tromell locally designed and fabricated, and a small backhoe used instead of a front-end loader. A schematic of the plans is shown in Figure 6 and the budget is presented in Table 14. The plant will produce approximately 15 cubic meters of consistently high-quality compost a day to be used for marketing. The operation will help to fine tune production on a proposed larger scale. Based on one year's operation and the annualizing of capital costs over five years, the plant will produce compost at approximately $24 per cubic meter.

The second operation at the pilot site will be a labor-intensive, no-energy, operation based on a bin system of composting. From the waste brought in by collectors, obvious non-composting material will be hand picked and the remaining material will be placed in a three-sided composting bin. After a few days the compost operator will empty the contents into an adjacent bin. This process will be repeated for two months at which time the contents of the second bin will be heaped into a progressively growing curing pile that will be allowed to stand for 30 to 45 days. After the curing, the compost will be screened by hand and stockpiled for testing and then sale. A schematic of this system is shown in Figure 7 and the budget in Table 15. Based on a year's operation and the annualizing of capital costs over three years, this method will produce compost at approximately $17 per cubic meter. By comparison, a redesigned UNACOM operation could produce compost for about $3.86 per cubic meter. (See Table 11.)

5.8 Other Recyclables

The composition of MSW in Port-au-Prince is becoming less organic as more plastics and metals appear in the waste stream. There is very little glass because soda bottles have a large return deposit on them. Scavengers prize these highly and are also recycling and selling tin cans and large plastic bottles that are reused to carry water. Now that Haiti has its own plastics industry, some plastic fabricators are buying polyethylene, polypropeline, and PVC for remanufacturing. There is no aluminum recycling. Recycling to remanufacture is done on a limited basis by some plastics processors and some of the large paper and cardboard manufacturers.

Figure 6

NEIGHBORHOOD COMPOSTING PARTIALLY MECHANIZED

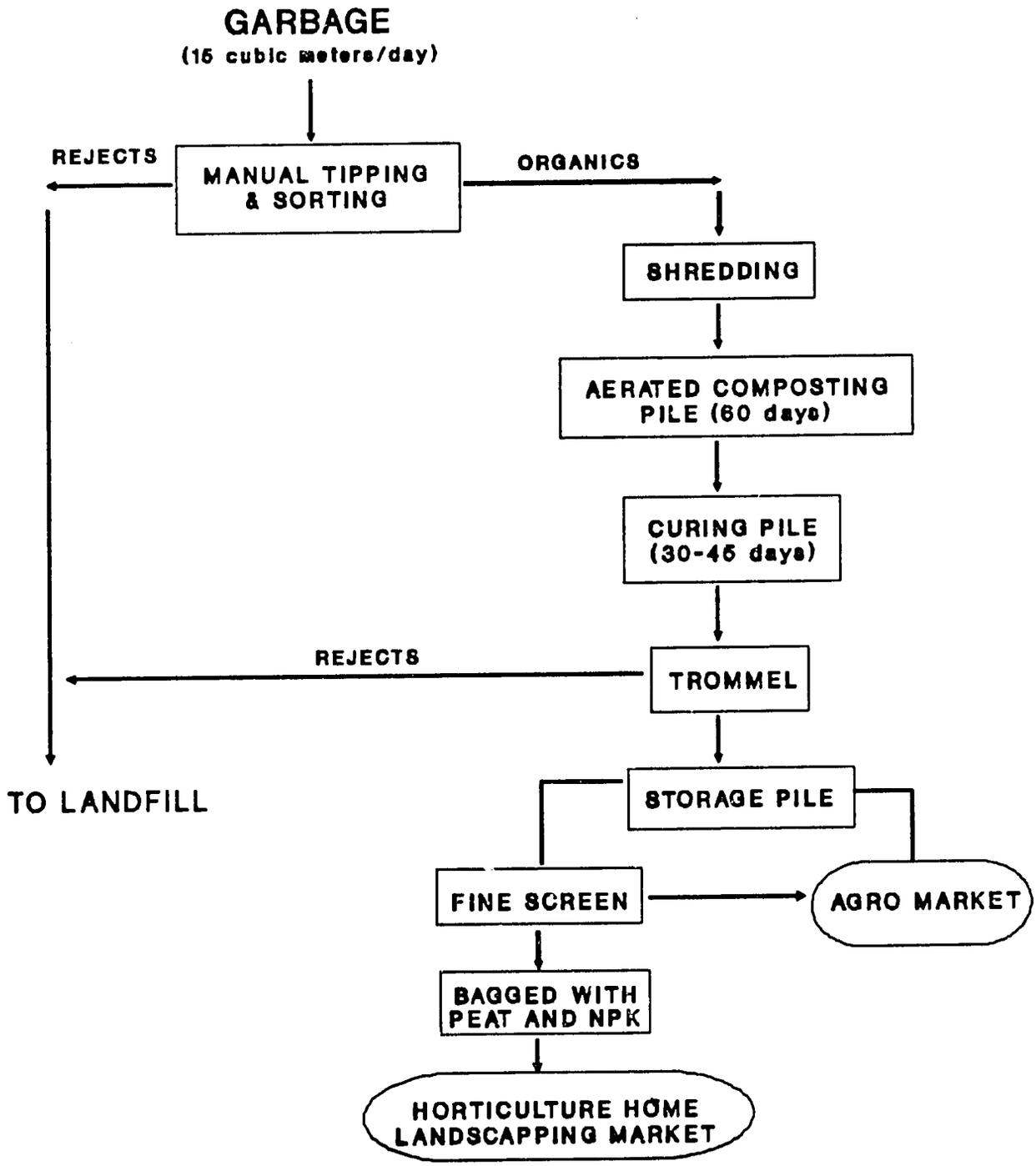


Figure 7

NEIGHBORHOOD COMPOSTING MANUALLY OPERATED

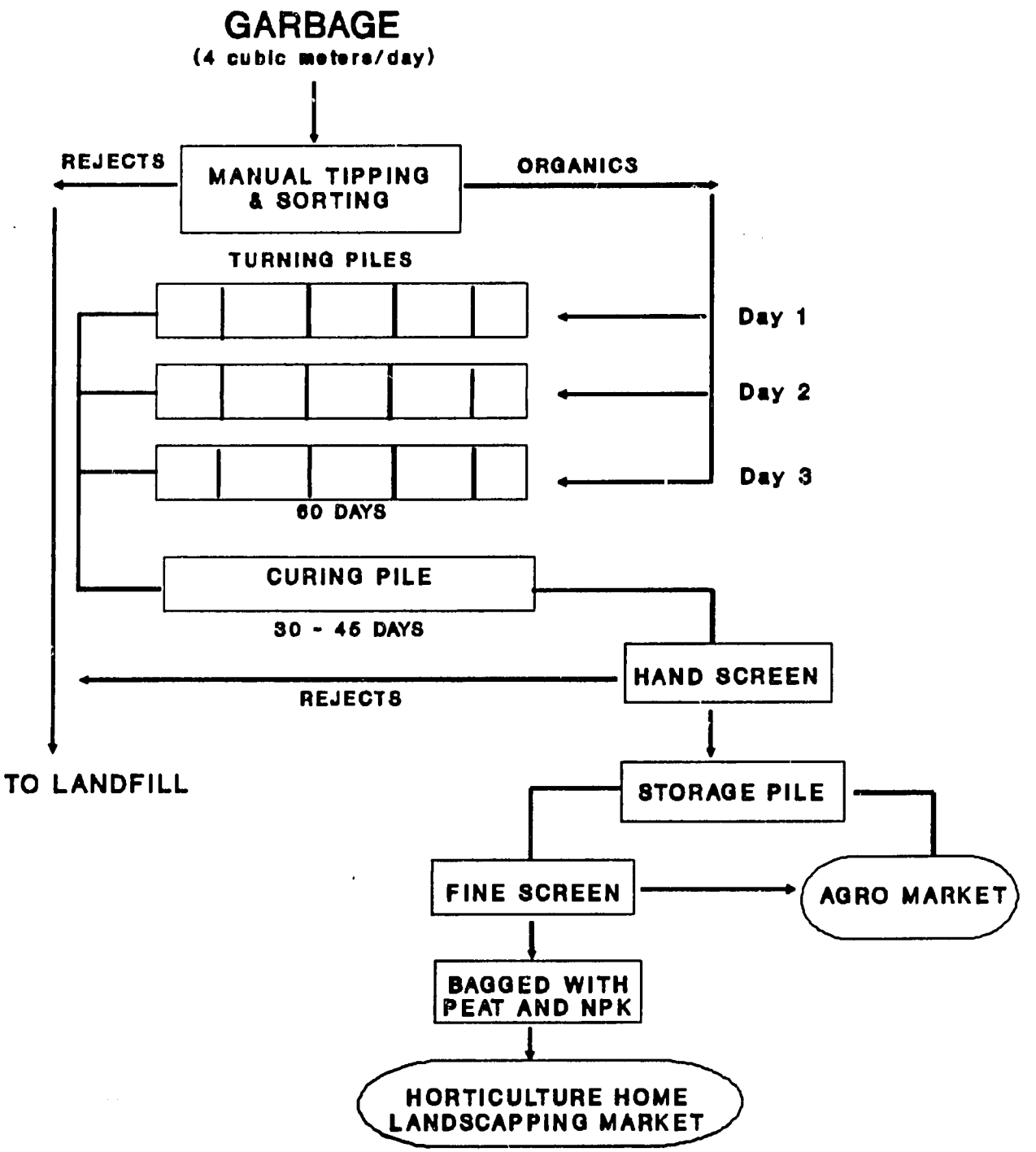


Table 14

PILOT NEIGHBORHOOD COMPOSTING
PARTIALLY MECHANIZED
15 cubic meters/day

Activity	Area Required (in M^2)	Equipment	Labor Laborer hours (Operator hrs)	Cost (US$)
Receiving Tipping Floor	75			
Sorting	75	Sh,Pf	5	
Shredding	75	Sh,H,Pf Shredders	30	
Composting piles	360	Sh,Pf,Wbl Backhoe	8(8)	
Curing piles	360	Sh,Pf,Wbl Aeration		
Screening		Sh,Pf,Wbl,Screen	53	
Storage piles	360			
Total Labor Hours			96(8)	
UTILITIES OPERATION	Electric	.18/Kwh	26,280	4,730.40
	Fuel	1.86/gal	5,565	10,350.90
	Water	0.01/gal	39,750	397.50
TOTAL				15,478.80
CONSTRUCTION/EQUIPMENT PURCHASE		Storage Shed		4,500.00
		Hand tools		2,100.00
		Mechanical Backhoe, Aeration System, Shredder		58,800.00
		Generator 6Kwh		3,000.00
		Laboratory		2,500.00
TOTAL				70,900.00
ANNUAL STAFFING		Watchman	2	3,285.00
		Laborers	12	17,280.00
		Operator	1	2,650.00

		Supervisor	1	18,550.00
		Local Consultant	1	8,000.00
TOTAL LABOR COSTS				49,765.00
ANNUAL COSTS	Utilities			18,632.00
	Annualized Capital Cost*			14,180.00
	Staffing			49,765.00
TOTAL COSTS				$ 82,577.00
TOTAL COMPOST PRODUCED/M^3 per year		3,378.75		
Cost/M^3				$ 24.44

* Annualized over 5 years

Key:
Sh - Shovel
H - Hoe
Pf - Pitchfork
Wbl- Wheelbarrow
Ftld - Front-end loader

Table 15

PILOT NEIGHBORHOOD COMPOSTING
MANUALLY OPERATED
4 cubic meters/day

Activity	Equipment	Labor Hours	Cost (US$)
Receiving Tipping Floor		2	
20 Bins – Three sets of Bins	Sh,Pf	55	
Curing piles	Sh,Pf,Wbl	8	
Screening	Sh,Pf,Wbl,Screen	8	
Storage pile	Sh,Pf,Wbl	0	
Total Labor Hrs/day		73	
Utilities Operation	Water 0.01/gal	35,000	350.00
Capital Costs	Composting bins		1,080.00
	Hand Tools		1,200.00
TOTAL			2,280.00
ANNUAL STAFFING	Laborers	9	12,960.00
	Foreman	1	1,855.00
TOTAL LABOR COSTS			14,815.00
ANNUAL COSTS	Utilities		350.00
	Annualized Capital Costs*		760.00
	Staffing		14,815.00
TOTAL COSTS			$ 15,925.00
TOTAL COMPOST PRODUCED M^3 per year		901	
Cost/M^3			$ 17.67

* Annualized cost over 3 years

Key:
Sh - Shovel
H - Hoe
Pf - Pitchfork
Wbl- Wheelbarrow
Ftld - Front-end loader

5.9 Future of Composting

The future of composting in Port-au-Prince is unclear with both positive and negative attributes. On the side favoring composting is the fact that Haiti can ill afford to waste organic resources. The historical losses of soils and nutrients are huge and must be replaced if Haiti is to regain a viable agricultural base. Municipal solid wastes represent a resource that potentially could help to alleviate these losses. The survey demonstrated that there is high interest among citizens in recycling and learning about home composting. There is also interest among present users of soil conditioners such as horticulturalists, landscapers, and small farmers in obtaining a quality product at a reasonable price. Finally, there is also value in reducing landfill volumes that the large scale production of compost could significantly affect.

On the negative side the cost of producing compost outweighs the existing market selling price, although large scale operations approach a viable balance. Presently, the marketable volume of compost among commercial buyers does not justify a large scale operation. Other users of compost who potentially would buy compost in large volumes for land reclamation have not shown an interest to date. The past experience of UNACOM has produced a skepticism among potential users of compost which would have to be overcome.

On balance there appears to be sufficient justification to produce compost for municipal wastes but there are formidable obstacles to overcome. A composting operation cannot be justified for its commercial value alone, but when combined with an integrated waste management operation where composting costs are subsidized from the waste collection revenues, then it becomes viable.

In consideration that composting would become a part of an integrated solid waste management system (the neighborhood pilot operations will help determine this), several points should be outlined. First, the UNACOM plant appears worthy of rehabilitation in spite of some design faults. The cost of this rehabilitation was presented in Table 11. Secondly, in order to compost about half of the total volume of wastes in Port-au-Prince, a second site would be needed. Ideally, this site would be located in Carrefour (Gressier) to take advantage of local wastes high in organics and in close proximity of agricultural markets for compost in the area. It is envisioned that the new site would be much more low tech and labor intensive, compared to UNACOM, and provide employment to citizens of the area. The technical approach would be based on the results of the neighborhood pilot operations. A budget for the costs of a new site which would serve as compost operation and transfer facility for non-organic wastes is presented in Table 16.

Table 16

LARGE VOLUME COMPOSTING AND TRANSFER STATION
300 cubic meters/day

Activity	Area Required (in M^2)	Equipment	Labor laborer hours (operator hrs)	Cost (US$)
Receiving Tipping Floor				
Sorting	1,500	Sh,Pf,Ftld	4(2)	
Shredding	1,500	Sh,PF,Ftld	2(4)	
Compost piles	5,400	Sh,PF,Wbl Ftld	12(8)	
Curing piles	2,400	Sh,Pf,Wbl Aeration	15	
Screening		Sh,Pf,Wbl,Scr een	24(8)	
Storage piles	1,200		6(2)	
Total Labor hr./day			63(24)	
UTILITIES OPERATION	Electric	.18/Kwh	246,375 kwh	44,347.50
	Fuel	1.86/gal	15,720 gal	29,239.20
	Water	0.01/gal	50,600 gal	506.00
TOTAL/YEAR				74,092.70
CONSTRUCTION/ EQUIPMENT PURCHASE		Site Preparation		40,000.00
		Concrete Aeration Pads		40,000.00
		Storage Bldg.		10,000.00
		Frontend Loaders $5m^3$ 3 @ 120,000		360,000.00
		Aeration System		10,000.00
		Shredders & Screen		300,000.00
		Laboratory		1,500.00
TOTAL				761,500.00
STAFFING		Watchman	2	3,285.00
		Laborers	8	12,720.00
		Operator	3	7,950.00

		Supervisor	1	18,550.00
TOTAL LABOR CTS				42,505.00
ANNUAL COSTS	Utilities			74,092.70
	Annualized Capital Costs*			128,583.33
	Staffing			42,505.00
TOTAL COSTS				$ 245,181.03
TOTAL COMPOST PRODUCED M^3 per year			63,600	
Cost/M^3				$ 3.86

* Annualized cost over 6 years

Key:
Sh - Shovel
H - Hoe
Pf - Pitchfork
Wbl- Wheelbarrow
Ftld - Front-end loader

Chapter 6

INSTITUTIONAL ANALYSIS

6.1 Establishment of SMCRS

The organization responsible for solid waste collection in metropolitan Port-au-Prince is SMCRS, created by governmental decree in 1981 and operational since October 1982 with aid from the Inter-American Development Bank (IDB). SMCRS is responsible, according to the decree, for cleaning streets, markets, and public areas. However, the communes (mayor's office) have undertaken this task and employ a large work force for this purpose. The commune of Port-Au-Prince, for example, employs 954 street sweepers.

Initially, SMCRS was under the Ministry of Public Works (*Ministere des Trauvaux Publics, Transports, et Communications*) but in 1983 it was transferred to the Urban Commune of Port-au-Prince where it remained until April 1989, after which it was returned to Public Works. SMCRS is administered by a council comprising the four Ministers of Public Works, Public Health, Interior, and Finance, plus three consulting members from the communal magistrates of Port-au-Prince and Petion-Ville and the General Director of SMCRS.

6.2 Infrastructure

SMCRS is housed in a headquarters complex at Mais Gate (or Petite Place Cazeau) that includes an administration building, garage, and parking area for vehicle fleet that originally consisted of 45 garbage trucks and support vehicles. It has a landfill at Truittier covering 205 hectares and once had about 1,500 garbage containers of various sizes.

With this equipment and facilities, according to SMCRS reports (1990), about 60 percent of wastes in Port-au-Prince were collected until 1987. Since 1987 the situation has deteriorated rapidly. SMCRS now has only 20 operational vehicles and on any given day breakdowns may put several of these out of service. In March 1990, only 12 trucks and one loader were operational. The Truittier landfill receives only minor quantities of garbage, with much being dumped at the temporary sites of Bicentenaire and, more recently, La Saline. Indiscriminate dumping in ravines and open areas accounts for the remainder of waste disposal. Only a small number of garbage containers are still in service.

6.3 Personnel

Lack of finances and equipment has forced recent reductions in personnel. Numbers of personnel in various categories for 1989 and 1990 are shown in Table 17.

Previous Page Blank

Table 17

SMCRS Personnel

Category	1989	1990
Drivers	83	50
Laborers	400	300
Mechanics	51	30
Administration	64	20

The staff of SMCRS, particularly those responsible for vehicle maintenance, have been handicapped by a lack of adequate training and spare parts. A report prepared by Pan American Health Organization consultant Quenard Jean-Bernard in May 1987 noted this situation and recommended urgent action to reorganize and reinforce the vehicle garage. However, nothing was done and the equipment has deteriorated further.

6.4 Legislation

Legislation related to solid waste management over the past 10 years has provided an adequate policy and institutional foundation. Key elements of this legislation are:

- SMCRS was created as an autonomous public institution in consideration of the government's responsibility to protect the health of its citizens and to ensure the integrity of the environment against pollution and degradation.

- All enterprises that produce wastes must inform the Public Health Department of the nature, quantity, and means of disposal of these wastes.

- The management of household wastes is the responsibility of the communes.

- Penalties for improper disposal of wastes include imprisonment from two months to two years and fines from 2,500 to 50,000 gourdes.*

* Equivalency: 7 gourdes = US$ 1.

- Fees for waste collection will be based on the rates from electrical consumption billed by the Electrical Authority of Haiti (EDH).

While these articles and others display the intent and good faith of the government to assure proper waste management they have not been enforced to the degree needed. The means of collecting revenues, in particular, has been changed by administrative decision to not use the electrical authority as decreed. EDH has not been able to collect revenues to cover its own costs and its creditors, including the World Bank, have opposed any surcharges for waste collection.

6.5 Finances

From the beginning, the financing of SMCRS has never been adequate for its operational needs. It currently receives the equivalent of $514,284 per year. The monthly sources of these finances are shown in Table 18.

Table 18

SMCRS Monthly Funds

	gourdes	%
Ministry of Finance	125,000	42
Delmas mayor	50,000	16
PAP mayor	125,000	42
Total	300,000	

To add to its problems, SMCRS is not getting the expected contributions from the mayors, who are dissatisfied with the service. Its monthly payroll alone is 632,000 gourdes ($90,286), and it estimates its monthly budget needs at 1,584,738 gourdes or 19,125,856 gourdes per year ($2,732,265). Appeals have been made to the GOH and the international donor community for funding but only partial and short-term financing has been provided.

6.6 Future of SMCRS

The General Director of SMCRS (SMCRS reports, 1990) has described a situation which is painfully clear to all residents of Port-au-Prince:

> "The residential zones and principal streets of the capital are occasionally cleaned with the trash thrown pell-mell in the markets, ravines, and the poorer neighborhoods, giving a hideous image of the capital, without counting negative impacts on health and the national economy."

It is unrealistic to expect SMCRS to survive in the face of a rapidly expanding urban population, lack of equipment, inadequate personnel, and severely inadequate finances. Its present operation is tenuous at best and is contributing only a small fraction of the necessary waste collection services. The GOH has not supported this institution and apparently lacks the means and will to do so. A totally new system of waste management is needed, one that operates independently of GOH revenues and has a mandate to collect funds specifically for waste collection. Privatization offers many advantages that are described in the next chapter.

Chapter 7

MANAGEMENT ALTERNATIVES

7.1 Description of Recommended Approach

The considerable problems outlined in the previous chapter justify, in the opinion of the WASH consultants, a recommendation for a new private solid waste management organization to replace SMCRS. To be known as the Waste Management Association (WMA), it would have the following characteristics:

- Privately managed, non-profit organization with responsibility for collection and disposal of all solid wastes
- Oversight by a board of directors consisting of individuals with a stake in effective garbage management
- Garbage collection by many, perhaps 50, franchised private entrepreneurs with specified areas of responsibility
- Fees to be paid to WMA by waste producers in accordance with level of service provided
- Management of landfill and compost operations by private entrepreneurs

7.2 Waste Management Association

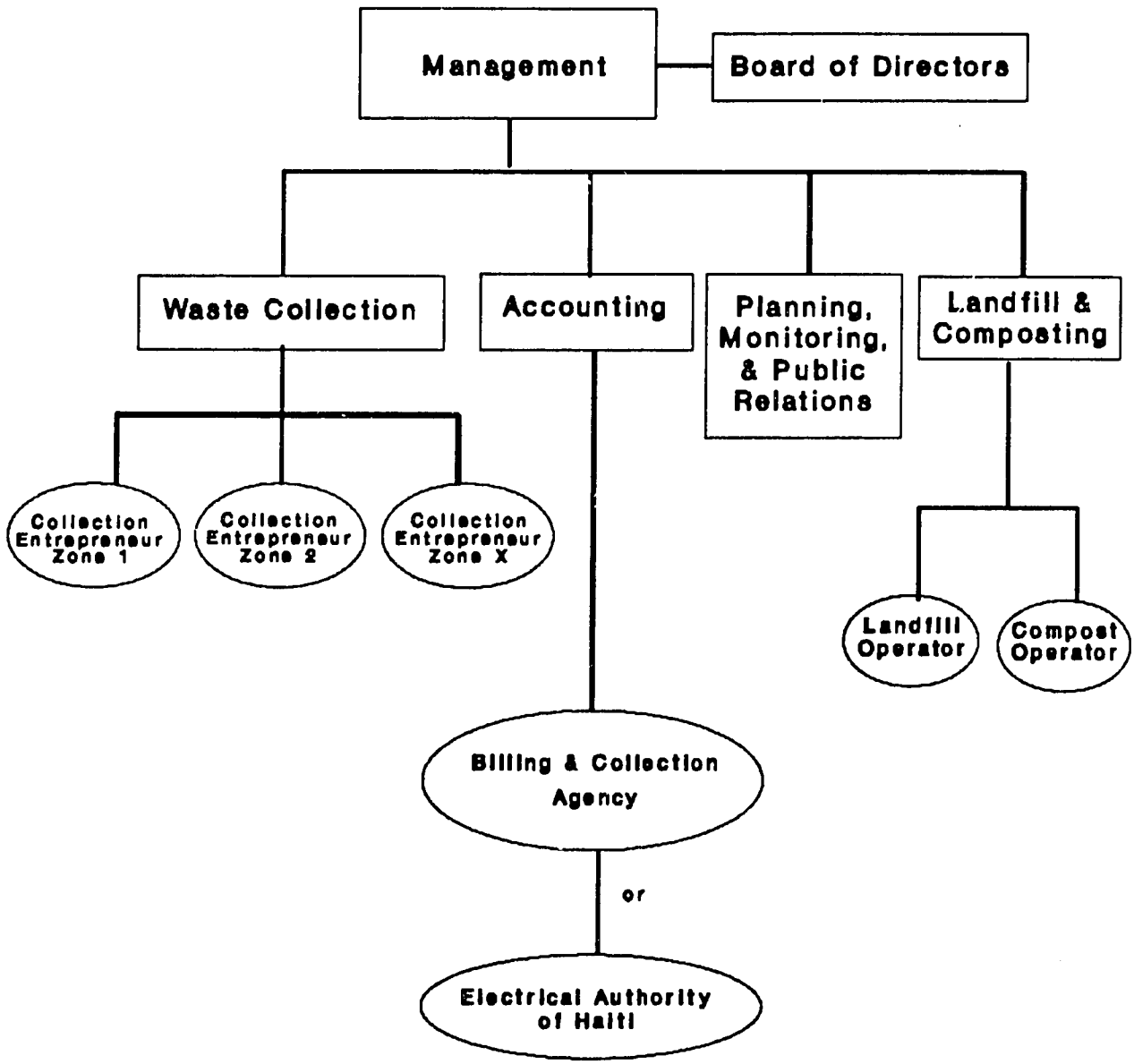
WMA would be established as a non-profit association with authority to establish fees for varying levels of service. As an association with a public service mandate it is deemed preferable that it be organized as a not-for-profit venture. It would be self-sufficient, collecting revenues in accordance with associated costs, and would not be subsidized by outside interests. It would pay competitive salaries based on private sector norms and would let contracts to entrepreneurs for a variety of services through competitive bidding.

It would consist of the following several units (Figure 8).

- Management
- Waste collection
- Planning, monitoring, and public relations
- Accounting
- Landfill and composting operations

Figure 8

PROPOSED ORGANIZATIONAL STRUCTURE OF WASTE MANAGEMENT ASSOCIATION



NOTE: The units in boxes are directly employed by the WMA while the units in circles would be contracted by the WMA for specific services

Management

The management unit would have a senior manager, assistants, and a secretarial staff and would be responsible for solid waste management in accordance with policies and guidelines established by the board of directors.

The board of directors would be made up of perhaps 10 representatives from the following agencies and groups with a stake in the effective management of solid wastes:

- Ministry of Public Works
- Ministry of Health
- Chamber of Commerce
- Industry
- Hotels and tourism
- Community organizations
- Mayors from each of the four communes in Port-au-Prince

Waste Collection

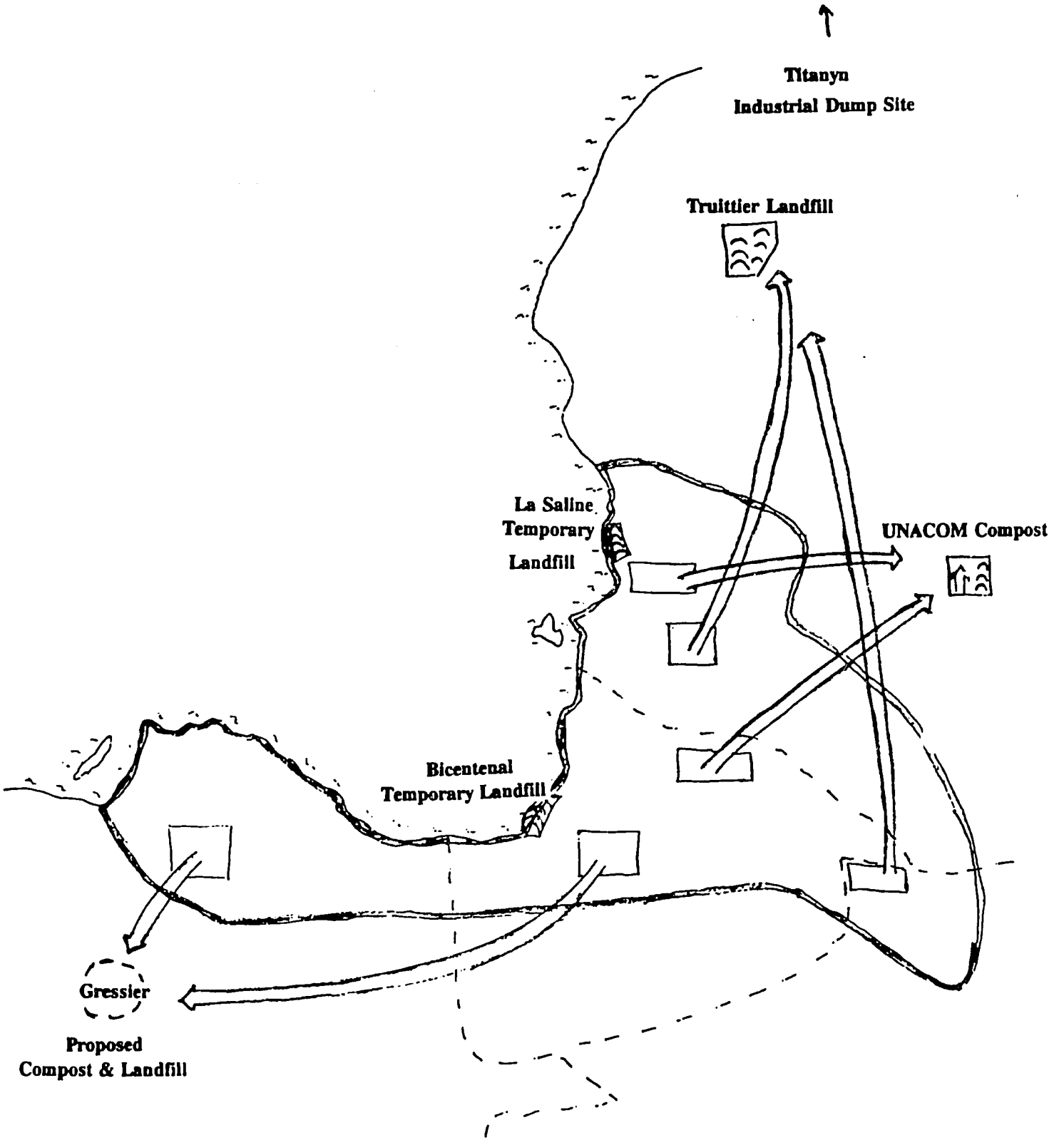
Waste collection would be undertaken by entrepreneurs franchised to work in about 50 geographic zones defined by a volume of approximately 20 tons of garbage generated daily in each zone. This is the average quantity that a typical truck can handle. This arrangement will allow small entrepreneurs to participate, although larger entrepreneurs with more than one truck could be franchised for several zones. Wheelbarrow collectors could work in partnership with franchised collectors under terms arranged among themselves.

Entrepreneurs would provide their own trucks, equipment, and personnel and would, of course, be responsible for all repairs and maintenance. The operation of taxis and minibuses in Port-au-Prince bears out the feasibility of this approach.

Entrepreneurs would be compensated strictly on the basis of tons of garbage delivered to specified sites, either landfills or composting plant. Preliminary estimates indicate a payment of $9.50/ton would allow a viable business to operate (see Appendix K for a financial analysis). They would be able to supplement their incomes through recycling of useful trash. Figure 9 provides a schematic of the zones and the routes to landfill and composting sites.

Figure 9

LANDFILL AND COMPOST SITES



Accounting

The accounting unit would be responsible for all financial activities including fee collection. The least-cost means of billing and collecting fees would be to add a surcharge of about 15 percent to electric bills. EDH has a collection system in place and can enforce payment by threats to cut off service to subscribers who do not pay. The EDH progressive rate structure based on actual power consumption has the important advantage of placing the burden of payment on those most able to pay. Although Haitian law provides for a garbage collection surcharge on electric bills, the administration edict mentioned earlier has determined that this means will not be used.

If EDH is not to be involved, WMA would have to establish its own billing and collection system. Fees for households would be based upon property tax assessments so that the least valuable properties would pay little or nothing and the most valuable would pay the most. Fees for business and industrial concerns would be structured based on the size of operation and volume of waste generated. Hazardous wastes would be assessed a surcharge. Billing and fee collection would be subcontracted to a private collection agency that would be paid a percentage of the fees and would therefore have the incentive to work diligently. Branch offices would be established in various neighborhoods to make payments convenient.

An alternative suggestion would be to have a private agency collect property taxes to which a garbage surcharge would be added, the proceeds of the surcharge going directly to WMA. Significantly more revenues would be generated for the Haitian treasury in this way.

Fee collection is clearly a difficult task. Public awareness educational campaigns and strong enforcement of waste disposal regulations are indispensable to its success.

Planning, Monitoring, and Public Relations

The role of this unit would be to keep abreast of a dynamic and changing city to plan quality service by the WMA. It would delineate franchise areas, oversee waste collection entrepreneurs, establish levels of service, and set up collection routes and disposal of wastes at proper sites. It would establish fair tipping fees (credit for volume of wastes delivered) for entrepreneurs and would work closely with the accounting office to ensure a balance between costs and revenues.

The unit would provide oversight of the waste collection entrepreneurs and of the fee collection process. It would solicit the opinions of customers about the service provided, and would conduct campaigns through various media (i.e., leaflets, newspaper, radio, TV) to educate the public on the importance of proper waste disposal and of the problems and penalties for noncompliance, a task that is critical to the success of the program and deserving particular emphasis.

Landfill and Composting Operations

Two landfills, operated by either WMA or subcontracted to a private entrepreneur, would be needed: one at the existing site at Truittier north of Port-au-Prince and another at a new site (Gressier) south of the city. The landfill operator would control the discharge of wastes and ensure that hazardous wastes were kept apart.

Collectors would be paid by the ton for waste delivered at either the landfill or at composting sites. Organics would go to the composting sites and other trash to the landfills for controlled dumping. The landfill operator would issue credit slips which collectors would turn in to the accounting unit of the WMA for compensation.

It is envisioned that about half the total volume of wastes would be composted. Neighborhood associations in the poorer areas would do some of this and sell the product in the city. Larger quantities would be composted at the UNACOM plant and at the southern landfill site. Wastes from the poorer neighborhoods, which generate garbage high in organic content, would be channeled to these composting sites (see Figure 9).

7.3 Establishing WMA

A governmental decree is needed to establish bylaws under which the WMA would operate. Such a decree would be forging new ground for the privatization of public services and would require careful attention to the details of organizational structure and cooperation with existing governmental ministries. This process would take time. In the interim, SMCRS would continue to function at its present capacity and the WMA would gradually, zone by zone, take over the responsibility of waste management.

While this chapter outlines a recommended approach for privatizing solid waste management, more institutional detail is needed. As a first step, a planning committee should be commissioned by the GOH with the task of formalizing the WMA. It is recommended that technical assistance be offered through USAID and IDB to this committee to advise on the privatization process.

Chapter 8

FINANCIAL ANALYSIS

8.1 Alternatives

Previous chapters have described the significant outlays for waste collection and disposal by households, commerce, and industry; the general dissatisfaction with SMCRS; and a willingness to pay for adequate and reliable service. This chapter considers the financial implications of four solid waste management alternatives ranging from continuing with the SMCRS to creating a new Waste Management Authority.

Alternative I—SMCRS With No Change

This alternative assumes that SMCRS continues to function and that its equipment is rehabilitated or repaired.

Alternative II—SMCRS With New Equipment

This alternative assumes that SMCRS continues to function with rehabilitated or repaired equipment but that new equipment is added. The existing landfill (landfill I at Truittier) is rehabilitated, and a new landfill (landfill II at Gressier) is opened. In essence, it equips SMCRS with the resources to undertake all waste management in Port-au-Prince. The city realistically cannot continue under the present waste management conditions which here are considered as an alternative only to indicate the minimum cost of maintaining the status quo.

The analysis of the equipment required was developed in an earlier WASH report "Assessment of Solid Waste Management of Port-au-Prince". WASH Field Report No. 292, 1990.

Alternative III—New Private Waste Management Authority

This alternative assumes the same waste management capacity as in alternative II but under the management of WMA. The equipment, materials, and personnel would be identical to alternative II.

Alternative IV—WMA With Compost Added

This alternative is the same as alternative III but adds the composting of 50 percent of the waste stream production.

8.2 Equipment for the Four Alternatives

Alternative I

SMCRS has 20 trucks with a total capacity of 400 tons.

Alternatives II, III and IV

Equipment in place and to be added is indicated in Tables 19, 20, and 21.

Table 19

Alternative II
SMCRS with New Equipment

Description	1991	1992	1993	1994	1995
Existing Equipment					
Trucks	20	16	12	8	4
New					
Replace exist. equip.	-	4	4	4	4
Trucks	5	1	2	1	2
Total of new trucks	25	5	6	5	6
Tractors	8	1	0	1	1
Containers	50	3	4	4	5
Landfill I					
Tractor	1	-	-	-	-
Grader	1	-	-	-	-
Compactor	1	-	-	-	-
Landfill II					
Tractor	1	-	-	-	-
Grader	1	-	-	-	-
Compactor	1	-	-	-	-

Table 20

Alternative III
WMA

Description	1991	1992	1993	1994	1995
Existing Equipment					
Trucks	20	16	12	8	4
New					
Replace exist. equip.	-	4	4	4	4
Trucks	2	1	2	1	2
Total of new trucks	22	5	6	5	6
Tractors	8	1	0	1	1
Containers	50	3	4	4	5
Landfill I					
Tractor	1	-	-	-	-
Grader	1	-	-	-	-
Compactor	1	-	-	-	-
Landfill II					
Tractor	1	-	-	-	-
Grader	1	-	-	-	-
Compactor	1	-	-	-	-

Table 21

Alternative IV
WMA With Composting

Description	1991	1992	1993	1994	1995
Existing Equipment					
Trucks	20	16	12	8	4
New					
Replace exist. equip.	-	4	4	4	4
Trucks	0	1	2	1	2
Total of new trucks	20	5	6	5	6
Tractors	8	1	0	1	1
Containers	50	3	4	4	5
Landfill					
Tractor	1	-	-	-	-
Grader	1	-	-	-	-
Compactor	1	-	-	-	-

Composting Equipment—See Chapter 5.

8.3 Cost Elements of the Four Alternatives

There are some unit prices common to all four alternatives. They are as follows.

1. Repairing SMCRS equipment and improving facilities.

   The estimated cost of rehabilitating or repairing SMCRS equipment, improving landfill I, and constructing landfill II is:

Landfill I and access road—rehabilitation	$ 100,000
Collection equipment—rehabilitation (SMCRS)	$ 240,000
Landfill II—site preparation	$ 200,000

2. New Equipment

The unit cost of new equipment is calculated as follows.

Truck (10 m^3)	$ 75,000
Tractor	25,000
Container on wheels	10,000
Tractor for landfill I	285,000
Grader	126,000
Loader	79,000
Compactor	56,000
Tractor for landfill II	125,000

8.4 Projected Annual Capacity of Equipment

The projected annual capacity of equipment for each alternative is summarized in Table 22.

Table 22

Annual Nominal Capacity of Collecting Equipment

Description	Alternative			
	I	II	III	IV
Existing equip.—No/Trk	20	20	20	20
New equip.—No/Trk	-	25	22	20
—No/Trk	-	8	8	8
Containers	-	50	50	50
Nominal capacity T	200	600	570	550
Trips per day	2	2	2.2	2.3
Daily capacity in T	400	1200	1254	1265
Working days	341	341	341	341
Annual nominal capacity in '000 tons	136	395	428	432
Annual production* in '000 tons	406	406	406	406
Garbage accumulated in tons	270	6	-22	-26

* Based on 1991 population.
Source: Assessment of Solid Waste Management in Port-au-Prince, WASH Field Report No. 292, January 1990.

8.5 Investment Requirements

The initial investment for each alternative in thousands of dollars is shown below.

Alternative I

Rehabilitation and repair of existing equipment	$ 240

Alternative II

The investment for this alternative includes the purchase of new equipment and site preparation of a new landfill in addition to the repair of existing equipment and rehabilitation of the existing landfill.

• Rehabilitation and repair of existing equipment	$ 240
• Rehabilitation of landfill I	200
• Equipment for landfill I	820
• 25 new trucks	2,100
• Site preparation for landfill II	200
• Equipment for landfill II	430
• New tractors	240
• New containers	500
Total	$ 4,730

Alternative III

WMA would subcontract the collection and treatment of wastes to private enterprises that would bear the costs of operation and equipment. Those costs are included here for comparison. Note that the equipment for collection has been reduced somewhat to reflect more efficient operation.

• Rehabilitation and repair of existing equipment and facilities	$ 1,260
• 22 new trucks	1,848
• Site preparation and equipment for Landfill II	630
• New tractors and containers	740
Total	$ 4,478

Alternative IV

WMA would produce compost with 50 percent of the waste stream. The UNACOM plant would be rehabilitated and a second composting site south of Port-au-Prince would be constructed. Under these conditions only one landfill (Truittier) would be needed.

	(in 000's)
• Rehabilitation and repair of existing equipment and facilities	$ 440
• Landfill equipment	820
• 22 new trucks (two additional trucks required to transport nonorganic material from composting plant to landfill)	1,848
• New tractors and containers	740
• Compost equipment for two sites	1,500
Total	$ 5,348

Summary of Initial Investments

The required initial investment for equipment for each alternative is summarized in Table 23.

Table 23

Summary of Initial Investment
for each Alternative
(in US$,000s)

Description	Initial Cost
Alternative I	$ 240
Alternative II	4,730
Alternative III	4,478
Alternative IV	5,348

8.6 Implementation

Waste collection would begin in selected zones and gradually be expanded until the whole of Port-au-Prince was covered in two years. Details of investments for the first five years are presented in Table 24.

Table 24

Five-Year Plan
Yearly Investment
(in US$,000s)

Description	Year 1	Year 2	Year 3	Year 4	**Year 5**
Rehabilitation, existing equip.	252.0				
Rehabilitation, landfill	250.0				
New Equipment					
Trucks	-	680.4	756.0	831.6	907.2
Tractors	81.0	135.0	27.0	27.0	27.0
Containers	270.0	302.4	43.2	43.2	54.0
Tractor for	310.0	-	-	-	-
Landfill					
Compactor	61.0	-	-	-	-
Loader	130.0	-	-	-	-
Grader	85.3	-	-	-	-
Total	1,440.1	1,117.4	826.2	901.8	988.2
Composting					
Pilot program	84	-	-	-	-
Composting I	197	214	214	214	214
Composting II	-	300	300	300	300

8.7 Cash Flow Analysis

The projected cash flow under alternative IV is based on the financial analysis presented in WASH Field Report No. 292 and on the assumptions that follow.

Management and Operations

- Depreciation coefficients:
  - equipment 5 years
  - buildings 40 years

- Residual value:
  - equipment 10 percent

building 20 percent

- Salaries
  Labor costs were based on competitive salaries and established benefits.

Revenues from Each Group

Revenues from each group have been calculated based on survey results indicating willingness to pay and on the data provided below. Most revenues (91 percent) would be generated within the household groups as shown in Figure 10.

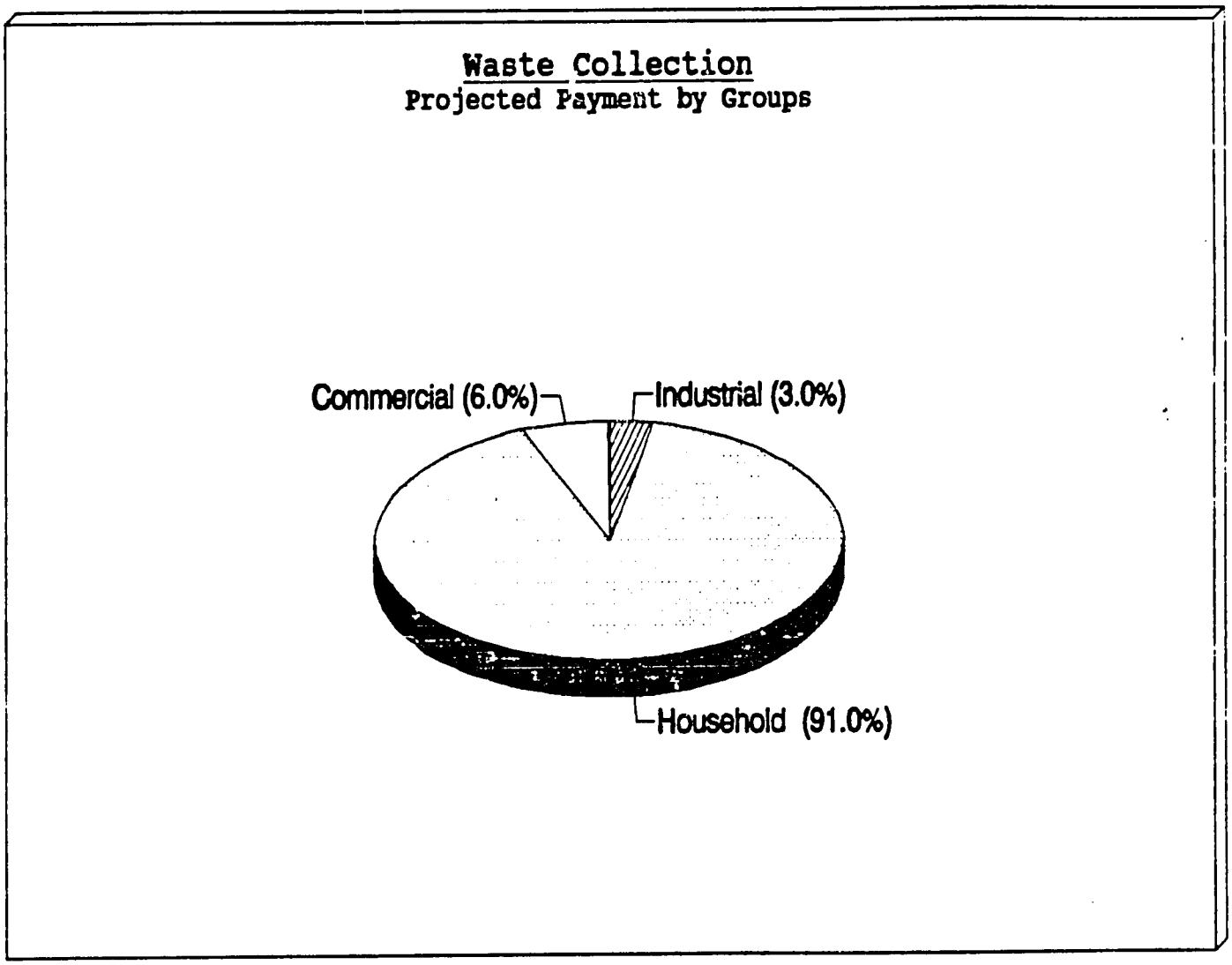
- Industrial

Number of employees (projected from Lavalin)	60,000
Annual percentage of increase	7.82 percent

- Commercial

Number of employees (projected from Lavalin but not including public administration, micro commerce, housing, and transport)	49,450
Annual percentage of increase	7.82 percent

Figure 10


Waste Collection
Projected Payment by Groups
Commercial (6.0%)
Industrial (3.0%)
Household (91.0%)

- Household

The projected average payment per house (APH) is derived from survey responses (see Chapter 3, Table 6) and combines amounts indicated by those willing to pay with those unwilling by zone.

Zone	Income Level*	APH (in dollars)
1	5	2.43
2	4	1.13
3	3	1.23
4	3	1.57
5	3	1.37
6	2	0.52
7	1	0.87
8	1	0.93
9	3	0.0
10	3	0.0
11	4	0.0
12	4	0.59

* Source: Lavalin (categorization based on average income levels with 5 being highest and 1 lowest).

- Financial Constants

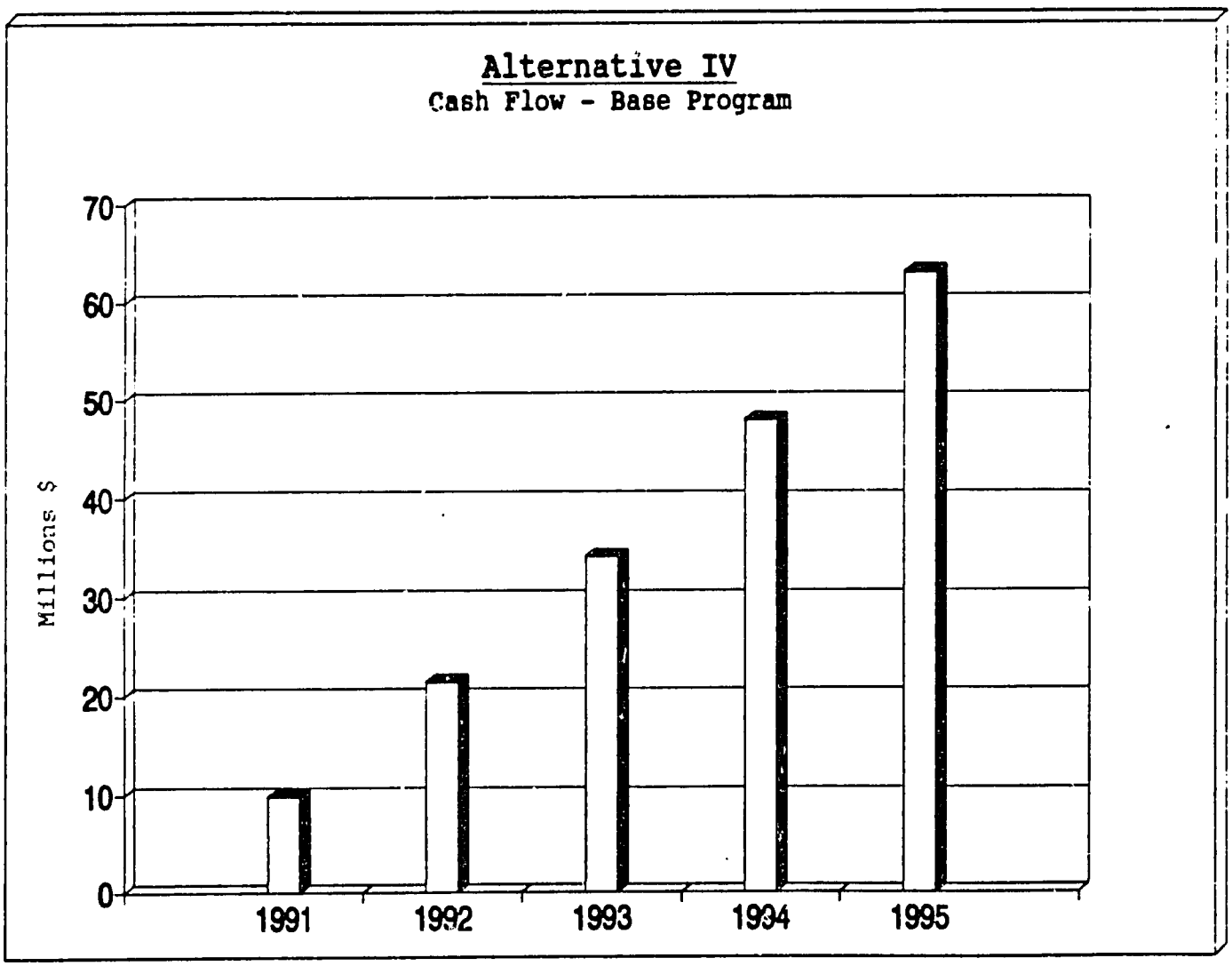
Interest rate	16 percent
Profit	15 percent
Collection fee	15 percent

8.8 Cash Flows

1. A baseline spreadsheet for the cash flow analysis was prepared from the above APH values which were based on survey results indicating willingness to pay. The projected cash flow for 5 years is indicated below (see Figure 11). A detailed analysis is shown in Appendix D.

Year	Cash Flow (000 $)
1991	9,858
1992	21,449
1993	34,154
1994	47,975
1995	63,042

Figure 11



It is clear that cash flows based on willingness to pay are enormous. To reduce revenues to levels comparable to costs, thus maintaining a non-profit organization, several other scenarios were constructed as part of a sensitivity analysis. The objective was to determine a fee structure that would cover operating costs by (1) establishing a lowered collection fee for all zones (Scenario I) or (2) excluding the poorer neighborhoods from any payments (Scenario II).

2. Scenario I

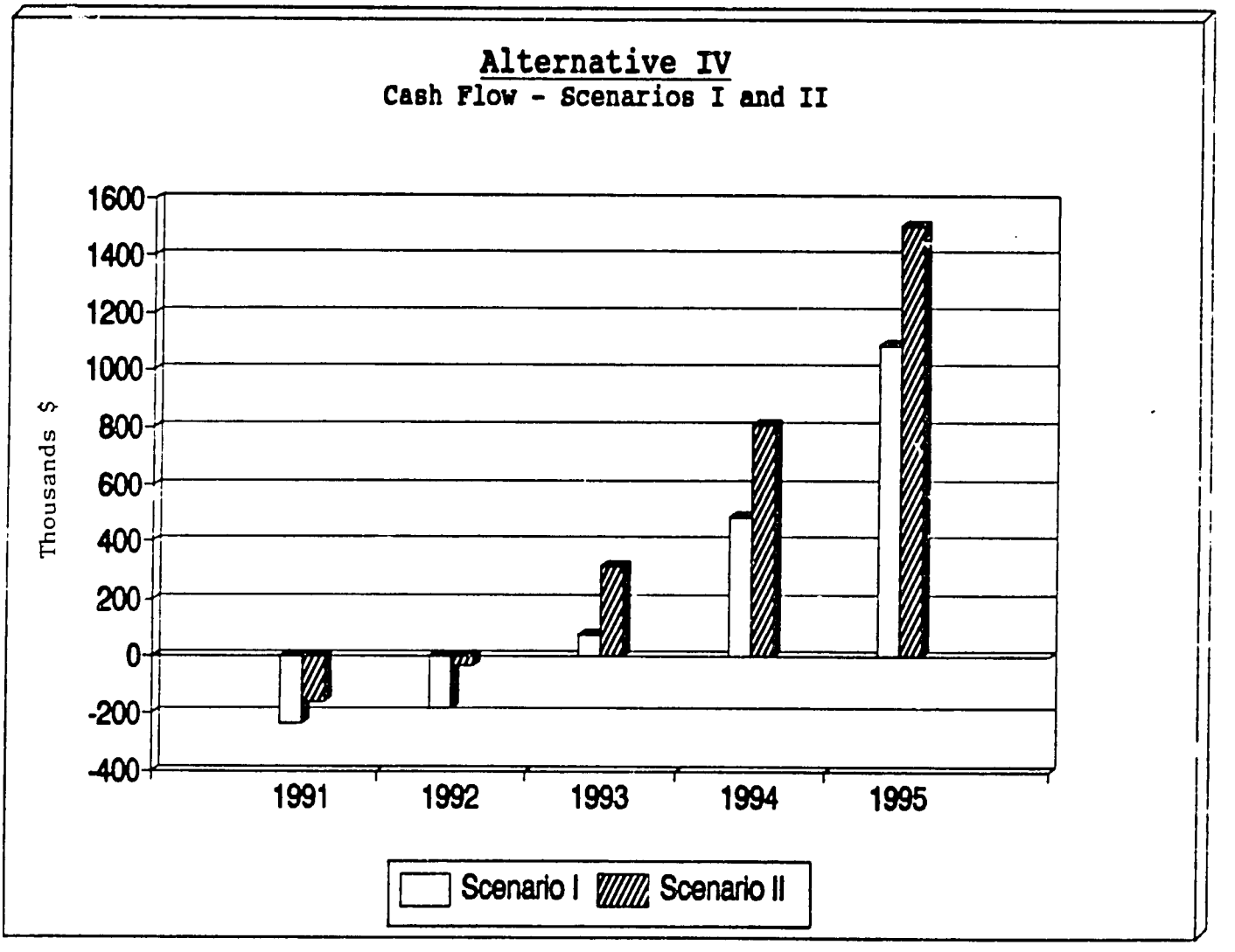
This scenario assumed that payment in all zones was reduced from 100 percent to 33 percent. A detailed analysis is shown in Appendix E. The projected cash flow for 5 years is indicated below and in Figure 12.

Year	Cash Flow (000 $)
1991	- 236
1992	- 185
1993	78
1994	484
1995	1,086

3. Scenario II

This scenario considered the percentages of payment as a function of the income levels of the different zones. It arbitrarily assumed that the poorest levels (1 and 2) would pay nothing and that a graduated payment schedule would be established according to income level as shown below. The payment schedule is based on a percentage of the expressed willingness to pay for each zone. This approach is comparable to using property values to determine payment rates.

Figure 12


Alternative IV
Cash Flow - Scenarios I and II
Thousands $
1600
1400
1200
1000
800
600
400
200
0
-200
-400
1991
1992
1993
1994
1995
Scenario I
Scenario II

Zone	Percentage of Average Payment per House*
1	90
2	75
3	32
4	32
5	32
6	0
7	0
8	0
9	32
10	32
11	75
12	75

* Based on APH as shown in section 8.7.

A detailed analysis is shown in Appendix F. The projected cash flow for 5 years is indicated below and in Figure 12.

Year	Cash Flow (000 $)
1991	- 163
1992	- 35
1993	312
1994	808
1995	1,504

8.9 Financial Analysis for Small Business

An analysis of the financial implications for a small entrepreneur with one truck who is interested in entering the waste collection business is presented in Appendix K. It was assumed that the most efficient means of collecting waste was through as small businesses characterized by owner-operators with one truck (or perhaps more). Investment costs include the purchase through a commercial loan of a truck at $75,000. Labor costs provide for truck operators and helpers at monthly salaries of $500 and $125 respectively. Revenues based on payments of $9.50 per ton of waste delivered to landfill or compost sites would generate a 16 percent profit annually to the business.

Chapter 9

ENVIRONMENTAL IMPACTS

9.1 Introduction

It is most evident that the existing solid waste management system, or lack thereof, produces considerable negative impacts on the environment of Port-au-Prince. Improved management and the introduction of a composting process are being proposed as means to reverse these.

Composting utilizes natural biological decomposition to stabilize and reduce the volume of organic municipal solid waste (which includes paper or cellulose products, food, and wood, including leaves, grass, and brush). Experience in developing and developed countries has proved that the benefits of composting MSW outweigh the negative environmental impacts associated with the process.

The benefits include a nutrient-rich product that can be used as a soil amendment to improve productivity and control erosion. Furthermore, when integrated with other methods of waste management, composting can reduce the amount of municipal solid waste and certain types of commercial wastes that must be landfilled or burned. Composting also is an appropriate low-cost alternative to more expensive and potentially damaging waste management methods.

The negative environmental impacts attributable to an under-maintained composting facility include surface water runoff, odors, and the marketing of an inferior end-product. These typically are the result of improper temperature and moisture control, improper pathogen destruction, poor mixing of incoming materials, and poorly-designed composting areas. Furthermore, composting requires a collection and transportation system that may disrupt traffic and have other impacts such as noise, odors, and dust.

What follows is a discussion of the expected positive and negative environmental impacts of a composting facility in greater Port-au-Prince.

9.2 Existing Conditions

Currently, Port-au-Prince and the surrounding communes generate approximately 1,100 tons per day (tpd) of municipal and industrial solid waste. A visual survey by the WASH team estimated that at least 75 percent of the MSW is good for compost. The rest consists of inert materials such as textiles, plastic, metals, and glass. The survey also concluded that

industrial and commercial waste also has a high percentage of organics, but that these may be contaminated because of manufacturing, collection, and storage practices.

The MSW and industrial/commercial waste is collected by the SMCRS and private haulers. The SMCRS disposes of waste in unlined, unregulated landfills, the private haulers dispose of it in the same landfills and also at unregulated informal disposal sites. Some waste is dumped on the nearest street corners and empty lots also used by the general public.

Both the landfills and the unofficial dump sites are responsible for the substandard quality of the environment. Some waste at these sites is burned in the open to reduce the volume and control odors. The rest is left to decompose naturally through exposure to the elements. Animals and scavengers rummage through the piles. Open burning decreases air quality significantly. Uncovered waste piles are sources of disease carried by vermin and animals and of runoff associated with surface water pollution. The low temperatures of open burning increase the emission of particulates, carbon monoxide, and hydrocarbons. All of these are known to cause respiratory problems in humans, and in sufficient concentrations can accumulate in soils and plants. The emission factors associated with open burning of MSW are: particulates 8 kg; sulfur oxides 0.5 kg; carbon monoxide 42 kg; hydrocarbons 15 kg; and nitrogen oxides 3 kg per metric ton. If 10 percent of the total daily waste production of 1,100 metric tons is burned each day, the volume of these pollutants released into the atmosphere is 7.5 tons.

The landfills and other disposal areas also affect nearby ground and surface water. Leachate from the these sites into percolates to the water table or drains into adjacent streams and drainage ditches marked by the distinctive discoloration associated with landfill leachate. Ground and surface water movements could contaminate more distant bodies of water like the ocean, which is only about one km from the official landfill and laps the temporary landfills. There is a strong possibility that marine life is being harmed by the leachate.

The impacts on ground and surface water are based on the average concentrations of pollutants in the leachate. Organic and inorganic pollutants characteristic of MSW leachate include BOD, COD, total solids, and heavy metals. Data specific to Haiti have not been collected. Concentrations of pollutants typical of landfills worldwide are listed in Table 25.

Table 25

Typical Landfill Leachate Quality Data*

Parameter	Average Concentration (mg/1)
BOD	3800
COD	5029
Total Solids	6167
Chlorides	2388
Iron	> 50
Silver	< 0.02
Cadmium	< 0.02
Chromium	0.302
Copper	0.053
Nickel	0.376
Lead	0.23
Zinc	4.67
Volatile Organics	4.716
Semi-Volatiles	40.0
pH (in pH units)	5.9

* These data are typical of landfills throughout the world. Data specific to Haiti are not available.

These concentrations of inorganic pollutants far exceed the drinking water standards recommended by the U.S. Environmental Protection Agency and those used in other countries. For instance, the landfill leachate contains .02 mg/l of cadmium against a recommended concentration no greater then .010 mg/l. Other actual versus recommended levels are: chromium .30 mg/l vs. .05 mg/l; lead.23 mg/l vs. .05 mg/l.

Although standards for the organic components of leachate are based on local water quality, it is assumed that elevated levels of organics in drinking water can be harmful to humans and livestock unless the water is treated.

The ambient air quality and sources of drinking water in the Port-au-Prince region strongly suggest that both uncontrolled burning and landfilling are harming the environment. Although no air quality data are available, visual observations indicate that air quality is poor. The lack of emission controls on vehicles and industrial facilities combined with the smoke from cooking fires is the cause of these conditions, exacerbated by the addition of particulates, hydrocarbons, and oxides from the open burning of refuse.

Because drinking water for the city comes primarily from groundwater, the environmental impact of current landfill practices is of as much concern as open burning. The leaching of organic and inorganic pollutants into the water table could seriously degrade the quality of drinking water, leading to major health problems for those relying on it, the need for additional water treatment facilities, and, in the worst case, an acute shortage of potable water. Several wells producing drinking water for distribution by vendors throughout the city are within one km of the official Port-au-Prince landfill.

The unmanaged dump sites are breeding grounds for various vectors of harmful diseases. Flies and mosquitoes abound. Recent cases of dengue fever in Haiti have raised fears of large outbreaks of this disease like those in nearby countries of Central America.

9.3 Environmental Benefits of Composting

Composting is the activity of a microbial community that converts easily degradable organic matter to more stable humic forms and to inorganic products (e.g., carbon dioxide, water, ammonia, nitrate, and methane). As a result of this conversion, the production of air and leachate contaminants associated with open burning and landfilling is controlled. Leachate production is minimized by regulating the moisture content of the compost pile through the provision of adequate heat and air. This also reduces the odors that are present when MSW is landfilled or burned. Heavy metals, which are emitted into the air when burned, are bound into the compost. Particulates, hydrocarbons, and oxides are never produced, as the temperature necessary to generate them through combustion is never reached.

Unlike uncontrolled open burning or landfilling, composting also has the advantage of reducing the quantity of incoming material by 60 to 75 percent in a short time. Natural decomposition enhanced by a healthy microbial population converts the bulk of the organic fraction of the material into carbon dioxide. Thus, the land area required for composting is less than the area required for landfilling or open burning.

Besides its environmental benefits composting produces an organic material that can be used as a soil conditioner/amendment and as a means to mitigate soil erosion. When incorporated into the soil it provides nitrogen, potassium, and phosphorus.

Furthermore, it could balance the naturally high alkaline (pH 7.5-8.5) content of the soil in the lowland area and the acidic soil (pH 4.5) in the upland areas, and mitigate salt buildup in the soils affected by saltwater intrusion and exposed to long periods of sunshine and heat. The incorporation of compost into the soil or as a top dressing of mulch dilutes salt content and slows evaporation.

The strategic siting of new composting facilities will yield a direct benefit to the environment of Port-au-Prince by minimizing the vehicle miles traveled to disposal areas. Currently, waste collection vehicles travel to a number of dispersed locations. A reduction in travel time will conserve fuel and reduce dust and carbon monoxide pollution attributed to large collection vehicles.

9.4 Environmental Constraints of Composting

The benefits of composting are lessened by a poorly designed and maintained facility that generated odors, noise, dust, pathogens, and affects the marketability of the finished product.

Odors are the main environmental problem associated with compost operations. They are difficult to measure and in many cases are a matter of individual rather then collective response. They have no ill effects on health but trigger an adverse psychological reaction to an immediate stimulus. Thus, the management of odor problems is concerned not with annual averages but with instantaneous reactions.

Two types of odors result from compost operations: sulfides and ammonia. Sulfides have a characteristic smell of rotten eggs. Ammonia has a characteristic fishy smell. A certain amount of odor is unavoidable, but a composting facility emits hardly any compared with a landfill or open burning. However, certain design and operational features can reduce objectionable odors still further.

- Trucks delivering MSW should be cleaned frequently.
- Incoming materials should be processed immediately.
- Moisture and temperature should be controlled through proper aeration.
- The system should be designed to incorporate positive aeration. The compost pile can be used as an odor scrubber.

- Piles should be turned during periods of higher humidity such as early morning.

- Proper site drainage to minimize odors associated with runoff should be a priority.

The level of processing technology affects the level of noise generated by a composting facility. A high-technology facility that utilizes shredders, mixers, trommels, and screens may have an interior a noise level of 95 decibels. If the facility is totally enclosed, the noise level outside the building will remain at approximately 40 decibels. A low-technology facility that has open walls and uses manual labor will generate noise levels below 40 decibels. The main source of noise will be the trommels, which need not be operating for eight hours per day.

Dust is another disadvantage associated with composting facilities. It is generated during mixing and screening and can also be raised by the wind when the compost piles are dry.

In a capital intensive facility dust emissions can be controlled by dust hoods and a bag house. In a lower technology system, maintaining adequate moisture on the outside and inside of the piles will control airborne dust.

MSW may contain large populations of pathogenic microorganisms — bacteria, viruses, fungi, and parasites some which may reach humans in sufficient numbers to cause disease or food poisoning. These microorganisms must be reduced in number during the composting process and prevented from growing in the finished product. Continual monitoring of the compost piles to ensure that high temperatures are maintained during the composting process is necessary for a safe product. Particular attention must also be paid to moisture, oxygen supply, pile turning frequency, and pile size. As a further precaution, the finished product must be analyzed for harmful ingredients before it is released.

No compost process is practicable unless a market exists for the finished product. Markets include landfill cover, nurseries, gardens, and farms. Markets for compost are readily available when the end product is free of contaminants and has been fully decomposed. A well designed and maintained system can meet these requirements.

9.5 Collection System Impacts

Traffic disruption because of waste collection is a significant problem in Port-au-Prince for two reasons. First, the accumulation of garbage in the streets prevents the free flow of traffic in many areas, particularly the business districts. In some cases, four lanes of traffic are reduced to two or even one, and traffic jams, already a common occurrence, are made worse. Second, garbage is collected during normal business hours and not at more suitable times like night or early morning because of concerns for security.

If, for example, an estimated 10,000 commuters are delayed 15 minutes each day because of disruptions in traffic from garbage (a conservative estimate in some cases), the loss to the economy amounts to almost $3.9 million annually (taking an average salary of commuters at $50/day). In addition, there are losses in fuel and increased air pollution from idling automobiles.

Chapter 10

CONCLUSIONS AND RECOMMENDATIONS

10.1 Present Conditions

The sorry state of solid waste management in the metropolitan area of Port-au-Prince is painfully visible. Garbage and trash pile up on the streets and in drainage canals, and even more abundantly, in ravines and open areas. Wastes are dumped and often burned without regard for negative environmental effects. About 1,152 tons of solid waste are generated daily but less than one-quarter of this is collected by SMCRS. Almost all the collected wastes are disposed of at temporary dumps in the city along the ocean. Only a fraction is transported outside. This report does not consider the impacts on public health which are probably significant. In addition, waste accumulation is responsible for the blockage of drainage canals, disruption of traffic, air and water pollution, curtailment of business and industrial activities, reduction of tourism, and an overall pessimism related to a deteriorating quality of life.

SMCRS has proved ineffective as the government agency responsible for waste management. Responses to the survey amply bore this out. Part of the problem has been a lack of financial support from the government of Haiti, and there is no evidence that this is about to change.

Presently, the household, commercial, and industrial sectors collectively spend at least $2 million annually for waste collection. For the household and commercial groups, payment is made to small entrepreneurs or individuals. There are few businesses equipped with trucks for handling wastes, but there are hundreds of individuals with wheelbarrows who collect and dispose of wastes. For the industrial and part of the commercial groups, expenditures are incurred for their own staff to dispose of garbage.

10.2 Prospects for Change

Any recommendations for improving waste management will have to include a means of financing such operations. According to the survey, there is a remarkably great willingness to pay for reliable waste collection and disposal amounting to $20 million annually. The household sector, which presently receives only minor service, accounts for the large majority of this potential payment. Clearly, there is reason to believe that waste management could be independently funded by direct payments for services provided.

Several scenarios were considered in determining the best operation capable of managing all the wastes generated in Port-au-Prince including the poorest neighborhoods. One

Previous Page Blank

scenario indicates that sufficient revenues would be generated for proper waste management to the household sector by having all income classes contribute only about one-third of what they proposed in the survey of willingness to pay. A second scenario indicates that sufficient revenues may be obtained by a progressive fee structure that requires no payment from the poorest classes.

10.3 Private Waste Management Association

This report has described the institutional structure for a privatized Waste Management Authority (WMA). The most difficult task for WMA will be the collection of fees, a difficulty that plagues existing government services, most notably property tax collections. The survey results indicate that citizens will pay for waste collection services that are delivered as promised and result in tangible benefits of a clean city. For this to occur the WMA must operate in a professional manner based on sound business practices to provide waste collection services that serve the needs of the customers. A privately managed authority, with the oversight of key individuals with a stake in the sector, is in the best position to accomplish this objective.

Although the easiest method of fee collection would be to attach a surcharge to electric bills, this report has also discussed other means. An independent fee collection system undoubtedly would be more expensive but has been factored into the cost calculations and reviewed in the financial analysis.

The approach envisioned for the WMA relies on providing incentives for maximizing private entrepreneurial involvement. Waste collection would be accomplished by franchising small businesses primarily on the basis of single truck operators who would be responsible for assigned areas. There appears to be significant interest among small businessmen for this work. In addition, it is envisioned that fee collection and the management of landfill and compost operations would be contracted to entrepreneurs. Fee collection, in particular, is well suited to an entrepreneurial approach based upon incentive payments for services.

A critical component of WMA's success will be a public awareness campaign that disseminates information on the importance of proper waste management, supported by strictly enforced penalties for improper disposal. Existing legislation appears adequate as a regulatory framework. WMA will need to work closely with the public health authorities and other government agencies to implement these measures safeguarding the urban environment.

10.4 Recycling, Composting, and Environmental Considerations

Recycling presently is a common practice in Port-au-Prince. Households and businesses reuse many materials and purchase recycled products. In most cases these materials (including paper/cartons, plastic containers, and building materials) are not transformed but kept intact for reuse. Discarded items, primarily in the more affluent zones, are recycled by scavengers and sold for profit. Few materials of value are thrown away and little change is needed to improve these practices.

Organic materials suitable for composting, however, are indeed being wasted. In consideration of the significant need to improve Haitian soils, attention must be drawn to composting. While this report has pointed to a relatively small market for the purchase of compost, the economic benefits of improving land resources are believed to be significant and critical to the long-term future of Haiti.

10.5 Next Steps

The following steps are suggested:

1. A meeting of key officials should be called to discuss the implications and recommendations of this report. IDB has expressed an interest in hosting such a meeting.

2. As this report is being written, USAID is funding an emergency clean up of Port-au-Prince in connection with the presidential elections. This clean up could have a desirable effect on future waste management if two important actions are taken: private entrepreneurs should be involved in the clean up to the greatest extent possible; and the landfill should be reopened and all wastes collected should be deposited there in a controlled manner.

3. USAID has funded the "Haiti Solid Waste Privatization Project" to be carried out by the Cooperative Housing Foundation and WASH. The objectives of this project are to assist in the development of a solid waste management system; offer recommendations on policy and regulatory development; and provide a preliminary design for recycling and landfill operations. In essence, the project is intended to provide timely assistance on key areas of privatization. It is positioned to assist in several of the key problem areas mentioned in this chapter with particular emphasis on composting operations and assisting entrepreneurs to enter the waste collection business.

   Assurances of the participation of local organizations to be involved needs to be finalized and procedural questions need to be addressed. A start-up workshop is

needed to begin this activity and assure that it is integrated with related activities of the GOH and other donors.

4. In anticipation of GOH agreement on the need to privatize waste management, it is suggested that a committee be formed to draw up legislation to begin the privatization process and consider the institutional arrangements needed to carry it out.

5. In view of the leadership IDB has provided in funding waste management to date, it is the logical organization to coordinate resources for the capitalization of a new privatized Waste Management Authority. USAID should cooperate with the IDB in this endeavor.

Appendix A

BIBLIOGRAPHY

1. SMCRS. Projet de Reorganisation.
   Programme d'intervention.
   Rapport d'Activitites (Mars-Juin, 1990).
   Avant projet d'etude pour an Projet Pilote de Production de Biogaz. Juin, 1990.

2. SMCRS. Rapport de la Commission Chargee de la Recherche des Voies et Moyens pour le Financement du Budget General du SMCRS. July, 1990.

3. SMCRS. Projet d'Assistance de Collecte d'Urgence. April, 1990.

4. Lavalin Inter. Plan Directeur d'Urbanisme de Port au Prince. Ministere des Travaux Publics. PNUD. Vols 1-12. Sept, 1988.

5. Jean-Bernard, Quenard. Reorganisaton du Garage du Service Metropolitain de Collecte des Residus Solides. PAHO. Mai, 1987.

6. Bessalel, Mito & Semkow, Roman. Assessment of Solid Waste Management in PAP, Haiti. WASH FR 292, Jan. 1990.

7. Dalmat, D.J. et.al. Co-Composting Potential for Developing Nations. Biocycle. Nov/Dec 1982.

8. Dalmat, D.J., and Willson, George. Measuring Compost Stability. Biocycle. August, 1986.

Appendix B

PERSONS CONTACTED

Dave Eckerson	Chief, Health, Population & Nutrition Division USAID/Haiti
Skip Kissinger	RHODO USAID/Jamaica
David Cohen	Director USAID/Haiti
Christian Bonaparte	LOGOS Market Research Consultants
Jean Pierre Moise Pierre-Louis	Minister of Public Works
Francois de Backer	Water & Sanitation, IBD
Serge Ambroise	Water & Sanitation, IBD
Ralph Latortue	General Director, SMCRS
Alain Maillard	Lavalin Inter.
Bernard Sarvonat	Lavalin Inter.
Michel Collins	Lavalin Inter.
Yves Fritz Joseph	Consulting Engineer, LOGOS
Carole Roy	Sociologist, LOGOS
Terence Niyungeko	WHO/PAHO
Pamel Duverger	Economist
Reginald Boulos	Executive Director, CDS
Jose Leveille	Director of garage, SMCRS
Irene Ridore	Mayor of PAP
Evans Paul	Special council, Mayor PAP

Previous Page Blank

Gabriel Berrete	Private Enterprise office, USAID
Gracela Cintora-Robin	Interamerican Bank of Development
Martial Bailey	Chief Local Currency Unit/USAID
Jean Joseph Eryc Kernizan	Assistant Director EPPLS
Philippe Mathier	Technical Director Darbouca S.A.
Jean Pierre de Saint Christo	Carribean Exotic Floral Export, Inc.
Wallace Turnball	Director, Horticultural & Ag Extension, Captist Mission Kenscoff
Alexander von Lignau	Industrial Engineer, Former UNACOM Manager
James Parr	Project Manager/USDA/USAID

Appendix C

CONSTANTS

Exchange rate	$ US = 7 Haitian gourdes
Population of metropolitan Port-au-Prince	1,567,880 (1988)* 1,965,218 (1991)
Population growth rate	7.82%
Number of households	275,454 (1988)* 345,261 (1991)
Business employees	49,450*
Number of industrial employees	60,000 (1988)*
Average weight of household garbage	0.5 metric tons/m^3

* Lavalin Estimates

FIELD REPORT

MARKET SURVEY OF SOLID WASTE MANAGEMENT PORT-AU-PRINCE

SEPTEMBER 10 - 28, 1990

VOLUME II

Field Report No. 319
February 1991

WATER AND SANITATION for HEALTH PROJECT

Sponsored by the U.S. Agency for International Development
Operated by CDM and Associates

-97

CONTENTS

VOLUME II

D. Financial Analysis Base Program

E. Financial Analysis—Scenario I

F. Financial Analysis—Scenario II

G. Household Questionnaire (Creole Version & French Version)

H. Household Survey Results

I. Commercial Questionnaire

J. Commercial Survey Results

K. Financial Analysis for Small Business

L. Sample Circulars for Garbage Collection Services

APPENDIX D

FINANCIAL ANALYSIS

BASE PROGRAM

APPENDIX D - Financial Analysis Base Program

Base Program - 100 % Revenue Collection

Parameters (cost in '000)

F7 Rehabilitation of existing Equipment	259.20
Purchase of new Equipment	
F9 Trucks/each	75.60
F10 Tractors	27.00
F11 Containers	10.80
F12 Building	1800
F13 Annual Inflation	1.08

5 Years Analysis - Required equipment

Year	1	2	3	4	5
New trucks	20	15	6	7	6
T'l trucks	22	27	33	40	48
Tractors	7	1	1	1	1
Containers	50	3	4	4	5

5 - Years Capital Investment

Category	Year 1	Year 2	Year 3	Year 4	Year 5
Trucks	1512.00	1134.00	453.60	529.20	453.60
Tractor	189.00	27.00	27.00	27.00	27.00
Cont.	540.00	32.40	43.20	43.20	54.00
Total	2241.00	1193.40	523.80	599.40	534.60

Depreciation Coeficients

c37	Equipment	5
c38	Buildings	40

Residual Value

c42	Building	20
c43	Equipment	10

Annual Depreciation

Category	Year 1	Year 2	Year 3	Year 4	Year 5
Exist Eq.	46.66	46.66	46.66	46.66	46.66
N Trucks	272.16	476.28	557.93	653.18	734.83
N Tractors	34.02	38.88	43.74	48.60	53.46
N Cont	97.20	103.03	110.81	118.58	128.30
Building	36.00	36.00	36.00	36.00	36.00
Total	486.036	700.848	795.132	903.024	999.252

Surcharge Computation on Indirect wages and salaries

Number of days per year

Number of days	365
less Saturdays	52
less Sundays	52
Number of paid days	261

Deduction for paid unproductive days

Official hollidays	12
Leave according to law	15
sickness according to law	15
Number-paid unproductive days	-42
Effective working days	219

Computation of Surcharge due
Labor

Description	Percentage
Social security (ONA)	3.00
ONA on unproductive days (42/219*0.03	0.58
Employment tax	2.00
Allowance	
Leave+sick+30 day annual bonus =60 days	27.40
Total surcharge	32.97

Managers

Description	Percentage
Social security (ONA)	3.00
Employment tax	2.00
Allowance	
Annual bonnus	16.67
Total surcharge	21.67

Medium Level Personnel

Description	Percentage
Social security (ONA)	3.00
Employment tax	2.00
Allowance	
Annual bonnus	8.33

96

Total surcharge 13.33

Fleet service manager and Service Staff

Description	Percentage
Social security (ONA)	3.00
ONA on unproductive days (42/219*0.03	0.58
Employment tax	2.00
Allowance	
Leave+sick+30 day annual bonus =60 days	27.40
Total surcharge	32.97

Indirect and payroll table

Function	Number	Base sal.	Surch.	Total
Gen. Mang.	1	50.00	21.67	60.83
Dep. Mang.	1	25.00	21.67	30.42
Chief Acc.	1	18.00	13.33	20.40
Pers. Man.	1	18.00	13.33	20.40
Oper. Man.	1	18.00	13.33	20.40
Flt.Serv. Manager	1	18.00	32.97	23.94
Off. Staff	6	3.00	32.97	23.94
Ser. Staff	12	2.00	32.97	31.91
Insp/contr	6	3.00	32.97	23.94
Total				256.17
Emp's contribution to health ins. 2%				5.12
Total				261.29

Annual Administrative overheads (in '0000

Item	Description	Amount
1	Payroll	261.29
2	Insurance (10%)	26.13
3	Utilities (8%0	20.90
4	Contingencies (15%)	39.19
	Total	347.52

Annual maintenance costs

Spare parts

Rehabilitated Equipmemt

20 percent of average new equipment spread over 5 years

20 trucks	75.6	60.48

New Equipment

20 percent of new equipment value spread over 5 years

Truck	75.60	3.02
Tractor	27.00	1.08
Container	10.80	0.43

Previsions for maintenance

10 percent of new equipment value spread over 5 years

75.60	1.512
27.00	0.54
10.80	0.216

Annual Cost for Maintenance and Spare parts

Category	Year1	Year 2	Year 3	Year 4	Year 5
Spare Parts					
Truck	127.01	142.13	160.27	181.44	205.63
Tractors	7.56	8.64	9.72	10.80	11.88
Containers	21.60	22.90	24.62	26.35	28.51
Maintenance					
Truck	63.50	71.06	80.14	90.72	102.82
tractor	3.78	4.32	4.86	5.40	5.94
Container	10.80	11.45	12.31	13.18	14.26
Total	234.25	260.50	291.92	327.89	369.04

Surcharge computation on direct Labor Wages

Surcharge Computation on Indirect wages and salaries

Number of days per year

Number of days	365
less Saturdays	52
less Sundays	52

Number of paid days	261

Deduction for paid unproductive days

Official hollidays	12
Leave according to law	15
Sickness according to law	15
Tolerate absenteism	15

Number-paid unproductive days	-57

95

Effective working days	204

Description	Percentage
Social security (ONA)	3.00
Employment tax	2.00
Medical Insurance	2.00
Allowance	
30 day annual bonus	14.71
Total surcharge'	21.71

Effective working days per vehicle

Number days per year	365
less legal hollidays	12
less maintenance day	12
less repair 10	10
Total	331
Effective working days per cre	204
Additional crew days req'd	127
correpond 127/204*100	62.25

Annual base wage per crew

1 Driver	2400
3 Loader	4500
Total	6900

Annual Direct cost per track

Wages	
Base wage per crew	6900.00
Surch	1497.71
Surc for additional Crew	5227.98
Total	13625.69

Fuel

Effective working days	331.00
Gallons per day	20.00
Cost per gallon	1.89
Cost of fuel per track	12511.80
Total direct cost per track	26137.49

Tractor
Effective working days per year
Same number as trucks

Annual base wage per crew

99'

1 driver	2400.00
2 helpers	3000.00
total	5400.00

Annual cost for crew	5400.00
Surch	1172.12
Surc for additional Crew	4091.47
Total	10663.58

Fuel

Effective working days	331.00
Gallons per day	20.00
Cost per gallon	1.89
Cost of fuel per track	12511.80
Total direct cost per tract	23175.38

Operating cost Estimate

	year 1	year 2	year 3	year 4	year 5
Adm ovh	347.52	382.27	420.50	462.55	508.80
Maint/rep	234.25	260.50	291.92	327.89	369.04
Dir'cos'tr	575.02	705.71	862.54	1045.50	1254.60
Dir'cos'tr	162.23	185.40	208.58	231.75	254.93
Net Oper.	1319.02	1533.88	1783.54	2067.69	2387.37
Depr.	486.04	700.85	795.13	903.02	999.25
Total	1805	2235	2579	2971	3387
Transp/com	730	781	836	894	957
Grand-T	2535	3016	3414	3865	4343

REVENUES

Asummed

Industry

Number of Ind. Empl. in Port-au-Prince	60000
Percentage of payment	60
Increase per year	1.0782
Amount of payment per year	18

Commercial

Parameters projected from Lavalin Report
Number of Empl. in Port-au-Prince

Total	49450
Payment per person per year in dollars	23.4
Increase per year	1.0782

Residential

Residential amount of potential imcome from residential was defined from survey performed in Port-au-Prince by WASH-Logos (Sept 1990)

Asumptions:

increase of number of houses per year is	7.82%
Section 1 pays	1.00
Section 2, 11 and 12 pay	1.00
Section 3,4,5,9 and 10 pay	1.00
Section 6 pays	1.00
Section 7 and 8	1.00

Year 1

Zone	No houses	pay/house	rev
1	14808	2.43	1869321
2	46260	1.13	2714866
3	9296	1.23	594542
4	23985	1.57	1960107
5	42928	1.37	3048177
6	115716	0.52	3155532
7	51006	0.87	2301792
8	15243	0.93	0
9	721	0.00	0
10	22890	2.44	2899611
11	1500	0.00	0
12	789	0.59	24385
Total	345144		18568334

Year 2

Zone	No houses	pay/house	rev
1	15966	2.43	2015502
2	49877	1.13	2927168
3	10023	1.23	641035
4	25861	1.57	2113387
5	46285	1.37	3286545
6	124765	0.52	3402295
7	54995	0.87	2481793
8	16435	0.93	793642
9	781	0.00	0
10	24680	2.44	3126361
11	1617	0.00	0
12	851	0.59	26292
Total	372134		20814020

Year 3

- 101

Zone	No houses	pay/house	rev
1	17214	2.43	2173114
2	53777	1.13	3156073
3	10807	1.23	691164
4	27883	1.57	2278654
5	49904	1.37	3543552
6	134521	0.52	3668355
7	59295	0.87	2675869
8	17720	0.93	855705
9	842	0.00	0
10	26610	2.44	3370843
11	1744	0.00	0
12	918	0.59	28348
Total	401235		22441676

Year 4

Zone	No houses	pay/house	rev
1	18561	2.43	2343052
2	57983	1.13	3402878
3	11652	1.23	745213
4	30063	1.57	2456845
5	53807	1.37	3820658
6	145041	0.52	3955220
7	63932	0.87	2885122
8	19106	0.93	922621
9	908	0.00	0
10	28691	2.44	3634442
11	1880	0.00	0
12	989	0.59	30565
Total	432612		24196615

Year 5

Zone	No houses	pay/house	rev
1	20012	2.43	2526278
2	62517	1.13	3668983
3	12563	1.23	803489
4	32414	1.57	2648970
5	58014	1.37	4119434
6	156383	0.52	4264518
7	68931	0.87	3110738
8	20600	0.93	994770
9	979	0.00	0
10	30934	2.44	3918656
11	2027	0.00	0
12	1067	0.59	32955
Total	466442		26088791

1

Summary Residential Revenues per Year in 000

Zone	1	2	3	4	5
1	1869	2016	2173	2343	2526
2	2715	2927	3156	3403	3669
3	595	641	691	745	803
4	1960	2113	2279	2457	2649
5	3048	3287	3544	3821	4119
6	3156	3402	3668	3955	4265
7	2302	2482	2676	2885	3111
8	0	794	856	923	995
9	0	0	0	0	0
10	2900	3126	3371	3634	3919
11	0	0	0	0	0
12	24	26	28	31	33
Total	18568	20814	22442	24197	26089

Item	Year 1	Year 2	Year 3	Year 4	Year 5
Industry	648	699	753	812	876
Commercial	1157	1248	1345	1450	1564
Resident	18568	20814	22442	24197	26089
Total/rev	20373	22760	24540	26459	28528
L'fil	947	610	624	639	655
Coll/Treat	2535	3016	3414	3865	4343
Landf					
Del/Coll/N	323	323	323	364	364
Collec/Fee	3056	3414	3681	3969	4279
Education	250	250	250	250	250
Compost	341	514	514	514	514
Loan Charg	856	685	513	342	171
Overhead Subcontractors					
Collectors	373	402	434	468	504
L'fill	289	311	336	362	390
Treat/Comp	173	187	202	217	234
Total	9144	9713	10291	10990	11706
Prof 15%	1372	1457	1544	1648	1756
Balance	9858	11591	12705	13821	15067
Cash Flow	9858	21449	34154	47975	63042

Initial investment from financial analysis in '000 5348

Collection Notice - Deliver
Depreciation 3 years

Analysis for one car one notice deliverer

Car	3500	3500	3500	3500	3500
Rep/parts	2000	2000	2000	2000	2000
Maint.	1000	1000	1000	1000	1000
Gasoline	8000	8000	8000	8000	8000
Insurance	2000	2000	2000	2000	2000

Salary	18000	18000	18000	18000	18000
Overh	5935	5935	5935	5935	5935
Total	40435	40435	40435	40435	40435
Number	8	8	8	9	9
Cost	323477	323477	323477	363911	363911

Landfill Cost Analysis

Capital Investment

Description					
Reh/site	250.00	0	0	0	0
Reh/Road	110.00	0	0	0	0
Road Maint	0.00	20	20	20	20
Tractor	820.00	0	0	0	0
Misc	25.00	25	25	25	25
T/Equip	845	25	25	25	25
Dep/5year	169.00	169.00	169.00	169.00	169.00
Rep/Parts	169.00	169.00	169.00	169.00	169.00
Maint	84.50	84.50	84.50	84.50	84.50
Road Reh	110.00	0.00	0.00	0.00	0.00
R/Maint	0.00	10.00	10.00	10.00	10 00
S/Rehab	250.00	0.00	0.00	0.00	0.00
Operation	164.79	177.68	191.57	206.55	222.71
Total	947.29	610.18	624.07	639.05	655.21

Operators	4	18000	72000
Labors	6	1500	9000
Security	3	1000	3000
Total			84000
Surcharge			18233
Total labor			102233

Fuel	
100 gallons/day	62559
Increase operation/year	7.82%
Total operation	164792

104

APPENDIX E

FINANCIAL ANALYSIS

SCENARIO I

APPENDIX E - Scenario I

Parameters (cost in '000)

F7 Rehabilitation of existing Equipment	259.20
Purchase of new Equipment	
F9 Trucks/each	75.60
F10 Tractors	27.00
F11 Containers	10.80
F12 Building	1800
F13 Annual Inflation	1.08

5 Years Analysis - Required equipment

Year	1	2	3	4	5
New trucks	20	15	6	7	6
Total truc	22	27	33	40	48
Tractors	7	1	1	1	1
Containers	50	3	4	4	5

5 - Years Capital Investment

Category	Year 1	Year 2	Year 3	Year 4	Year 5
Trucks	1512.00	1134.00	453.60	529.20	453.60
Tractor	189.00	27.00	27.00	27.00	27.00
Cont.	540.00	32.40	43.20	43.20	54.00
Total	2241.00	1193.40	523.80	599.40	534.60

Depreciation Coeficients

c37	Equipment	5
c38	Buildings	40

Residual Value

c42	Building	20
c43	Equipment	10

Annual Depreciation

Category	Year 1	Year 2	Year 3	Year 4	Year 5
Exist Eq.	46.66	46.66	46.66	46.66	46.66
N Trucks	272.16	476.28	557.93	653.18	734.83
N Tractors	34.02	38.88	43.74	48.60	53.46
N Cont	97.20	103.03	110.81	118.58	128.30
Building	36.00	36.00	36.00	36.00	36.00
Total	486.036	700.848	795.132	903.024	999.252

Surcharge Computation on Indirect wages and salaries

Number of days per year

Number of days	365
less Saturdays	52
less Sundays	52
Number of paid days	261

Deduction for paid unproductive days

Official hollidays	12
Leave according to law	15
sickness according to law	15
Number-paid unproductive days	-42
Effective working days	219

Computation of Surcharge due
Labor

Description	Percentage
Social security (ONA)	3.00
ONA on unproductive days (42/219*0.03	0.58
Employment tax	2.00
Allowance	
Leave+sick+30 day annual bonus =60 days	27.40
Total surcharge	32.97

Managers

Description	Percentage
Social security (ONA)	3.00
Employment tax	2.00
Allowance	
Annual bonnus	16.67
Total surcharge	21.67

Medium Level Personnel

Description	Percentage
Social security (ONA)	3.00
Employment tax	2.00
Allowance	
Annual bonnus	8.33

-107

Total surcharge 13.33

Fleet service manager and Service Staff

Description	Percentage
Social security (ONA)	3.00
ONA on unproductive days (42/219*0.03	0.58
Employment tax	2.00
Allowance	
Leave+sick+30 day annual bonus =60 days	27.40
Total surcharge	32.97

Indirect and payroll table

Function	Number	Base sal.	Surch.	Total
Gen. Mang.	1	50.00	21.67	60.83
Dep. Mang.	1	25.00	21.67	30.42
Chief Acc.	1	18.00	13.33	20.40
Pers. Man.	1	18.00	13.33	20.40
Oper. Man.	1	18.00	13.33	20.40
Flt.Serv. Manager	1	18.00	32.97	23.94
Off. Staff	6	3.00	32.97	23.94
Ser. Staff	12	2.00	32.97	31.91
Insp/contr	6	3.00	32.97	23.94
Total				256.17
Emp's contribution to health ins. 2%				5.12
Total				261.29

Annual Administrative overheads (in '0000

Item	Description	Amount
1	Payroll	261.29
2	Insurance (10%)	26.13
3	Utilities (8%0	20.90
4	Contingencies (15%)	39.19
	Total	347.52

Annual maintenance costs

Spare parts

Rehabilitated Equipmemt

105

20 percent of average new equipment spread over 5 years

20 trucks	75.6	60.48

New Equipment

20 percent of new equipment value spread over 5 years

Truck	75.60	3.02
Tractor	27.00	1.08
Container	10.80	0.43

Previsions for maintenance

10 percent of new equipment value spread over 5 years

75.60	1.512
27.00	0.54
10.80	0.216

Annual Cost for Maintenance and Spare parts

Descrip.	Year 1	Year 2	Year 3	Year 4	Year 5
Spare Parts					
Truck	127.01	142.13	160.27	181.44	205.63
Tractors	7.56	8.64	9.72	10.80	11.88
Containers	21.60	22.90	24.62	26.35	28.51
Maintenance					
Truck	63.50	71.06	80.14	90.72	102.82
tractor	3.78	4.32	4.86	5.40	5.94
Container	10.80	11.45	12.31	13.18	14.26
Total	234.25	260.50	291.92	327.89	369.04

Surcharge computation on direct Labor Wages

Surcharge Computation on Indirect wages and salaries

Number of days per year

Number of days	365
less Saturdays	52
less Sundays	52

Number of paid days	261

Deduction for paid unproductive days

Official hollidays	12
Leave according to law	15
Sickness according to law	15
Tolerate absenteism	15

Number-paid unproductive days	-57

Effective working days 204

Description	Percentage
Social security (ONA)	3.00
Employment tax	2.00
Medical Insurance	2.00
Allowance	
30 day annual bonus	14.71
Total surcharge	21.71

Effective working days per vehicle

Number days per year	365
less legal hollidays	12
less maintenance day	12
less repair 10	10
Total	331
Effective working days per cre	204
Additional crew days req'd	127
correpond 127/204*100	62.25

Annual base wage per crew

1 Driver	2400
3 Loader	4500
Total	6900

Annual Direct cost per track

Wages	
Base wage per crew	6900.00
Surch	1497.71
Surc for additional Crew	5227.98
Total	13625.69

Fuel

Effective working days	331.00
Gallons per day	20.00
Cost per gallon	1.89
Cost of fuel per track	12511.80
Total direct cost per track	26137.49

Tractor
Effective working days per year
Same number as trucks

Annual base wage per crew

1 driver	2400.00
2 helpers	3000.00
	---
total	5400.00
Annual cost for crew	5400.00
Surch	1172.12
Surc for additional Crew	4091.47

Total	10663.58

Fuel

Effective working days	331.00
Gallons per day	20.00
Cost per gallon	1.89
Cost of fuel per track	12511.80

Total direct cost per tract	23175.38

Operating cost Estimate

	year 1	year 2	year 3	year 4	year 5
Adm ovh	347.52	382.27	420.50	462.55	508.80
Maint/rep	234.25	260.50	291.92	327.89	369.04
Dir'cos'tr	575.02	705.71	862.54	1045.50	1254.60
Dir'cos'tr	162.23	185.40	208.58	231.75	254.93
Net Oper.	1319.02	1533.88	1783.54	2067.69	2387.37
Depr.	486.04	700.85	795.13	903.02	999.25
Total	1805	2235	2579	2971	3387
Transp/com	730	781	836	894	957
Grand-T	2535	3016	3414	3865	4343

REVENUES

Asummed

Industry

Number of Ind. Empl. in Port-au-Prince	60000
Percentage of payment	60
Increase per year	1.0782
Amount of payment per year	18

Commercial

Parameters projected from Lavalin Report
Number of Empl. in Port-au-Prince

Total	49450
Payment per person per year in dollars	23.4
Increase per year	1.0782

Residential

Residential amount of potential imcome from residential was defined from survey performed in Port-au-Prince by WASH-Logos (Sept 1990)

Asumptions:

increase of number of houses per year is	7.82%
Section 1 pays	0.33
Section 2, 11 and 12 pay	0.33
Section 3,4,5,9 and 10 pay	0.33
Section 6 pays	0.33
Section 7 and 8	0.33

Year 1

Zone	No houses	pay/house	rev
1	14808	2.43	616876
2	46260	1.13	895906
3	9296	1.23	196199
4	23985	1.57	646835
5	42928	1.37	1005898
6	115716	0.52	1041326
7	51006	0.87	759591
8	15243	0.93	242907
9	724	0.00	0
10	22890	2.44	956872
11	1500	0.00	0
12	789	0.59	8047
Total	345144		6370456.9

Year 2

Zone	No houses	pay/house	rev
1	15966	2.43	665116
2	49877	1.13	965965
3	10023	1.23	211542
4	25861	1.57	697418
5	46285	1.37	1084560
6	124765	0.52	1122757
7	54995	0.87	818992
8	16435	0.93	261902
9	781	0.00	0
10	24680	2.44	1031699
11	1617	0.00	0
12	851	0.59	8676
Total	372134		6868627

Year 3

112

Zone	No houses	pay/house	rev
1	17214	2.43	717128
2	53777	1.13	1041504
3	10807	1.23	228084
4	27883	1.57	751956
5	49904	1.37	1169372
6	134521	0.52	1210557
7	59295	0.87	883037
8	17720	0.93	282383
9	842	0.00	0
10	26610	2.44	1112378
11	1744	0.00	0
12	918	0.59	9355
Total	401235		7405753

Year 4

Zone	No houses	pay/house	rev
1	18561	2.43	773207
2	57983	1.13	1122950
3	11652	1.23	245920
4	30063	1.57	810759
5	53807	1.37	1260817
6	145041	0.52	1305223
7	63932	0.87	952090
8	19106	0.93	304465
9	908	0.00	0
10	28691	2.44	1199366
11	1880	0.00	0
12	989	0.59	10086
Total	432612		7984883

Year 5

Zone	No houses	pay/house	rev
1	20012	2.43	833672
2	62517	1.13	1210764
3	12563	1.23	265151
4	32414	1.57	874160
5	58014	1.37	1359413
6	156383	0.52	1407291
7	68931	0.87	1026544
8	20600	0.93	328274
9	979	0.00	0
10	30934	2.44	1293156
11	2027	0.00	0
12	1067	0.59	10875
Total	466442		8609301

1

113

Summary Residential Revenues per Year in 000

Zone	1	2	3	4	5
1	617	665	717	773	834
2	896	966	1042	1123	1211
3	196	212	228	246	265
4	647	697	752	811	874
5	1006	1085	1169	1261	1359
6	1041	1123	1211	1305	1407
7	760	819	883	952	1027
8	243	262	282	304	328
9	0	0	0	0	0
10	957	1032	1112	1199	1293
11	0	0	0	0	0
12	8	9	9	10	11
Total	6370	6869	7406	7985	8609

Item	Year 1	Year 2	Year 3	Year 4	Year 5
Industry	648	699	753	812	876
Commercial	1157	1248	1345	1450	1564
Resident	6370	6869	7406	7985	8609
Total/rev	8176	8815	9504	10247	11049
L'fil	947	610	624	639	655
Coll/Treat	2535	3016	3414	3865	4343
Landf					
Del/Coll/N	323	323	323	364	364
Collec/Fee	1226	1322	1426	1537	1657
Education	250	250	250	250	250
Compost	341	514	514	514	514
Loan Charg	856	685	513	342	171
Overhead Subcontractors					
Collectors	373	402	434	468	504
L'fill	289	311	336	362	390
Treat/Comp	173	187	202	217	234
Total	7314	7621	8036	8558	9084
Prof 15%	1097	1143	1205	1284	1363
Balance	-236	51	263	406	602
Cash Flow	-236	-185	78	484	1086

Initial investment from financial analysis in '000 5318

Collection Notice - Deliver
Depreciation 3 years

Analysis for one car one notice deliverer

Car	3500	3500	3500	3500	3500
Rep/parts	2000	2000	2000	2000	2000
Maint.	1000	1000	1000	1000	1000
Gasoline	8000	8000	8000	8000	8000
Insurance	2000	2000	2000	2000	2000

114

Salary	18000	18000	18000	18000	18000
Overh	5935	5935	5935	5935	5935
Total	40435	40435	40435	40435	40435
Number	8	8	8	9	9
Cost	323477	323477	323477	363911	363911

Landfill Cost Analysis

Capital Investment

Description					
Reh/site	250.00	0	0	0	0
Reh/Road	110.00	0	0	0	0
Road Maint	0.00	20	20	20	20
Tractor	820.00	0	0	0	0
Misc	25.00	25	25	25	25
T/Equip	845	25	25	25	25
Dep/5year	169.00	169.00	169.00	169.00	169.00
Rep/Parts	169.00	169.00	169.00	169.00	169.00
Maint	84.50	84.50	84.50	84.50	84.50
Road Reh	110.00	0.00	0.00	0.00	0.00
R/Maint	0.00	10.00	10.00	10.00	10.00
S/Rehab	250.00	0.00	0.00	0.00	0.00
Operation	164.79	177.68	191.57	206.55	222.71
Total	947.29	610.18	624.07	639.05	655.21

Operators	4	18000	72000
Labors	6	1500	9000
Security	3	1000	3000
Total			84000
Surcharge			18233
Total labor			102233

Fuel	
100 gallons/day	62559
Increase operation/year	7.82%
Total operation	164792

15

APPENDIX F

FINANCIAL ANALYSIS

SCENARIO II

APPENDIX F - Financial Analysis Scenario II

Parameters (cost in '000)

F7 Rehabilitation of existing Equipment	259.20
Purchase of new Equipment	
F9 Trucks/each	75.60
F10 Tractors	27.00
F11 Containers	10.80
F12 Building	1800
F13 Annual Inflation	1.08

5 Years Analysis - Required equipment

Year	1	2	3	4	5
New trucks	20	15	6	7	6
Total truc	22	27	33	40	48
Tractors	7	1	1	1	1
Containers	50	3	4	4	5

5 - Years Capital Investment

Category	Year 1	Year 2	Year 3	Year 4	Year 5
Trucks	1512.00	1134.00	453.60	529.20	453.60
Tractor	189.00	27.00	27.00	27.00	27.00
Cont.	540.00	32.40	43.20	43.20	54.00
Total	2241.00	1193.40	523.80	599.40	534.30

Depreciation Coeficients

c37	Equipment	5
c38	Buildings	40

Residual Value

c42	Building	20
c43	Equipment	10

Annual Depreciation

Category	Year 1	Year 2	Year 3	Year 4	Year 5
Exist Eq.	46.66	46.66	46.66	46.66	46.66
N Trucks	272.16	476.28	557.93	653.18	734.83
N Tractors	34.02	38.88	43.74	48.60	53.46
N Cont	97.20	103.03	110.81	118.58	128.30
Building	36.00	36.00	36.00	36.00	36.00
Total	486.036	700.848	795.132	903.024	999.252

Surcharge Computation on Indirect wages and salaries

Surcharge Computation on Indirect wages and salaries

Number of days per year

Number of days	365
less Saturdays	52
less Sundays	52
Number of paid days	261

Deduction for paid unproductive days

Official hollidays	12
Leave according to law	15
sickness according to law	15
Number-paid unproductive days	-42
Effective working days	219

Computation of Surcharge due
Labor

Description	Percentage
Social security (ONA)	3.00
ONA on unproductive days (42/219*0.03	0.58
Employment tax	2.00
Allowance	
Leave+sick+30 day annual bonus =60 days	27.40
Total surcharge	32.97

Managers

Description	Percentage
Social security (ONA)	3.00
Employment tax	2.00
Allowance	
Annual bonnus	16.67
Total surcharge	21.67

Medium Level Personnel

Description	Percentage
Social security (ONA)	3.00
Employment tax	2.00
Allowance	
Annual bonnus	8.33

Total surcharge 13.33

Fleet service manager and Service Staff

Description	Percentage
Social security (ONA)	3.00
ONA on unproductive days (42/219*0.03	0.58
Employment tax	2.00
Allowance	
Leave+sick+30 day annual bonus =60 days	27.40
Total surcharge	32.97

Indirect and payroll table

Function	Number	Base sal.	Surch.	Total
Gen. Mang.	1	50.00	21.67	60.83
Dep. Mang.	1	25.00	21.67	30.42
Chief Acc.	1	18.00	13.33	20.40
Pers. Man.	1	18.00	13.33	20.40
Oper. Man.	1	18.00	13.33	20.40
Flt.Serv. Manager	1	18.00	32.97	23.94
Off. Staff	6	3.00	32.97	23.94
Ser. Staff	12	2.00	32.97	31.91
Insp/contr	6	3.00	32.97	23.94
Total				256.17
Emp's contribution to health ins. 2%				5.12
Total				261.29

Annual Administrative overheads (in '0000

Item	Description	Amount
1	Payroll	261.29
2	Insurance (10%)	26.13
3	Utilities (8%0	20.90
4	Contingencies (15%)	39.19
	Total	347.52

Annual maintenance costs

Spare parts

Rehabilitated Equipmemt

20 percent of average new equipment spread over 5 years

20 trucks	75.6	60.48

New Equipment

20 percent of new equipment value spread over 5 years

Truck	75.60	3.02
Tractor	27.00	1.08
Container	10.80	0.43

Previsions for maintenance

10 percent of new equipment value spread over 5 years

75.60	1.512
27.00	0.54
10.80	0.216

Annual Cost for Maintenance and Spare parts

Descrip.	Year 1	Year 2	Year 3	Year 4	Year 5
Spare Parts					
Truck	127.01	142.13	160.27	181.44	205.63
Tractors	7.56	8.64	9.72	10.80	11.88
Containers	21.60	22.90	24.62	26.35	28.51
Maintenance					
Truck	63.50	71.06	80.14	90.72	102.82
tractor	3.78	4.32	1.86	5.40	5.94
Container	10.80	11.45	12.31	13.18	14.26
Total	234.25	260.50	291.92	327.89	369.04

Surcharge computation on direct Labor Wages

Surcharge Computation on Indirect wages and salaries

Number of days per year

Number of days	365
less Saturdays	52
less Sundays	52
Number of paid days	261

Deduction for paid unproductive days

Official hollidays	12
Leave according to law	15
Sickness according to law	15
Tolerate absenteism	15
Number-paid unproductive days	-57

Effective working days	204

Description	Percentage
Social security (ONA)	3.00
Employment tax	2.00
Medical Insurance	2.00
Allowance	
30 day annual bonus	14.71
Total surcharge	21.71

Effective working days per vehicle

Number days per year	365
less legal hollidays	12
less maintenance day	12
less repair 10	10
Total	331
Effective working days per cre	204
Additional crew days req'd	127
correpond 127/204*100	62.25

Annual base wage per crew

1 Driver	2400
3 Loader	4500
Total	6900

Annual Direct cost per track

Wages	
Base wage per crew	6900.00
Surch	1497.71
Surc for additional Crew	5227.98
Total	13625.69

Fuel

Effective working days	331.00
Gallons per day	20.00
Cost per gallon	1.89
Cost of fuel per track	12511.80
Total direct cost per track	26137.49

Tractor
Effective working days per year
Same number as trucks

Annual base wage per crew

1 driver	2400.00
2 helpers	3000.00
	---
total	5400.00
Annual cost for crew	5400.00
Surch	1172.12
Surc for additional Crew	4091.47

Total	10663.58

Fuel

Effective working days	331.00
Gallons per day	20.00
Cost per gallon	1.89
Cost of fuel per track	12511.80

Total direct cost per tract	23175.38

Operating cost Estimate

	year 1	year 2	year 3	year 4	year 5
Adm ovh	347.52	382.27	420.50	462.55	508.80
Maint/rep	234.25	260.50	291.92	327.89	369.04
Dir'cos'tr	575.02	705.71	862.54	1045.50	1254.60
Dir'cos'tr	162.23	185.40	208.58	231.75	254.93
Net Oper.	1319.02	1533.88	1783.54	2067.69	2387.37
Depr.	486.04	700.85	795.13	903.02	999.25
Total	1805	2235	2579	2971	3387
Transp/com	730	781	836	894	957
Grand-T	2535	3016	3414	3865	4343

REVENUES

Asummed

Industry

Number of Ind. Empl. in Port-au-Prince	60000
Percentage of payment	60
Increase per year	1.0782
Amount of payment per year	18

Commercial

Parameters projected from Lavalin Report
Number of Empl. in Port-au-Prince

Total	49450
Payment per person per year in dollars	23.4
Increase per year	1.0782

Residential

Residential amount of potential imcome from residential was defined from survey performed in Port-au-Prince by WASH-Logos (Sept 1990)

Asumptions:

increase of number of houses per year is	7.82%
Section 1 pays	0.90
Section 2, 11 and 12 pay	0.75
Section 3,4,5,9 and 10 pay	0.32
Section 6 pays	0.00
Section 7 and 8	0.00

Year 1

Zone	No houses	pay/house	rev
1	14808	2.43	1682389
2	46260	1.13	2036149
3	9296	1.23	190253
4	23985	1.57	627234
5	42928	1.37	975117
6	115716	0.52	0
7	51006	0.87	0
8	15243	0.93	0
9	724	0.00	0
10	22890	2.44	927876
11	1500	0.00	0
12	789	0.59	18289
Total	345144		6457607

Year 2

Zone	No houses	pay/house	rev
1	15966	2.43	1813952
2	49877	1.13	2195376
3	10023	1.23	205131
4	25861	1.57	676284
5	46285	1.37	1051694
6	124765	0.52	0
7	54995	0.87	0
8	16435	0.93	0
9	781	0.00	0
10	24680	2.44	1000436
11	1617	0.00	0
12	851	0.59	19719
Total	372134		6962592

Year 3

Zone	No houses	pay/house	rev
1	17214	2.43	1955803
2	53777	1.13	2367055
3	10807	1.23	221173
4	27883	1.57	729169
5	49904	1.37	1133937
6	134521	0.52	0
7	59295	0.87	0
8	17720	0.93	0
9	842	0.00	0
10	26610	2.44	1078670
11	1744	0.00	0
12	918	0.59	21261
Total	401235		7507067

Year 4

Zone	No houses	pay/house	rev
1	18561	2.43	2108746
2	57983	1.13	2552158
3	11652	1.23	238468
4	30063	1.57	786190
5	53807	1.37	1222611
6	145041	0.52	0
7	63932	0.87	0
8	19106	0.93	0
9	908	0.00	0
10	28691	2.44	1163022
11	1880	0.00	0
12	989	0.59	22924
Total	432612		8094119

Year 5

Zone	No houses	pay/house	rev
1	20012	2.43	2273650
2	62517	1.13	2751737
3	12563	1.23	257116
4	32414	1.57	847671
5	58014	1.37	1318219
6	156383	0.52	0
7	68931	0.87	0
8	20600	0.93	0
9	979	0.00	0
10	30934	2.44	1253970
11	2027	0.00	0
12	1067	0.59	24716
Total	466442		8727079

1

124

Summary Residential Revenues per Year in 000

Zone	1	2	3	4	5
1	1682	1814	1956	2109	2274
2	2036	2195	2367	2552	2752
3	190	205	221	238	257
4	627	676	729	786	848
5	975	1052	1134	1223	1318
6	0	0	0	0	0
7	0	0	0	0	0
8	0	0	0	0	0
9	0	0	0	0	0
10	928	1000	1079	1163	1254
11	0	0	0	0	0
12	18	20	21	23	25
Total	6458	6963	7507	8094	8727

Item	Year 1	Year 2	Year 3	Year 4	Year 5
Industry	648	699	753	812	876
Commercial	1157	1248	1345	1450	1564
Resident	6458	6963	7507	8094	8727
Total/rev	8263	8909	9606	10357	11167
L'fil	947	610	624	639	655
Coll/Treat	2535	3016	3414	3865	4343
Landf					
Del/Coll/N	323	323	323	364	364
Collec/Fee	1239	1336	1441	1554	1675
Education	250	250	250	250	250
Compost	341	514	514	514	514
Loan Charg	856	685	513	342	171
Overhead Subcontractors					
Collectors	373	402	434	468	504
L'fill	289	311	336	362	390
Treat/Comp	173	187	202	217	234
Total	7327	7635	8051	8575	9101
Prof 15%	1099	1145	1208	1286	1365
Balance	-163	129	347	496	700
Cash Flow	-163	-35	312	808	1508

Initial investment from financial analysis in '000 5348

Collection Notice - Deliver
Depreciation 3 years

Analysis for one car one notice deliverer

Car	3500	3500	3500	3500	3500
Rep/parts	2000	2000	2000	2000	2000
Maint.	1000	1000	1000	1000	1000
Gasoline	8000	8000	8000	8000	8000
Insurance	2000	2000	2000	2000	2000

Salary	18000	18000	18000	18000	18000
Overh	5935	5935	5935	5935	5935
Total	40435	40435	40435	40435	40435
Number	8	8	8	9	9
Cost	323477	323477	323477	363911	363911

Landfill Cost Analysis

Capital Investment

Description					
Reh/site	250.00	0	0	0	0
Reh/Road	110.00	0	0	0	0
Road Maint	0.00	20	20	20	20
Tractor	820.00	0	0	0	0
Misc	25.00	25	25	25	25
T/Equip	845	25	25	25	25
Dep/5year	169.00	169.00	169.00	169.00	169.00
Rep/Parts	169.00	169.00	169.00	169.00	169.00
Maint	84.50	84.50	84.50	84.50	84.50
Road Reh	110.00	0.00	0.00	0.00	0.00
R/Maint	0.00	10.00	10.00	10.00	10.00
S/Rehab	250.00	0.00	0.00	0.00	0.00
Operation	164.79	177.68	191.57	206.55	222.71
Total	947.29	610.18	624.07	639.05	655.21

Operators	4	18000	72000
Labors	6	1500	9000
Security	3	1000	3000
Total			84000
Surcharge			18233
Total labor			102233

Fuel	
100 gallons/day	62559
Increase operation/year	7.82%
Total operation	164792

APPENDIX G

HOUSEHOLD QUESTIONNAIRE

CREOLE VERSION

FRENCH VERSION

KOLEK DOU FATRA NAN KAY ANKET NAN DAY YO

ANKETE A: SUPERVIZE A
DATE LA : NO KEKSYONE A:

ADRES KAY LA: NO KI KORESPONN AK ZON LAN:

VERIFIKASYON [ ] WI [ ] NON DAT LA: LE A:

KARAKTERISTIK

1. NAN KI KALITE KATYE ANKET LA AP FET
   KATYE KI GEN AMPIL MOUN (1) CITE (2)
   KATYE KI PAGEN AMPIL MOUN (3) KATYE GRAN NEG RETE [5]
   KATYE KI GEN ANPIL MOUN NAN ANBA LAVIL [4]
2. KI SEKS MOUN KI CHEF KAY LA YE/OSWA YON MOUN KI AN CHAJ
   GASON (1) FANM (2)

PWODIKSYON FATRA

3. KOMBVEN MOUN ANTOU KAP VIV NAN KAY LA?

   1-3 (1) 4-6 (2) 7-10 (3) +DE 10 (4)

4. NAN KISA-W KONN ARITVE METE FRATA LAKAY-OU?
   BOKIT (1) PANYE [2] SAK (3)
   BWOURET (4) DWOUM [5] LOT BAGAY:.....

5. KI KANTITE KON LA (KOMBYEN POU YON) ?
   :.....

6. CHAK KOMBYEN TAN W JETE KANTITE FATRA SA-A?

   CHAK JOU (1) CHAK 2 JOU (2) CHAK 3 JOU (3)
   YON FWA NAN SENMENN LAN (4) YON JOU EKZAT:.....

KALITE FATRA YO

7. ESKE-W KONN METE PO MANJE, WATE BET, PAY PWA, PAY MAYI, NAN BAGAY OU KONN METE FATRA-W YO OCWA LOT BAGAY?

   WI (1) NON (2)

8. KONSA TOU, ESKE-W ABITYE IETE FATRA SO YO LAKAY OU TANKOU:

PLASTIK	WI (1)	NON (2)
METAL (BWAT KONSEV)	WI (1)	NON (2)
KATON	WI (1)	NON (2)
BOUTEY AK IOT	WI (1)	NON (2)

LOT BAGAY AMKO (DI YO):.....

9. KI KALITE FATRA OU KAPAB OSINON OU GEN ABITID ITILIZE POU LOT BAGAY (TANKOU PO ZORANI, MOSO BWA, MOSO BOUTEY) ?

A: MOSO BWA [ ]
B: BOUTEY [ ]
C: PO ZORANJ/SIT [ ]
D: GALON PLASTIK [ ]
E: BWAT FE BLAN [ ]
F: PO BET [ ]
G: KATON [ ]
H: COMPOS [ ]

10. (SI COMPOS) ESKE-W KONN FE COMPO-LA ESPRE ?
WI [1] NON [0] P.D.R [2]

RESIKLAY

11. ESKE-W KONN ACHTE LOT BAGAY KI SEVI DEJA POU-W RESEVI OU-MENN ?

A: MOSO BWA [ ]
B: BOUTEY [ ]
C: PO ZORANJ/SIT [ ]
D: BWAT FE BLAN [ ]
E: GALON PLASTIK [ ]
F: PO BET [ ]
G: KATON [ ]

12. ESKE-W KONN ACHTE :

A: TENWA WI [1] NON [0]

(SI WI) KISA-W KONN FE AVE-L .....

B: ANGRE OSWA BAGAY POU JADEN POUSE
WI [1] NON [0]

(SI WI) KISA-W KONN FE AVE-L .....

C: FIMYE WI [1] NON [0]

(SI WI) KISA-W KONN FE AVE-L.....

D: FIMYE POU PLANT YO (COMPOS)
WI [1] NON [0]

13. NAN ZON OU-AN KI ES KI RANMASE FATRA ?

	CK JOU	CK 2 J	CK 3 J	1 X SEM	J. FIX	OCC.
LA KOMIN						
SEVIS PRIVE						
OU-MEMM KI OKIPE-L						
MOUN KI PA RETE NAN KAY LA						

14. (SI SE YON SEVIS PRIVE) KOMBYEN KOB OU PEYE CHAK MWA ?
$.....

15. (SI SE YON SEVIS PRIVE) KI AVANTAJ LI BA-W ?

A:.....

B:.....

C:.....

16. (SI SE YON SEVIS PRIVE) KI PWOBLEM OUE-L BA-OU ?

A: .....

B: .....

C: .....

17. (SI SE YON MOUN KI PA RETE NAN KAY LA - A LA 13)
KOMBYEN OU KONN PEYE'L ?
$.....

18. (SI SE MOUN KI PA RETE NAN KAY LA - A LA 13)
AK KISA LI KONN SEVI POU JETE FATRA ?

BOKIT [1] PANYE [2] SAK [3]
BWOURET[4] DWOUM [5] LOT BAGAY .....

M'PA KONIN [7]

19. (SI SE MOUN KI PA RETE NAN KAY LA - A LA 13)
ESKE SEVIS-SA POU LEVE FATRA-AN LI BA-W AVANTAJ OSINON PWOBLEM ?

[1] AVANTAJ
KI LES : .....
[2] PWOBLEM
KI LES : .....

[3] M'PA KA DI-W
[4] NI YOUN NI LOT

20. **(SEULEMENT POUR CEUX QUI ONT REPONDU "LA MAIRIE")**
KI JAN OU-MENM OU WE KALITE SEVIS RANMASAJ FATRA-AN ?

[1] PABON MENM [2] KOREK (BON) [3] BON
[4] PA GEN IDE SOU SA-A

21. **(SI'L TE REPON A LA 13 KE'L KON FON JAN POU JETE YO LI MENM)**
SA-W KONN FE AVEK FATRA YO DABITIT: KI BO OU KONN JETE YO ?

[1] DEVAN LAKAY MWEN POU KOLEK-LA
[2] SOU KOUEN LA RI-A
[3] NAN RAVIN LA
[4] SOU YON TEREN KI PA GENYEN ANYEN LADAN
[5] NAN LATRIN
[6] YON KOTE KOTE YO KONN VINN RANMASE
[7] NENPOT KI KOTE
[8] M'KONN FE YO BRILE
[9] NAN YON FOS KE NOU TE FE POU SA MENM
[10] P.D.R.

LOT FASON AK KI SA OU KA DI ANKO SOU ZAFE SA-A

22. KI KONSEY OU TE KA BAY NAN AFE RANMASAJ FATRA ?

.....
.....
.....
.....
.....

23. ESKE DAPRE-W GON KOMITE KI KONN OKIPE AFE RANMASJ FATRA NAN KATYE OU RETE-AN ?

[1] WI [0] NON [2] PA KONEN

24. (SI SE "NON" OSINON "PA KONEN") APRE KONSEY OU SOT BAY, ESKE-W TA DAKO POU YON OGANIZASYON KOMINOTE TA VINN RANMASE FATRA ?

[0] NON **(GOTO 28)** [1] WI [2] PA KONEN

25. (SI SE WI A LA Q.23) ESKE-W TA PATASIPE LADAN ?

[1] WI [0] NON

26. (SI SE WI A LA Q.24) POU KI REZON SA-A ?

.....

27. (SI SE NON A LA Q.24) POU KI REZON SA-A ?

.....

28. ESKE-W TA DAKO POU PEYE YON ABONEMAN OSINON YON KONTRA OU TA PASE POU VINN RANMASE FATRA ?

[0] NON **(GOTO 30)**

(si oui)
[ ] WI [1] POKO KA DI
[2] LAKAY MWEN
[3] YON KOTE KOTE YO KONN VINN RANMASE-L
[4] NI YOUN NI LOT
[5] P.D.R.

29. ESKE DAPRE SA-W KONEN SOU VALE KOB YO KONN PEYE NAN LOT ZONN-YO, KI PRI OU TA DISPOSE PEYE POU YON SEVIS KONSA-A ?

$10/SEM	[1] OUI	[0] NON
$ 8/SEM	[1] OUI	[0[NON
$ 6/SEM	[1] OUI	[0] NON
$ 5/SEM	[1] OUI	[0] NON
$ 3/SEM	[1] OUI	[0] NON
$ 2/SEM	[1] OUI	[0] NON

30.

SI MOUN YO TA PAYE-W POU TA SEPARE YON KALITE FATRA ESPESIAL NAN SA OU KONN GEN YO, ESKE-W TA DISPOZE POTE YO KEK KOTE KE YO TA DI-W ?

[1] WI [0] NON [2] KESTYON KI PA POU YO

31. CHAK KOMBYEN TAN KONSA OU KONN FE NETOYE FOS-LA (OSINON LATRIN-LA)?

[1] 2 X LAN [2] CHQ ANE [3] CHQ 2 ZAN
[4] SA DEPAN [5] P.D.R. [0] PA GEN FOS

32. <u>(SI YO GEN FOS LAKAY-LA OSINON LATRINN)</u>, KILES KI KONN FE SA-
.....

33. <u>(SI YO GEN FOS LAKAY-LA OSINON LATRINN)</u>, KONBYEN LI KOUTE-W ?

$.....

<u>EDIKASYON</u>

34. ESKE-W KWE KE MOUN POTOPRENS-YO KONN VREMAN KI FASON POU TA FE POU TA RETIRE TOUTT FATRA-YO JAN YO TA DWE ?

[1] WI [0] NON [2] M'PA KA DI'W [3] P.D.R.

35. ESKE **OU-MENM MENM** OU TA REMEN KONEN **PLIS TOUJOU** SOU KESTYON

A: BON FASON POU YO TA VINN RANMASE FATRA
[1] WI [0] NON

B: SA YO KONN FE AK DECHE KI KA DEKONPOZE

[1] WI [0] NON

C: SA YO KONN FE AK DECHE KI PA KONN DEKONPOZE
[1] WI [0] NON

36. ESKE-W TA RENMEN KONEN PI PLIS SOU KESTYON SA TOUTT FATRA KI PA KONN LEVE SOUVAN KA FE NOU ?

[1] WI [0] NON [2] M'PA KA DI-W [3] P.D.R.

37. (SI "WI" OSINON "M'PA KA DI-W"), KI MWAYEN KI TA KA PI BON POU-W TA KONN PI PLIS SOU KESTYON-AN ?

[1] RADYO [2] TELEVISYON [3] JOUNAL
[4] OKEN LADAN [5] M'PA KONEN [6] TOUTT 3 YO

SA MOUN WAP PALE AVE'L-LAN LI YE

39. ESKE-W TAL LEKOL, E SI WI KI DENYE KLAS OU TE RIVE ?

[1] 3 ZAN PRIME [2] 3 A 7 AN PRIME
[3] PLIS PASE 8 AN [4] LEKOL PROFESYONEL
[5] LINIVESITE [6] PROG. ALFABETIZASYON
[7] PAT JAM AL LEKOL [8] P.D.R.

40. KI METYE OU FE ?

[1] PA GEN TRAVAY [2] JOUNALYE
[3] MACHANN [4] ANPLWAYE REGILYE
[5] PWOFESYON LIBERAL [6] MET KOMES

---

41. STATUT SOCIO-ECONOMIQUE

[1] L.P. [2] M.R.V. [3] M.S.F [4] B.E.

ENQUETES MENAGES

ENQUETEUR : SUPERVISEUR :
DATE : QUESTIONNAIRE NO.

ADRESSE : CODE DE ZONE:

BACK CHECK ( ) OUI ( ) NON DATE : HEURE :

CARACTERISTIQUES

---

1. TYPE DU QUARTIER
   QUARTIER SPONTANNE (1) CITE (2)
   QUARTIER (3) QUARTIER RESIDENTIEL (4)

2. QUEL EST LE SEXE DU CHEF DE MENAGE/PERSONNE EN CHARGE
   HOMME (1) FEMME (2)

PRODUCTION D'ORDURES

3. COMBIEN DE PERSONNES EN TOUT VIVENT-ELLES DANS LA MAISON (Y COMPRIS LE PERSONNEL)

   1-3 (1) 4-6 (2) 7-10 (3) + DE 10 (4)

4. COMMENT DISPOSEZ-VOUS DES ORSDURES CHEZ VOUS ? (UNITES)

   SEAU (1) PANIER (2) GRAND SAC (3))
   BROUETTE (4) DRUM (5)

5. PAR QUELLE QUANTITE (NOMBRE D'UNITE) ?
   :----------

6. TOUS LES COMBIEN DE TEMPS DISPOSEZ-VOUS DE CETTE QUANTITE ?

   CHAQUE JOUR (1) TOUS LES 2 JOURS (2) TOUS LES 3 JOURS (3)
   UNE FOIS PAR SEMAINE (4) UN JOUR PRECIS :.....

TYPE D'ORDURES

7. (MATIERES ORGANIQUES)
   DISPOSEZ-VOUS DE DECHETS VEGETEAUX, ALIMENTAIRES ET AUTRES

   OUI (1) NON (2)

8. EGALEMENT, AVEZ L'HABITUDE DE JETER DE MATIERES NON-ORGANIQUES TELLES QUE:

PLASTIQUE	OUI (1)	NON (2)
METAL (B.CONSERVE)	OUI (1)	NON (2)
CARTON	OUI (1)	NON (2)

AUTRES (SPECIFIEZ).....

9. QUELS TYPES DE DECHETES POUVEZ-VOUS OU AVEZ VOUS L'HABITUDE D'UTILIZER A D'AUTRES USAGES:

1 MORCEAUX DE BOIS	( )
2 BOUTEILLES	( )
3 PELURE D'ORA/BANA/CIT	( )
4 GALLONS PLASTIQUE	( )
5 BOITE FER BLANC	( )
6 PEAU DE BETE	( )
7 CARTON	( )
8 COMPOST	( )

10 (SI COMPOST A LA 9) FAITES-VOUS DU COMPOST VOLONTAIREMENT

(1) COMPOST VOLONTAIRE (2) NON (3) P.D.R.

RECYCLAGE

11 AVEZ-VOUS DEJA ACHETE DES OBJETS OU DU MATERIEL QUI A ETE TRANSFORME (FABRIQUE DE NOUVEAU)

	( ) OUI	( ) NON
1 MORCEAUX DE BOIS	( )	( )
2 BOUTEILLES	( )	( )
3 PELUSE D'ORAN/BANA/CIT	( )	( )
4 GALLONS PLASTIQUE	( )	( )
5 BOITE FER BLANC	( )	( )
6 PEAU DE BETE	( )	( )
7 CARTON	( )	( )

13 AVEZ VOUS ACHETE

A. DE LA TERRE NOIRE OUI (1) NON (2)

(SI OUI) POUR QUEL USAGE:.....

B. DES ENGRAIS OU FERTILISANTS OUI (1) NON (2)

(SI OUI) POUR QUEL USAGE:.....

C. DU FUMIER OUI (1) NON (2)

(SI OUI) POUR QUEL USAGE:.....

D. DU COMPOST OUI (1) NON (2)

(SI OUI) POUR QUEL USAGE:.....

RECYCLAGE, MODE ET FREQUENCE

14 DANS VOTRE ZONE, QUI FAIT LE RAMASSAGE DES ORDURES?

	CH JOU	TS 2	TS 3	1*SE	JOUR	OCCASIONNELLEMENT
LA MAIRIE						
SERVICE PRIVE						
DISPOSEZ VS-MEME						
JOBBEUR\JOURNALIER						

15 (S'IL S'AGIT D'UN SERVICE PRIVE) COMBIEN PAYEZ-VOUS PAR MOIS?

$.....

16 (S'IL S'AGIT D'UN SERVICE PRIVE) QUEL AVANTAGE OFFRE-T-IL ?

A:.....
B:.....
C:.....

17 (S'IL S'AGIT D'UN SERVICE PRIVE) QUEL INCONVENIENT OFFRE-T-IL?

A:.....
B:.....
C:.....

18 (SI JOBBEUR **A LA 14**) QUEL EST LE PRIX QUE VOUS LUI PAYEZ?

$.....

19 (SI JOBBEUR **A LA 14**) COMMENT DISPOSE-T-IL LES ORDURES?

[1] PANIER [2] GRAND SAC [3] SEAU

[4] DRUM [5] BROUETTE [6] AUTRE

[7] JE NE SAIS PAS

20 (SI JOBBEUR **A LA 14**) CE SERVICE, OFFRE-T-IL DES AVANTAGES OU DES INCOVENIENTS?

[1] AVANTAGE - LEQUEL:.....

[2] INCONVENIENT LEQUEL:.....

[3] NE SAIT PAS [4] TOUS LES DEUX

SATISFACTION

21 (SEULEMENT POUR CEUX QUI ONT REPONDU "LA MAIRIE")
COMMENT ESTIMEZ-VOUS LA QUALITE DE LA COLLECTE DES ORDURES?

[1] MAUVAIS [2] PASSABLE (BON) [3] BON
[4] NE SE PRONONCE PAS

22 | A LA 14 DISPOSE VS-A | QUE FAITES-VOUS DES ORDURES LE PLUS SOUVENT; OU LES JETEZ-VOUS?

[1] DEVANT CHEZ MOI POUR LA COLLECTE
[2] AU COIN DE LA RUE
[3] DANS LA RAVINE
[4] SUR UN TERRAIN VACANT
[5] DANS LES LATRINES
[6] A UN POINT PRECIS DE COLLECTE
[7] N'IMPORTE OU
[8] JE LES FAIS BRULER
[9] DANS UN FOSSE SPECIALEMENT CREUSEE A CET EFFET
[10] SANS REPONSE

AUTRES METHODES ET SUGGESTIONS

23 QU'AURIEZ-VOUS SUGGERE EN MATIERE DE COLLECTE DES ORDURES?

---

24 Y-A-T-IL UN COMITE DANS VOTRE QUARTIER QUI S'EN CHARGE PARFOIS?

[ ] OUI [ ] NON [ ] NE SAIT PAS

25 (SI NON OU NE SAIT PAS A LA Q 24), SERIEZ-VOUS EN FAVEUR D'UNE ORGANISATION COMMUNAUTAIRE A LA COLLECTE DES ORDURES ?

[0] NON **(GOTO 29)** [1] OUI

26 (SI OUI 25) Y PARTICIPERIEZ-VOUS A CETTE ORGANISATION COMMUNAUTAIRE ?

[0] NON [1] OUI

27 SERIEZ-VOUS INTERESSE A SEPARER LES DECHETS ORGANIQUES(BIO-DEGRADABLES) DES DECHETS ET ORDURES NON-ORGANIQUES EN LES PLACANT DANS DES CONTENEURS DIFFERENTS ?

[0] NON [1] OUI

28 (SI OUI A LA 25) POUR QUELLE RAISON ?

.....

29 (SI NON A LA 25) POUR QUELLE RAISON ?

.....

30 SERIEZ-VOUS DISPOSE A PAYER UN CONTRAT OU UN ABONNEMENT POUR LA COLLECTE DES ORDURES ?

[0] NON (GOTO 32) [ ] OUI [1] HESITE

(si oui): [2] A DOMICILE
[3] A UN POINT PRECIS DE COLLECTE
[4] L'UN OU L'AUTRE
[5] HESITE
[6] P.D.R.

31 ETES-VOUS DISPOSE A PAYER POUR UN SERVICE : (donner la liste)

	[1] OUI	[0] NON
-$10/SEM	[1] OUI	[0] NON
-$ 8/SEM	[1] OUI	[0] NON
-$ 6/SEM	[1] OUI	[0] NON
-$ 5/SEM	[1] OUI	[0] NON
-$ 3/SEM	[1] OUI	[0] NON
-$ 2/SEM	[1] OUI	[0] NON

32 **!!! QUESTION A VOIR AVEC LE SUPERVISEUR !!!**

SI ON VOUS PAIE POUR UN TAS DE DECHETS QUE VOUS DEVRIEZ SEPARER, SERIEZ-VOUS DISPOSE A LES AMENER AU POINT DE COLLECTE ?

[1] OUI [0] NON [2] NE S'APPLIQUE PAS

33 TOUS LES COMBIEN DE TEMPS FAITES-VOUS NETTOYER VOTRE FOSSE SEPTIQUE (OU VOTRE LATRINE) ?

[1] 2 x /AN [2] Chq ANNEE [3] TS LES 2 ANS
[4] VARIABLE [5] P.D.R. [0] N'A PAS DE FOSSE

34 (SI A UNE FOSSE/LATRINE) QUI LE FAIT ?

.....

35 (SI A UNE FOSSE/LATRINE) COMBIEN CELA VOUS COUTE-T-IL ?

$.....

EDUCATION

36 PENSEZ-VOUS QUE LES GENS EN GENERAL SOIENT VRAIMENT TOUS IMBUS OU CONSCIENT DE LA FACON LA PLUS ADEQUATE D'ELIMINER LES ORDURES MENAGERES ?

[1] OUI [0] NON [2] HESITE [3] P.D.R.

37 EST-CE QUE PERSONNELLEMENT VOUS AURIEZ SOUHAITE EN SAVOIR **PLUS** SUR :

A- LA FACON CORRECTE DE DISPOSER DES DECHETS
[1] OUI [0] NON
B- LE RECYCLAGE DES DECHETS ORGANIQUES
[1] OUI [0] NON
C- LE RECYCLAGE DES DECHETS NON-ORGANIQUES
[1] OUI [0] NON

38 VOULEZ-VOUS APPRENDRE PLUS SUR LES EFFETS PRODUITS PAR LES DECHETS SOLIDES ACCUMULES ?

[1] OUI [0] NON [2] HESITE [3] P.D.R.

39 (SI OUI/ou/HESITE) QUEL SERAIT LE MOYEN LE PLUS EFFICACE ? LA RADIO, LA TELEVISION OU LES JOURNAUX ?

[1] RADIO [2] TELEVISION [3] JOURNAUX
[4] AUCUN [5] NE SAIT PAS [6] TS LES 3

PROFIL DE L'INTERVIEWE

40 AVEZ-VOUS ETE A L'ECOLE, ET SI OUI, A QUEL NIVEAU D'ETUDE ETES-VOUS ARRIVE ?

[1] 3 ANNEES PRIMAIRES [2] 3 A 7 ANS PRIMAIRES
[3] PLUS QUE 8 ANS [4] ECOLE PROFESSIONNELLE
[5] UNIVERSITE [6] PROG. ALPHABETISATION
[7] N'A PAS ETE A L'ECOLE [0] P.D.R.

41 QUELLE EST VOTRE OCCUPATION ?

[1] SANS OCCUPATION FIXE [2] JOURNALIER
[3] MARCHAND(E) [4] SALARIE
[5] PROFESSION LIBERALE [6] CHEF D'ENTREPRISE

---

42 STATUT SOCIO-ECONOMIQUE

[1] L.P. [2] M.R.V [3] M.S.F. [4] B.E.

APPENDIX H

HOUSEHOLD SURVEY RESULTS

Variable traitee:QUARTIER
Libele:TYPE DU QUARTIER

Croisement sur:QUARTIER
Libele:# STRATE HABITAT - LAVALIN

	Total	Val 1	Val 2	Val 3	Val 4	Val 5	Val 6	Val 7	Val 8	Val 9	Val 10	Val 11	Val 12
Val 1	253 62.62%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	16 6.32% 57.14%	43 17.00% 82.69%	110 43.48% 76.92%	49 19.37% 92.45%	12 4.74% 42.86%	0.00% 0.00%	23 9.09% 100%	0.00% 0.00%	0.00% 0.00%
Val 2	40 9.90%	1 2.50% 4.76%	3 7.50% 7.69%	0.00% 0.00%	0.00% 0.00%	1 2.50% 1.92%	17 42.50% 11.89%	3 7.50% 5.66%	15 37.50% 53.57%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%
Val 3	92 22.77%	19 20.65% 90.48%	23 25.00% 58.97%	13 14.13% 100%	12 13.04% 42.86%	8 8.70% 15.38%	15 16.30% 10.49%	0.00% 0.00%	0.00% 0.00%	1 1.09% 100%	0.00% 0.00%	0.00% 0.00%	1 1.09% 100%
Val 4	7 1.73%	0.00% 0.00%	2 28.57% 5.13%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	1 14.29% 0.70%	1 14.29% 1.89%	1 14.29% 3.57%	0.00% 0.00%	0.00% 0.00%	2 28.57% 100%	0.00% 0.00%
Val 5	12 2.97%	1 8.33% 4.76%	11 91.67% 28.21%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%
	404	21 5.20%	39 9.65%	13 3.22%	28 6.93%	52 12.87%	143 35.40%	53 13.12%	28 6.93%	1 0.25%	23 5.69%	2 0.50%	1 0.25%

Variable traitee:SEXE
Libele:QUEL EST LE SEXE DU CHEF DE MENAGE/PERS. RESPONSABLE

Croisement sur:SEXE
Libele:# STRATE HABITAT - LAVALIN

	Total	Val 1	Val 2	Val 3	Val 4	Val 5	Val 6	Val 7	Val 8	Val 9	Val 10	Val 11	Val 12
Val 1	131 32.43%	10 7.63% 47.62%	14 10.69% 35.90%	4 3.05% 30.77%	7 5.34% 25.00%	21 16.03% 40.38%	45 34.35% 31.47%	14 10.69% 26.42%	7 5.34% 25.00%	1 0.76% 100%	7 5.34% 30.43%	0.00% 0.00%	1 0.76% 100%
Val 2	273 67.57%	11 4.03% 52.38%	25 9.16% 64.10%	9 3.30% 69.23%	21 7.69% 75.00%	31 11.36% 59.62%	98 35.90% 68.53%	39 14.29% 73.58%	21 7.69% 75.00%	0.00% 0.00%	16 5.86% 69.57%	2 0.73% 100%	0.00% 0.00%
	404	21 5.20%	39 9.65%	13 3.22%	28 6.93%	52 12.87%	143 35.40%	53 13.12%	28 6.93%	1 0.25%	23 5.69%	2 0.50%	1 0.25%

Variable traitee:DANS LA MAISON
Libele:COMBIEN DE PERSONNES EN TOUT VIVENT DANS LA MAISON.
(Y COMPRIS LE PERSONNEL)

Croisement sur:DANS LA MAISON
Libele:# STRATE HABITAT - LAVALIN

	Total	Val 1	Val 2	Val 3	Val 4	Val 5	Val 6	Val 7	Val 8	Val 9	Val 10	Val 11	Val 12
Val 1	58 14.36% 	2 3.45% 9.52%	5 8.62% 12.82%	1 1.72% 7.69%	5 8.62% 17.86%	9 15.52% 17.31%	20 34.48% 13.99%	7 12.07% 13.21%	5 8.62% 17.86%	 0.00% 0.00%	4 6.90% 17.39%	 0.00% 0.00%	 0.00% 0.00%
Val 2	229 56.68% 	13 5.68% 61.90%	19 8.30% 48.72%	9 3.93% 69.23%	13 5.68% 46.43%	32 13.97% 61.54%	78 34.06% 54.55%	30 13.10% 56.60%	18 7.86% 64.29%	1 0.44% 100%	14 6.11% 60.87%	1 0.44% 50.00%	1 0.44% 100%
Val 3	104 25.74% 	5 4.81% 23.81%	14 13.46% 35.90%	3 2.88% 23.08%	7 6.65% 32.14%	10 9.62% 19.23%	41 39.42% 28.67%	13 12.50% 24.53%	5 4.81% 17.86%	 0.00% 0.00%	3 2.88% 13.04%	1 0.96% 50.00%	 0.00% 0.00%
Val 4	13 3.22% 	1 7.69% 4.76%	1 7.69% 2.56%	 0.00% 0.00%	1 7.69% 3.57%	1 7.69% 1.92%	4 30.77% 2.80%	3 23.08% 5.66%	 0.00% 0.00%	 0.00% 0.00%	2 15.38% 8.70%	 0.00% 0.00%	 0.00% 0.00%
	404	21 5.20%	39 9.65%	13 3.22%	28 6.93%	52 12.87%	143 35.40%	53 13.12%	28 6.93%	1 0.25%	23 5.69%	2 0.50%	1 0.25%

Variable traitee:DISPOSEZ DES ORDURES
Libele:COMMENT DISPOSEZ-VOUS DES ORDURES CHEZ-VOUS?

Croisement sur:DISPOSEZ DES ORDURES
Libele:# STRATE HABITAT - LAVALIN

	Total	Val 1	Val 2	Val 3	Val 4	Val 5	Val 6	Val 7	Val 8	Val 9	Val 10	Val 11	Val 12
Val 1	117	4	8	5	4	13	43	17	11		11	1	
	28.96%	3.42%	6.84%	4.27%	3.42%	11.11%	36.75%	14.53%	9.40%	0.00%	9.40%	0.85%	0.00%
		19.05%	20.51%	38.46%	14.29%	25.00%	30.07%	32.08%	39.29%	0.00%	47.83%	50.00%	0.00%
Val 2	140	9	16	4	15	18	46	18	7		5	1	1
	34.65%	6.43%	11.43%	2.86%	10.71%	12.86%	32.86%	12.86%	5.00%	0.00%	3.57%	0.71%	0.71%
		42.86%	41.03%	30.77%	53.57%	34.62%	32.17%	33.96%	25.00%	0.00%	21.74%	50.00%	100%
Val 3	66	3	4	2	6	10	22	11	3	1	4		
	16.34%	4.55%	6.06%	3.03%	9.09%	15.15%	33.33%	16.67%	4.55%	1.52%	6.06%	0.00%	0.00%
		14.29%	10.26%	15.38%	21.43%	19.23%	15.38%	20.75%	10.71%	100%	17.39%	0.00%	0.00%
Val 4	12	1	1			2	5	2	1				
	2.97%	8.33%	8.33%	0.00%	0.00%	16.67%	41.67%	16.67%	8.33%	0.00%	0.00%	0.00%	0.00%
		4.76%	2.56%	0.00%	0.00%	3.85%	3.50%	3.77%	3.57%	0.00%	0.00%	0.00%	0.00%
Val 5	19	1	4	2		1	5	3	1		2		
	4.70%	5.26%	21.05%	10.53%	0.00%	5.26%	26.32%	15.79%	5.26%	0.00%	10.53%	0.00%	0.00%
		4.76%	10.26%	15.38%	0.00%	1.92%	3.50%	5.66%	3.57%	0.00%	8.70%	0.00%	0.00%
Val 6	50	3	6		3	8	22	2	5		1		
	12.38%	6.00%	12.00%	0.00%	6.00%	16.00%	44.00%	4.00%	10.00%	0.00%	2.00%	0.00%	0.00%
		14.29%	15.38%	0.00%	10.71%	15.38%	15.38%	3.77%	17.86%	0.00%	4.35%	0.00%	0.00%
	404	21	39	13	28	52	143	53	28	1	23	2	1
		5.20%	9.65%	3.22%	6.93%	12.87%	35.40%	13.12%	6.93%	0.25%	5.69%	0.50%	0.25%

Variable traitee:NOMBRE D'UNITES
Libele:PAR QUELLE QUANTITE ?

Croisement sur:NOMBRE D'UNITES
Libele:# STRATE HABITAT LAVALIN

	Total	Val 1	Val 2	Val 3	Val 4	Val 5	Val 6	Val 7	Val 8	Val 9	Val 10	Val 11	Val 12
Val 1	36 8.91% 	1 2.78% 4.76%	3 8.33% 7.69%	 0.00% 0.00%	3 8.33% 10.71%	3 8.33% 5.77%	20 55.56% 13.99%	3 8.33% 5.66%	 0.00% 0.00%	 0.00% 0.00%	1 2.78% 4.35%	1 2.78% 50.00%	1 2.78% 100%
Val 2	291 72.03% 	11 3.78% 52.38%	23 7.90% 58.97%	11 3.78% 84.62%	18 6.19% 64.29%	37 12.71% 71.15%	106 36.43% 74.13%	44 15.12% 83.02%	25 8.59% 89.29%	 0.00% 0.00%	15 5.15% 65.22%	1 0.34% 50.00%	 0.00% 0.00%
Val 3	64 15.84% 	8 12.50% 38.10%	7 10.94% 17.95%	2 3.13% 15.38%	6 9.38% 21.43%	9 14.06% 17.31%	16 25.00% 11.19%	6 9.38% 11.32%	2 3.13% 7.14%	1 1.56% 100%	7 10.94% 30.43%	 0.00% 0.00%	 0.00% 0.00%
Val 4	13 3.22% 	1 7.69% 4.76%	6 46.15% 15.38%	 0.00% 0.00%	1 7.69% 3.57%	3 23.08% 5.77%	1 7.69% 0.70%	 0.00% 0.00%	1 7.69% 3.57%	 0.00% 0.00%	 0.00% 0.00%	 0.00% 0.00%	 0.00% 0.00%
	404	21 5.20%	39 9.65%	13 3.22%	28 6.93%	52 12.87%	143 35.40%	53 13.12%	28 6.93%	1 0.25%	23 5.69%	2 0.50%	1 0.25%

Variable traitee:DISPOSEZ-VOUS
Libele:TOUS LES COMBIEN DE JOURS DISPOSEZ-VOUS DE CETTE QUANTITE ?

Croisement sur:DISPOSEZ-VOUS
Libele:# STRATE HABITAT - LAVALIN

	Total	Val 1	Val 2	Val 3	Val 4	Val 5	Val 6	Val 7	Val 8	Val 9	Val 10	Val 11	Val 12
Val 1	112 27.72%	5 4.46% 23.81%	16 14.29% 41.03%	1 0.89% 7.69%	9 8.04% 32.14%	8 7.14% 15.38%	46 41.07% 32.17%	12 10.71% 22.64%	7 6.25% 25.00%	0.00% 0.00%	6 5.36% 26.09%	1 0.89% 50.00%	1 0.89% 100%
Val 2	93 23.02%	7 7.53% 33.33%	7 7.53% 17.95%	4 4.30% 30.77%	3 3.23% 10.71%	15 16.13% 28.85%	31 33.33% 21.68%	14 15.05% 26.42%	8 8.60% 28.57%	0.00% 0.00%	4 4.30% 17.39%	0.00% 0.00%	0.00% 0.00%
Val 3	99 24.50%	6 6.06% 28.57%	6 6.06% 15.38%	3 3.03% 23.08%	11 11.11% 39.29%	10 10.10% 19.23%	30 30.30% 20.98%	14 14.14% 26.42%	9 9.09% 32.14%	0.00% 0.00%	10 10.10% 43.48%	0.00% 0.00%	0.00% 0.00%
Val 4	77 19.06%	1 1.30% 4.76%	8 10.39% 20.51%	1 1.30% 7.69%	2 2.60% 7.14%	16 20.78% 30.77%	31 40.26% 21.68%	12 15.58% 22.64%	3 3.90% 10.71%	1 1.30% 100%	1 1.30% 4.35%	1 1.30% 50.00%	0.00% 0.00%
Val 5	23 5.69%	2 8.70% 9.52%	2 8.70% 5.13%	4 17.39% 30.77%	3 13.04% 10.71%	3 13.04% 5.77%	5 21.74% 3.50%	1 4.35% 1.89%	1 4.35% 3.57%	0.00% 0.00%	2 8.70% 8.70%	0.00% 0.00%	0.00% 0.00%
	404	21 5.20%	39 9.65%	13 3.22%	28 6.93%	52 12.87%	143 35.40%	53 13.12%	28 6.93%	1 0.25%	23 5.69%	2 0.50%	1 0.25%

Variable traitee:MATIERES ORGANIQUES
Libele:DISPOSEZ-VOUS DE DECHETS VEGETAUX, ALIMENTAIRES ET AUTRES

Croisement sur:MATIERES ORGANIQUES
Libele:# STRATE HABITAT - LAVALIN

	Total	Val 1	Val 2	Val 3	Val 4	Val 5	Val 6	Val 7	Val 8	Val 9	Val 10	Val 11	Val 12
Val 1	8		2			4		2					
	1.98%	0.00%	25.00%	0.00%	0.00%	50.00%	0.00%	25.00%	0.00%	0.00%	0.00%	0.00%	0.00%
		0.00%	5.13%	0.00%	0.00%	7.69%	0.00%	3.77%	0.00%	0.00%	0.00%	0.00%	0.00%
Val 2	396	21	37	13	28	48	143	51	28	1	23	2	1
	98.02%	5.30%	9.34%	3.28%	7.07%	12.12%	36.11%	12.88%	7.07%	0.25%	5.81%	0.51%	0.25%
		100%	94.87%	100%	100%	92.31%	100%	96.23%	100%	100%	100%	100%	100%
	404	21	39	13	28	52	143	53	28	1	23	2	1
		5.20%	9.65%	3.22%	6.93%	12.87%	35.40%	13.12%	6.93%	0.25%	5.69%	0.50%	0.25%

Variable traitee:JETER PLASTIQUE
Libele:AVEZ-VOUS L'HABITUDE DE JETER DES MATIERES NON ORGANIQUES (PLASTIQUE)

Croisement sur:JETER PLASTIQUE
Libele:# STRATE HABITAT - LAVALIN

	Total	Val 1	Val 2	Val 3	Val 4	Val 5	Val 6	Val 7	Val 8	Val 9	Val 10	Val 11	Val 12
Val 1	79 19.55% 	2 2.53% 9.52%	5 6.33% 12.82%	2 2.53% 15.38%	1 1.27% 3.57%	15 18.99% 28.85%	32 40.51% 22.38%	10 12.66% 18.87%	5 6.33% 17.86%	 0.00% 0.00%	6 7.59% 26.09%	 0.00% 0.00%	1 1.27% 100%
Val 2	325 80.45% 	19 5.85% 90.48%	34 10.46% 87.18%	11 3.38% 84.62%	27 8.31% 96.43%	37 11.38% 71.15%	111 34.15% 77.62%	43 13.23% 81.13%	23 7.08% 82.14%	1 0.31% 100%	17 5.23% 73.91%	2 0.62% 100%	 0.00% 0.00%
	404	21 5.20%	39 9.65%	13 3.22%	28 6.93%	52 12.87%	143 35.40%	53 13.12%	28 6.93%	1 0.25%	23 5.69%	2 0.50%	1 0.25%

Variable traitee:JETER METAL
Libele:AVEZ-VOUS L'HABITUDE DE JETER DES MATIERES NON-ORGANIQUES
(METAL, BOITE, CONSERVE)

Croisement sur:JETER METAL
Libele:# STRATE HABITAT - LAVALIN

	Total	Val 1	Val 2	Val 3	Val 4	Val 5	Val 6	Val 7	Val 8	Val 9	Val 10	Val 11	Val 12
Val 1	48 11.88%	3 6.25% 14.29%	4 8.33% 10.26%	4 8.33% 30.77%	2 4.17% 7.14%	7 14.58% 13.46%	18 37.50% 12.59%	5 10.42% 9.43%	1 2.08% 3.57%	 0.00% 0.00%	4 8.33% 17.39%	 0.00% 0.00%	 0.00% 0.00%
Val 2	356 88.12%	18 5.06% 85.71%	35 9.83% 89.74%	9 2.53% 69.23%	26 7.30% 92.86%	45 12.64% 86.54%	125 35.11% 87.41%	48 13.48% 90.57%	27 7.58% 96.43%	1 0.28% 100%	19 5.34% 82.61%	2 0.56% 100%	1 0.28% 100%
	404	21 5.20%	39 9.65%	13 3.22%	28 6.93%	52 12.87%	143 35.40%	53 13.12%	28 6.93%	1 0.25%	23 5.69%	2 0.50%	1 0.25%

Variable traitee:JETER CARTON
Libele:AVEZ-VOUS L'HABITUDE DE JETER DES CARTONS

Croisement sur:JETER CARTON
Libele:# STRATE HABITAT - LAVALIN

	Total	Val 1	Val 2	Val 3	Val 4	Val 5	Val 6	Val 7	Val 8	Val 9	Val 10	Val 11	Val 12
Val 1	111	5	6	4	11	18	38	13	5	1	10		
	27.48%	4.50%	5.41%	3.60%	9.91%	16.22%	34.23%	11.71%	4.50%	0.90%	9.01%	0.00%	0.00%
		23.81%	15.38%	30.77%	39.29%	34.62%	26.57%	24.53%	17.86%	100%	43.48%	0.00%	0.00%
Val 2	293	16	33	9	17	34	105	40	23		13	2	1
	72.52%	5.46%	11.26%	3.07%	5.80%	11.60%	35.84%	13.65%	7.85%	0.00%	4.44%	0.68%	0.34%
		76.19%	84.62%	69.23%	60.71%	65.38%	73.43%	75.47%	82.14%	0.00%	56.52%	100%	100%
	404	21	39	13	28	52	143	53	28	1	23	2	1
		5.20%	9.65%	3.22%	6.93%	12.87%	35.40%	13.12%	6.93%	0.25%	5.69%	0.50%	0.25%

Variable traitee:JETER BOUTEILLES
Libele:AVEZ-VOUS L'HABITUDE DE JETER DES BOUTEILLES ?

Croisement sur:JETER BOUTEILLES
Libele:# STRATE HABITAT - LAVALIN

	Total	Val 1	Val 2	Val 3	Val 4	Val 5	Val 6	Val 7	Val 8	Val 9	Val 10	Val 11	Val 12
Val 1	143	9	10	7	8	23	55	17	7		6		1
	35.40%	6.29%	6.99%	4.90%	5.59%	16.08%	38.46%	11.89%	4.90%	0.00%	4.20%	0.00%	0.70%
		42.86%	25.64%	53.85%	28.57%	44.23%	38.46%	32.08%	25.00%	0.00%	26.09%	0.00%	100%
Val 2	261	12	29	6	20	29	88	36	21	1	17	2	
	64.60%	4.60%	11.11%	2.30%	7.66%	11.11%	33.72%	13.79%	8.05%	0.38%	6.51%	0.77%	0.00%
		57.14%	74.36%	46.15%	71.43%	55.77%	61.54%	67.92%	75.00%	100%	73.91%	100%	0.00%
	404	21	39	13	28	52	143	53	28	1	23	2	1
		5.20%	9.65%	3.22%	6.93%	12.87%	35.40%	13.12%	6.93%	0.25%	5.69%	0.50%	0.25%

Variable traitee:JETER AUTRE CHOSES
Libele:ET QUELLES AUTRES CHOSES ENCORE ?

Croisement sur:JETER AUTRE CHOSES
Libele:# STRATE HABITAT - LAVALIN

	Total	Val 1	Val 2	Val 3	Val 4	Val 5	Val 6	Val 7	Val 8	Val 9	Val 10	Val 11	Val 12
Val 1	17 4.21%	1 5.88% 4.76%	4 23.53% 10.26%	1 5.88% 7.69%	2 11.76% 7.14%	2 11.76% 3.85%	5 29.41% 3.50%	1 5.88% 1.89%	1 5.88% 3.57%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%
Val 2	3 0.74%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	1 33.33% 0.70%	0.00% 0.00%	2 66.67% 7.14%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%
Val 3	2 0.50%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	1 50.00% 0.70%	1 50.00% 1.89%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%
Val 4	382 94.55%	20 5.24% 95.24%	35 9.16% 89.74%	12 3.14% 92.31%	26 6.81% 92.86%	50 13.09% 96.15%	136 35.60% 95.10%	51 13.35% 96.23%	25 6.54% 89.29%	1 0.26% 100%	23 6.02% 100%	2 0.52% 100%	1 0.26% 100%
	404	21 5.20%	39 9.65%	13 3.22%	28 6.93%	52 12.87%	143 35.40%	53 13.12%	28 6.93%	1 0.25%	23 5.69%	2 0.50%	1 0.25%

Variable traitee:USAGE BOIS
Libele:AVEZ-VOUS L'HABITUDE UTILISER DES DECHETS A D'AUTRE USAGE (BOIS)

Croisement sur:USAGE BOIS
Libele:# STRATE HABITAT - LAVALIN

	Total	Val 1	Val 2	Val 3	Val 4	Val 5	Val 6	Val 7	Val 8	Val 9	Val 10	Val 11	Val 12
Val 1	346 85.64%	17 4.91% 80.95%	37 10.69% 94.87%	13 3.76% 100%	25 7.23% 89.29%	45 13.01% 86.54%	123 35.55% 86.01%	38 10.98% 71.70%	21 6.07% 75.00%	1 0.29% 100%	23 6.65% 100%	2 0.58% 100%	1 0.29% 100%
Val 2	58 14.36%	4 6.90% 19.05%	2 3.45% 5.13%	0.00% 0.00%	3 5.17% 10.71%	7 12.07% 13.46%	20 34.48% 13.99%	15 25.86% 28.30%	7 12.07% 25.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%
	404	21 5.20%	39 9.65%	13 3.22%	28 6.93%	52 12.87%	143 35.40%	53 13.12%	28 6.93%	1 0.25%	23 5.69%	2 0.50%	1 0.25%

Variable traitee:USAGE BOUTEILLES
Libele:AVEZ-VOUS L'HABITUDE UTILISER DES DECHETS A D'AUTRE USAGE (BOUTEILLES)

Croisement sur:USAGE BOUTEILLES
Libele:# STRATE HABITAT - LAVALIN

	Total	Val 1	Val 2	Val 3	Val 4	Val 5	Val 6	Val 7	Val 8	Val 9	Val 10	Val 11	Val 12
Val 1	135	7	12	4	12	18	45	20	9		7	1	
	33.42%	5.19%	8.89%	2.96%	8.89%	13.33%	33.33%	14.81%	6.67%	0.00%	5.19%	0.74%	0.00%
		33.33%	30.77%	30.77%	42.86%	34.62%	31.47%	37.74%	32.14%	0.00%	30.43%	50.00%	0.00%
Val 2	269	14	27	9	16	34	98	33	19	1	16	1	1
	66.58%	5.20%	10.04%	3.35%	5.95%	12.64%	36.43%	12.27%	7.06%	0.37%	5.95%	0.37%	0.37%
		66.67%	69.23%	69.23%	57.14%	65.38%	68.53%	62.26%	67.86%	100%	69.57%	50.00%	100%
	404	21	39	13	28	52	143	53	28	1	23	2	1
		5.20%	9.65%	3.22%	6.93%	12.87%	35.40%	13.12%	6.93%	0.25%	5.69%	0.50%	0.25%

Variable traitee:PELURES
Libele:AVEZ-VOUS L'HABITUDE UTILISER DECHETS A D'AUTRES USAGES
(PELURES D'ORANGE/CITRON/ET AUTRES) ?

Croisement sur:PELURES
Libele:# STRATE HABITAT - LAVALIN

	Total	Val 1	Val 2	Val 3	Val 4	Val 5	Val 6	Val 7	Val 8	Val 9	Val 10	Val 11	Val 12
Val 1	296	10	32	9	23	37	109	38	22	1	12	2	1
	73.27%	3.38%	10.81%	3.04%	7.77%	12.50%	36.82%	12.84%	7.43%	0.34%	4.05%	0.68%	0.34%
		47.62%	82.05%	69.23%	82.14%	71.15%	76.22%	71.70%	78.57%	100%	52.17%	100%	100%
Val 2	108	11	7	4	5	15	34	15	6		11		
	26.73%	10.19%	6.48%	3.70%	4.63%	13.89%	31.48%	13.89%	5.56%	0.00%	10.19%	0.00%	0.00%
		52.38%	17.95%	30.77%	17.86%	28.85%	23.78%	28.30%	21.43%	0.00%	47.83%	0.00%	0.00%
	404	21	39	13	28	52	143	53	28	1	23	2	1
		5.20%	9.65%	3.22%	6.93%	12.87%	35.40%	13.12%	6.93%	0.25%	5.69%	0.50%	0.25%

Variable traitee:GALLON PLASTIQUE
Libele:AVEZ-VOUS L'HABITUDE UTILISER DES DECHETS A D'AUTRES USAGES
(GALLON PLASTIQUE)

Croisement sur:GALLON PLASTIQUE
Libele:# STRATE HABITAT - LAVALIN

	Total	Val 1	Val 2	Val 3	Val 4	Val 5	Val 6	Val 7	Val 8	Val 9	Val 10	Val 11	Val 12
Val 1	59 14.60%	2 3.39% 9.52%	6 10.17% 15.38%	3 5.08% 23.08%	 0.00% 0.00%	11 18.64% 21.15%	24 40.68% 16.78%	6 10.17% 11.32%	4 6.78% 14.29%	1 1.69% 100%	2 3.39% 8.70%	 0.00% 0.00%	 0.00% 0.00%
Val 2	345 85.40%	19 5.51% 90.48%	33 9.57% 84.62%	10 2.90% 76.92%	28 8.12% 100%	41 11.88% 78.85%	119 34.49% 83.22%	47 13.62% 88.68%	24 6.96% 85.71%	 0.00% 0.00%	21 6.09% 91.30%	2 0.58% 100%	1 0.29% 100%
	404	21 5.20%	39 9.65%	13 3.22%	28 6.93%	52 12.87%	143 35.40%	53 13.12%	28 6.93%	1 0.25%	23 5.69%	2 0.50%	1 0.25%

Variable traitee:BOITES DE FER BLANC
Libele:AVEZ-VOUS L'HABITUDE D'UTILISER DES DECHETS A D'AUTRES USAGE
(BOITES DE FER BLANC)

Croisement sur:BOITES DE FER BLANC
Libele:# STRATE HABITAT - LAVALIN

	Total	Val 1	Val 2	Val 3	Val 4	Val 5	Val 6	Val 7	Val 8	Val 9	Val 10	Val 11	Val 12
Val 1	206	7	23	10	12	25	78	26	11	1	10	2	1
	50.99%	3.40%	11.17%	4.85%	5.83%	12.14%	37.86%	12.62%	5.34%	0.49%	4.85%	0.97%	0.49%
		33.33%	58.97%	76.92%	42.86%	48.08%	54.55%	49.06%	39.29%	100%	43.48%	100%	100%
Val 2	198	14	16	3	16	27	65	27	17		13		
	49.01%	7.07%	8.08%	1.52%	8.08%	13.64%	32.83%	13.64%	8.59%	0.00%	6.57%	0.00%	0.00%
		66.67%	41.03%	23.08%	57.14%	51.92%	45.45%	50.94%	60.71%	0.00%	56.52%	0.00%	0.00%
	404	21	39	13	28	52	143	53	28	1	23	2	1
		5.20%	9.65%	3.22%	6.93%	12.87%	35.40%	13.12%	6.93%	0.25%	5.69%	0.50%	0.25%

Variable traitee:PEAUX D'ANIMAUX
Libele:AVEZ-VOUS L'HABITUDE D'UTILISER DES DECHETS A D'AUTRES USAGE
(PEAUX D'ANIMAUX)

Croisement sur:PEAUX D'ANIMAUX
Libele:# STRATE HABITAT - LAVALIN

	Total	Val 1	Val 2	Val 3	Val 4	Val 5	Val 6	Val 7	Val 8	Val 9	Val 10	Val 11	Val 12
Val 1	396 98.02%	20 5.05% 95.24%	38 9.60% 97.44%	13 3.28% 100%	26 6.57% 92.86%	51 12.88% 98.08%	142 35.86% 99.30%	52 13.13% 98.11%	27 6.82% 96.43%	1 0.25% 100%	23 5.81% 100%	2 0.51% 100%	1 0.25% 100%
Val 2	8 1.98%	1 12.50% 4.76%	1 12.50% 2.56%	 0.00% 0.00%	2 25.00% 7.14%	1 12.50% 1.92%	1 12.50% 0.70%	1 12.50% 1.89%	1 12.50% 3.57%	 0.00% 0.00%	 0.00% 0.00%	 0.00% 0.00%	 0.00% 0.00%
	404	21 5.20%	39 9.65%	13 3.22%	28 6.93%	52 12.87%	143 35.40%	53 13.12%	28 6.93%	1 0.25%	23 5.69%	2 0.50%	1 0.25%

Variable traitee:CARTON
Libele:AVEZ-VOUS L'HABITUDE D'UTILISER DES DECHETS A D'AUTRES USAGE
(CARTON)

Croisement sur:CARTON
Libele:# STRATE HABITAT - LAVALIN

	Total	Val 1	Val 2	Val 3	Val 4	Val 5	Val 6	Val 7	Val 8	Val 9	Val 10	Val 11	Val 12
Val 1	303	17	35	11	21	42	107	33	17	1	17	1	1
	75.00%	5.61%	11.55%	3.63%	6.93%	13.86%	35.31%	10.89%	5.61%	0.33%	5.61%	0.33%	0.33%
		80.95%	89.74%	84.62%	75.00%	80.77%	74.83%	62.26%	60.71%	100%	73.91%	50.00%	100%
Val 2	101	4	4	2	7	10	36	20	11		6	1	
	25.00%	3.96%	3.96%	1.98%	6.93%	9.90%	35.64%	19.80%	10.89%	0.00%	5.94%	0.99%	0.00%
		19.05%	10.26%	15.38%	25.00%	19.23%	25.17%	37.74%	39.29%	0.00%	26.09%	50.00%	0.00%
	404	21	39	13	28	52	143	53	28	1	23	2	1
		5.20%	9.65%	3.22%	6.93%	12.87%	35.40%	13.12%	6.93%	0.25%	5.69%	0.50%	0.25%

Variable traitee:COMPOST
Libele:AVEZ-VOUS L'HABITUDE D'UTILISER DECHETS D'AUTRES USAGES
(COMPOST)

Croisement sur:COMPOST
Libele:# STRATE HABITAT - LAVALIN

	Total	Val 1	Val 2	Val 3	Val 4	Val 5	Val 6	Val 7	Val 8	Val 9	Val 10	Val 11	Val 12
Val 1	394 97.52%	20 5.08% 95.24%	34 8.63% 87.18%	13 3.30% 100%	27 6.85% 96.43%	51 12.94% 98.08%	142 36.04% 99.30%	52 13.20% 98.11%	28 7.11% 100%	1 0.25% 100%	23 5.84% 100%	2 0.51% 100%	1 0.25% 100%
Val 2	10 2.48%	1 10.00% 4.76%	5 50.00% 12.82%	0.00% 0 00%	1 10.00% 3.57%	1 10.00% 1.92%	1 10.00% 0.70%	1 10.00% 1.89%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%
	404	21 5.20%	39 9.65%	13 3.22%	28 6.93%	52 12.87%	143 35.40%	53 13.12%	28 6.93%	1 0.25%	23 5.69%	2 0.50%	1 0.25%

Variable traitee:COMPOST/VOUS-MEME
Libele:FAITES-VOUS VOTRE COMPOST VOUS-MEME ?

Croisement sur:COMPOST/VOUS-MEME
Libele:# STRATE HABITAT - LAVALIN

	Total	Val 1	Val 2	Val 3	Val 4	Val 5	Val 6	Val 7	Val 8	Val 9	Val 10	Val 11	Val 12
Val 1	132		3		5	2	70	33	17			2	
	32.67%	0.00%	2.27%	0.00%	3.79%	1.52%	53.03%	25.00%	12.88%	0.00%	0.00%	1.52%	0.00%
		0.00%	7.69%	0.00%	17.86%	3.85%	48.95%	62.26%	60.71%	0.00%	0.00%	100%	0.00%
Val 2	5	1	2			1	1						
	1.24%	20.00%	40.00%	0.00%	0.00%	20.00%	20.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
		4.76%	5.13%	0.00%	0.00%	1.92%	0.70%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Val 3	267	20	34	13	23	49	72	20	11	1	23		1
	66.09%	7.49%	12.73%	4.87%	8.61%	18.35%	26.97%	7.49%	4.12%	0.37%	8.61%	0.00%	0.37%
		95.24%	87.18%	100%	82.14%	94.23%	50.35%	37.74%	39.29%	100%	100%	0.00%	100%
	404	21	39	13	28	52	143	53	28	1	23	2	1
		5.20%	9.65%	3.22%	6.93%	12.87%	35.40%	13.12%	6.93%	0.25%	5.69%	0.50%	0.25%

Variable traitee:ACHAT BOIS
Libele:AVEZ-VOUS DEJA ACHETE DES OBJETS OU DU MATERIEL RECYCLE ?
(BOIS)

Croisement sur:ACHAT BOIS
Libele:# STRATE HABITAT - LAVALIN

	Total	Val 1	Val 2	Val 3	Val 4	Val 5	Val 6	Val 7	Val 8	Val 9	Val 10	Val 11	Val 12
Val 1	373 92.33% 	21 5.63% 100%	36 9.65% 92.31%	12 3.22% 92.31%	28 7.51% 100%	47 12.60% 90.39%	131 35.12% 91.61%	47 12.60% 88.68%	24 6.43% 85.71%	1 0.27% 100%	23 6.17% 100%	2 0.54% 100%	1 0.27% 100%
Val 2	31 7.67% 	 0.00% 0.00%	3 9.68% 7.69%	1 3.23% 7.69%	 0.00% 0.00%	5 16.13% 9.62%	12 38.71% 8.39%	6 19.35% 11.32%	4 12.90% 14.29%	 0.00% 0.00%	 0.00% 0.00%	 0.00% 0.00%	 0.00% 0.00%
	404	21 5.20%	39 9.65%	13 3.22%	28 6.93%	52 12.87%	143 35.40%	53 13.12%	28 6.93%	1 0.25%	23 5.69%	2 0.50%	1 0.25%

Variable traitee:ACHAT BOUTEILLES
Libele:AVEZ-VOUS DEJA ACHETE DES OBJETS OU DU MATERIEL RECYCLE (BOUTEILLES)

Croisement sur:ACHAT BOUTEILLES
Libele:# STRATE HABITAT - LAVALIN

	Total	Val 1	Val 2	Val 3	Val 4	Val 5	Val 6	Val 7	Val 8	Val 9	Val 10	Val 11	Val 12
Val 1	261 64.60%	17 6.51% 80.95%	29 11.11% 74.36%	11 4.21% 84.62%	23 8.81% 82.14%	34 13.03% 65.38%	83 31.80% 58.04%	33 12.64% 62.26%	11 4.21% 39.29%	 0.00% 0.00%	18 6.90% 78.26%	2 0.77% 100%	 0.00% 0.00%
Val 2	143 35.40%	4 2.80% 19.05%	10 6.99% 25.64%	2 1.40% 15.38%	5 3.50% 17.86%	18 12.59% 34.62%	60 41.96% 41.96%	20 13.99% 37.74%	17 11.89% 60.71%	1 0.70% 100%	5 3.50% 21.74%	 0.00% 0.00%	1 0.70% 100%
	404	21 5.20%	39 9.65%	13 3.22%	28 6.93%	52 12.87%	143 35.40%	53 13.12%	28 6.93%	1 0.25%	23 5.69%	2 0.50%	1 0.25%

Variable traitee:PELURES D'ORANGES
Libele:AVEZ-VOUS DEJA ACHETE DES OBJETS OU DU MATERIEL RECYCLE
(PELURES D'ORANGES)

Croisement sur:PELURES D'ORANGES
Libele:# STRATE HABITAT - LAVALIN

	Total	Val 1	Val 2	Val 3	Val 4	Val 5	Val 6	Val 7	Val 8	Val 9	Val 10	Val 11	Val 12
Val 1	379 93.81%	17 4.49% 80.95%	36 9.50% 92.31%	12 3.17% 92.31%	26 6.86% 92.86%	47 12.40% 90.38%	139 36.68% 97.20%	48 12.66% 90.57%	27 7.12% 96.43%	1 0.26% 100%	23 6.07% 100%	2 0.53% 100%	1 0.26% 100%
Val 2	25 6.19%	4 16.00% 19.05%	3 12.00% 7.69%	1 4.00% 7.69%	2 8.00% 7.14%	5 20.00% 9.62%	4 16.00% 2.80%	5 20.00% 9.43%	1 4.00% 3.57%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%
	404	21 5.20%	39 9.65%	13 3.22%	28 6.93%	52 12.87%	143 35.40%	53 13.12%	28 6.93%	1 0.25%	23 5.69%	2 0.50%	1 0.25%

Variable traitee:ACHAT FER RECYCLE
Libele:AVEZ-VOUS DEJA ACHETE DES OBJETS OU DU MATERIEL RECYCLE
(BOITES EN FER BLANC)

Croisement sur:ACHAT FER RECYCLE
Libele:# STRATE HABITAT - LAVALIN

	Total	Val 1	Val 2	Val 3	Val 4	Val 5	Val 6	Val 7	Val 8	Val 9	Val 10	Val 11	Val 12
Val 1	274	11	31	11	20	29	107	33	14	1	14	2	1
	67.82%	4.01%	11.31%	4.01%	7.30%	10.58%	39.05%	12.04%	5.11%	0.36%	5.11%	0.73%	0.36%
		52.38%	79.49%	84.62%	71.43%	55.77%	74.83%	62.26%	50.00%	100%	60.87%	100%	100%
Val 2	130	10	8	2	8	23	36	20	14		9		
	32.18%	7.69%	6.15%	1.54%	6.15%	17.69%	27.69%	15.38%	10.77%	0.00%	6.92%	0.00%	0.00%
		47.62%	20.51%	15.38%	28.57%	44.23%	25.17%	37.74%	50.00%	0.00%	39.13%	0.00%	0.00%
	404	21	39	13	28	52	143	53	28	1	23	2	1
		5.20%	9.65%	3.22%	6.93%	12.87%	35.40%	13.12%	6.93%	0.25%	5.69%	0.50%	0.25%

Variable traitee:ACHAT D'OBJETS
Libele:AVEZ-VOUS DEJA ACHETE DES OBJETS OU DU MATERIEL RECYCLE
(GALLONS EN PLASTIQUE)

Croisement sur:ACHAT D'OBJETS
Libele:# STRATE HABITAT - LAVALIN

	Total	Val 1	Val 2	Val 3	Val 4	Val 5	Val 6	Val 7	Val 8	Val 9	Val 10	Val 11	Val 12
Val 1	172	8	23	11	13	23	60	16	6		11	1	
	42.57%	4.65%	13.37%	6.40%	7.56%	13.37%	34.88%	9.30%	3.49%	0.00%	6.40%	0.58%	0.00%
		38.10%	58.97%	84.62%	46.43%	44.23%	41.96%	30.19%	21.43%	0.00%	47.83%	50.00%	0.00%
Val 2	232	13	16	2	15	29	83	37	22	1	12	1	1
	57.43%	5.60%	6.90%	0.86%	6.47%	12.50%	35.78%	15.95%	9.48%	0.43%	5.17%	0.43%	0.43%
		61.90%	41.03%	15.38%	53.57%	55.77%	58.04%	69.81%	78.57%	100%	52.17%	50.00%	100%
	404	21	39	13	28	52	143	53	28	1	23	2	1
		5.20%	9.65%	3.22%	6.93%	12.87%	35.40%	13.12%	6.93%	0.25%	5.69%	0.50%	0.25%

Variable traitee:ACHATS DES OBJETS
Libele:AVEZ-VOUS DEJA ACHETE DES OBJETS OU DU MATERIEL RECYCLE
(PEAUX D'ANIMAUX)

Croisement sur:ACHATS DES OBJETS
Libele:# STRATE HABITAT - LAVALIN

	Total	Val 1	Val 2	Val 3	Val 4	Val 5	Val 6	Val 7	Val 8	Val 9	Val 10	Val 11	Val 12
Val 1	396 98.02% 	21 5.30% 100%	37 9.34% 94.87%	13 3.28% 100%	28 7.07% 100%	51 12.88% 98.08%	141 35.61% 98.60%	52 13.13% 98.11%	26 6.57% 92.86%	1 0.25% 100%	23 5.81% 100%	2 0.51% 100%	1 0.25% 100%
Val 2	8 1.98% 	 0.00% 0.00%	2 25.00% 5.13%	 0.00% 0.00%	 0.00% 0.00%	1 12.50% 1.92%	2 25.00% 1.40%	1 12.50% 1.89%	2 25.00% 7.14%	 0.00% 0.00%	 0.00% 0.00%	 0.00% 0.00%	 0.00% 0.00%
	404	21 5.20%	39 9.65%	13 3.22%	28 6.93%	52 12.87%	143 35.40%	53 13.12%	28 6.93%	1 0.25%	23 5.69%	2 0.50%	1 0.25%

Variable traitee:OBJETS CARTON
Libele:AVEZ-VOUS DEJA ACHETE DES OBJETS OU DU MATERIEL RECYCLE?
(CARTON)

Croisement sur:OBJETS CARTON
Libele:$ STRATE HABITAT - LAVALIN

	Total	Val 1	Val 2	Val 3	Val 4	Val 5	Val 6	Val 7	Val 8	Val 9	Val 10	Val 11	Val 12
Val 1	350 86.63% 	18 5.14% 85.71%	37 10.57% 94.87%	13 3.71% 100%	26 7.43% 92.86%	42 12.00% 80.77%	123 35.14% 86.01%	42 12.00% 79.25%	22 6.29% 78.57%	1 0.29% 100%	23 6.57% 100%	2 0.57% 100%	1 0.29% 100%
Val 2	54 13.37% 	3 5.56% 14.29%	2 3.70% 5.13%	 0.00% 0.00%	2 3.70% 7.14%	10 18.52% 19.23%	20 37.04% 13.99%	11 20.37% 20.75%	6 11.11% 21.43%	 0.00% 0.00%	 0.00% 0.00%	 0.00% 0.00%	 0.00% 0.00%
	404	21 5.20%	39 9.65%	13 3.22%	28 6.93%	52 12.87%	143 35.40%	53 13.12%	28 6.93%	1 0.25%	23 5.69%	2 0.50%	1 0.25%

Variable traitee:ACHATS TERRE NOIRE
Libele:SAVEZ-VOUS ACHETER DE LA TERRE NOIRE ?

Croisement sur:ACHATS TERRE NOIRE
Libele:# STRATE HABITAT - LAVALIN

	Total	Val 1	Val 2	Val 3	Val 4	Val 5	Val 6	Val 7	Val 8	Val 9	Val 10	Val 11	Val 12
Val 1	371	16	30	9	24	49	137	53	26	1	23	2	1
	91.83%	4.31%	8.09%	2.43%	6.47%	13.21%	36.93%	14.29%	7.01%	0.27%	6.20%	0.54%	0.27%
		76.19%	76.92%	69.23%	85.71%	94.23%	95.80%	100%	92.86%	100%	100%	100%	100%
Val 2	33	5	9	4	4	3	6		2				
	8.17%	15.15%	27.27%	12.12%	12.12%	9.09%	18.18%	0.00%	6.06%	0.00%	0.00%	0.00%	0.00%
		23.81%	23.08%	30.77%	14.29%	5.77%	4.20%	0.00%	7.14%	0.00%	0.00%	0.00%	0.00%
	404	21	39	13	28	52	143	53	28	1	23	2	1
		5.20%	9.65%	3.22%	6.93%	12.87%	35.40%	13.12%	6.93%	0.25%	5.69%	0.50%	0.25%

Variable traitee:TERRE NOIRE/RAISON
Libele:POUR QUEL USAGE ACHETEZ-VOUS DE LA TERRE NOIRE ?

Croisement sur:TERRE NOIRE/RAISON
Libele:# STRATE HABITAT - LAVALIN

	Total	Val 1	Val 2	Val 3	Val 4	Val 5	Val 6	Val 7	Val 8	Val 9	Val 10	Val 11	Val 12
Val 1	33 8.17% 	5 15.15% 23.81%	9 27.27% 23.08%	4 12.12% 30.77%	4 12.12% 14.29%	3 9.09% 5.77%	6 18.18% 4.20%	 0.00% 0.00%	2 6.06% 7.14%	 0.00% 0.00%	 0.00% 0.00%	 0.00% 0.00%	 0.00% 0.00%
Val 2	0 0.00% 	 0.00% 0.00%	 0.00% 0.00%	 0.00% 0.00%	 0.00% 0.00%	 0.00% 0.00%	 0.00% 0.00%	 0.00% 0.00%	 0.00% 0.00%	 0.00% 0.00%	 0.00% 0.00%	 0.00% 0.00%	 0.00% 0.00%
Val 3	371 91.83% 	16 4.31% 76.19%	30 8.09% 76.92%	9 2.43% 69.23%	24 6.47% 85.71%	49 13.21% 94.23%	137 36.93% 95.80%	53 14.29% 100%	26 7.01% 92.86%	1 0.27% 100%	23 6.20% 100%	2 0.54% 100%	1 0.27% 100%
	404	21 5.20%	39 9.65%	13 3.22%	28 6.93%	52 12.87%	143 35.40%	53 13.12%	28 6.93%	1 0.25%	23 5.69%	2 0.50%	1 0.25%

Variable traitee:ACHAT D'ENGRAIS
Libele:SAVEZ-VOUS ACHETER DE L'ENGRAIS ?

Croiseaent sur:ACHAT D'ENGRAIS
Libele:# STRATE HABITAT - LAVALIN

	Total	Val 1	Val 2	Val 3	Val 4	Val 5	Val 6	Val 7	Val 8	Val 9	Val 10	Val 11	Val 12
Val 1	387 95.79%	19 4.91% 90.48%	33 8.53% 84.62%	12 3.10% 92.31%	25 6.46% 89.29%	52 13.44% 100%	139 35.92% 97.20%	53 13.70% 100%	27 6.98% 96.43%	1 0.26% 100%	23 5.94% 100%	2 0.52% 100%	1 0.26% 100%
Val 2	17 4.21%	2 11.76% 9.52%	6 35.29% 15.38%	1 5.88% 7.69%	3 17.65% 10.71%	0.00% 0.00%	4 23.53% 2.80%	0.00% 0.00%	1 5.88% 3.57%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%
	404	21 5.20%	39 9.65%	13 3.22%	28 6.93%	52 12.87%	143 35.40%	53 13.12%	28 6.93%	1 0.25%	23 5.69%	2 0.50%	1 0.25%

Variable traitee:ENGRAIS / RAISON
Libele:POUR QUELLE RAISON ACHETER-VOUS DE L'ENGRAIS ?

Croisement sur:ENGRAIS / RAISON
Libele:# STRATE HABITAT - LAVALIN

	Total	Val 1	Val 2	Val 3	Val 4	Val 5	Val 6	Val 7	Val 8	Val 9	Val 10	Val 11	Val 12
Val 1	17 4.21% 	2 11.76% 9.52%	6 35.29% 15.38%	1 5.88% 7.69%	3 17.65% 10.71%	 0.00% 0.00%	4 23.53% 2.80%	 0.00% 0.00%	1 5.88% 3.57%	 0.00% 0.00%	 0.00% 0.00%	 0.00% 0.00%	 0.00% 0.00%
Val 2	0 0.00% 	 0.00% 0.00%	 0.00% 0.00%	 0.00% 0.00%	 0.00% 0.00%	 0.00% 0.00%	 0.00% 0.00%	 0.00% 0.00%	 0.00% 0.00%	 0.00% 0.00%	 0.00% 0.00%	 0.00% 0.00%	 0.00% 0.00%
Val 3	387 95.79% 	19 4.91% 90.48%	33 8.53% 84.62%	12 3.10% 92.31%	25 6.46% 89.29%	52 13.44% 100%	139 35.92% 97.20%	53 13.70% 100%	27 6.98% 96.43%	1 0.26% 100%	23 5.94% 100%	2 0.52% 100%	1 0.26% 100%
	404	21 5.20%	39 9.65%	13 3.22%	28 6.93%	52 12.87%	143 35.40%	53 13.12%	28 6.93%	1 0.25%	23 5.69%	2 0.50%	1 0.25%

Variable traitee:FUMIER/RAISON
Libele:POUR QUEL USAGE ACHETEZ-VOUS DU FUMIER ?

Croisement sur:FUMIER/RAISON
Libele:# STRATE HABITAT - LAVALIN

	Total	Val 1	Val 2	Val 3	Val 4	Val 5	Val 6	Val 7	Val 8	Val 9	Val 10	Val 11	Val 12
Val 1	14 3.47% 	 0.00% 0.00%	10 71.43% 25.64%	1 7.14% 7.69%	2 14.29% 7.14%	1 7.14% 1.92%	 0.00% 0.00%	 0.00% 0.00%	 0.00% 0.00%	 0.00% 0.00%	 0.00% 0.00%	 0.00% 0.00%	 0.00% 0.00%
Val 2	0 0.00% 	 0.00% 0.00%	 0.00% 0.00%	 0.00% 0.00%	 0.00% 0.00%	 0.00% 0.00%	 0.00% 0.00%	 0.00% 0.00%	 0.00% 0.00%	 0.00% 0.00%	 0.00% 0.00%	 0.00% 0.00%	 0.00% 0.00%
Val 3	390 96.53% 	21 5.38% 100%	29 7.44% 74.36%	12 3.08% 92.31%	26 6.67% 92.86%	51 13.08% 98.08%	143 36.67% 100%	53 13.59% 100%	28 7.18% 100%	1 0.26% 100%	23 5.90% 100%	2 0.51% 100%	1 0.26% 100%
	404	21 5.20%	39 9.65%	13 3.22%	28 6.93%	52 12.87%	143 35.40%	53 13.12%	28 6.93%	1 0.25%	23 5.69%	2 0.50%	1 0.25%

Variable traitee:COMPOST/ACHAT
Libele:SAVEZ-VOUS ACHETER DU COMPOST

Croisement sur:COMPOST/ACHAT
Libele:# STRATE HABITAT - LAVALIN

	Total	Val 1	Val 2	Val 3	Val 4	Val 5	Val 6	Val 7	Val 8	Val 9	Val 10	Val 11	Val 12
Val 1	3 0.74% 	 0.00% 0.00%	3 100% 7.69%	 0.00% 0.00%	 0.00% 0.00%	 0.00% 0.00%	 0.00% 0.00%	 0.00% 0.00%	 0.00% 0.00%	 0.00% 0.00%	 0.00% 0.00%	 0.00% 0.00%	 0.00% 0.00%
Val 2	0 0.00% 	 0.00% 0.00%	 0.00% 0.00%	 0.00% 0.00%	 0.00% 0.00%	 0.00% 0.00%	 0.00% 0.00%	 0.00% 0.00%	 0.00% 0.00%	 0.00% 0.00%	 0.00% 0.00%	 0.00% 0.00%	 0.00% 0.00%
Val 3	401 99.26% 	21 5.24% 100%	36 8.98% 92.31%	13 3.24% 100%	28 6.98% 100%	52 12.97% 100%	143 35.66% 100%	53 13.22% 100%	28 6.98% 100%	1 0.25% 100%	23 5.74% 100%	2 0.50% 100%	1 0.25% 100%
	404	21 5.20%	39 9.65%	13 3.22%	28 6.93%	52 12.87%	143 35.40%	53 13.12%	28 6.93%	1 0.25%	23 5.69%	2 0.50%	1 0.25%

Variable traitee:RAMASSAGE / MAIRIE
Libele:EST-CE LA MAIRIE QUI COLLECTE LES ORDURES DANS VOTRE ZONE ?

Croisement sur:RAMASSAGE / MAIRIE
Libele:# STRATE HABITAT - LAVALIN

	Total	Val 1	Val 2	Val 3	Val 4	Val 5	Val 6	Val 7	Val 8	Val 9	Val 10	Val 11	Val 12
Val 1	15 3.71%		5 33.33% 12.82%	 0.00% 0.00%	 0.00% 0.00%	 0.00% 0.00%	5 33.33% 3.50%	1 6.67% 1.89%	 0.00% 0.00%	 0.00% 0.00%	4 26.67% 17.39%	 0.00% 0.00%	 0.00% 0.00%
Val 2	6 1.49%	 0.00% 0.00%	 0.00% 0.00%	 0.00% 0.00%	1 16.67% 3.57%	 0.00% 0.00%	3 50.00% 2.10%	1 16.67% 1.89%	 0.00% 0.00%	 0.00% 0.00%	1 16.67% 4.35%	 0.00% 0.00%	 0.00% 0.00%
Val 3	19 4.70%	1 5.26% 4.76%	5 26.32% 12.82%	 0.00% 0.00%	1 5.26% 3.57%	2 10.53% 3.85%	4 21.05% 2.80%	 0.00% 0.00%	 0.00% 0.00%	 0.00% 0.00%	6 31.58% 26.09%	 0.00% 0.00%	 0.00% 0.00%
Val 4	13 3.22%	 0.00% 0.00%	1 7.69% 2.56%	1 7.69% 7.69%	 0.00% 0.00%	 0.00% 0.00%	9 69.23% 6.29%	 0.00% 0.00%	1 7.69% 3.57%	1 7.69% 100%	 0.00% 0.00%	 0.00% 0.00%	 0.00% 0.00%
Val 5	2 0.50%	 0.00% 0.00%	 0.00% 0.00%	 0.00% 0.00%	 0.00% 0.00%	 0.00% 0.00%	1 50.00% 0.70%	 0.00% 0.00%	 0.00% 0.00%	 0.00% 0.00%	1 50.00% 4.35%	 0.00% 0.00%	 0.00% 0.00%
Val 6	40 9.90%	1 2.50% 4.76%	4 10.00% 10.26%	 0.00% 0.00%	3 7.50% 10.71%	4 10.00% 7.69%	12 30.00% 8.39%	6 15.00% 11.32%	10 25.00% 35.71%	 0.00% 0.00%	 0.00% 0.00%	 0.00% 0.00%	 0.00% 0.00%
Val 7	309 76.49%	19 6.15% 90.48%	24 7.77% 61.54%	12 3.88% 92.31%	23 7.44% 82.14%	46 14.89% 88.46%	109 35.28% 76.22%	45 14.56% 84.91%	17 5.50% 60.71%	 0.00% 0.00%	11 3.56% 47.83%	2 0.65% 100%	1 0.32% 100%
	404	21 5.20%	39 9.65%	13 3.22%	28 6.93%	52 12.87%	143 35.40%	53 13.12%	28 6.93%	1 0.25%	23 5.69%	2 0.50%	1 0.25%

Variable traitee:RAMASSAGE/SER.PRIVE
Libele:EST-CE UN SERVICE PRIVE QUI COLLECTE VOS ORDURES ?

Croisement sur:RAMASSAGE/SER.PRIVE
Libele:# STRATE HABITAT - LAVALIN

	Total	Val 1	Val 2	Val 3	Val 4	Val 5	Val 6	Val 7	Val 8	Val 9	Val 10	Val 11	Val 12
Val 1	6 1.49% 	 0.00% 0.00%	4 66.67% 10.26%	 0.00% 0.00%	1 16.67% 3.57%	 0.00% 0.00%	1 16.67% 0.70%	 0.00% 0.00%	 0.00% 0.00%	 0.00% 0.00%	 0.00% 0.00%	 0.00% 0.00%	 0.00% 0.00%
Val 2	10 2.48% 	 0.00% 0.00%	4 40.00% 10.26%	 0.00% 0.00%	 0.00% 0.00%	 0.00% 0.00%	3 30.00% 2.10%	1 10.00% 1.89%	2 20.00% 7.14%	 0.00% 0.00%	 0.00% 0.00%	 0.00% 0.00%	 0.00% 0.00%
Val 3	2 0.50% 	 0.00% 0.00%	1 50.00% 2.56%	 0.00% 0.00%	 0.00% 0.00%	 0.00% 0.00%	1 50.00% 0.70%	 0.00% 0.00%	 0.00% 0.00%	 0.00% 0.00%	 0.00% 0.00%	 0.00% 0.00%	 0.00% 0.00%
Val 4	0 0.00% 	 0.00% 0.00%	 0.00% 0.00%	 0.00% 0.00%	 0.00% 0.00%	 0.00% 0.00%	 0.00% 0.00%	 0.00% 0.00%	 0.00% 0.00%	 0.00% 0.00%	 0.00% 0.00%	 0.00% 0.00%	 0.00% 0.00%
Val 5	2 0.50% 	 0.00% 0.00%	1 50.00% 2.56%	 0.00% 0.00%	 0.00% 0.00%	 0.00% 0.00%	 0.00% 0.00%	1 50.00% 1.89%	 0.00% 0.00%	 0.00% 0.00%	 0.00% 0.00%	 0.00% 0.00%	 0.00% 0.00%
Val 6	0 0.00% 	 0.00% 0.00%	 0.00% 0.00%	 0.00% 0.00%	 0.00% 0.00%	 0.00% 0.00%	 0.00% 0.00%	 0.00% 0.00%	 0.00% 0.00%	 0.00% 0.00%	 0.00% 0.00%	 0.00% 0.00%	 0.00% 0.00%
Val 7	384 95.05% 	21 5.47% 100%	29 7.55% 74.36%	13 3.39% 100%	27 7.03% 96.43%	52 13.54% 100%	138 35.94% 96.50%	51 13.28% 96.23%	26 6.77% 92.86%	1 0.26% 100%	23 5.99% 100%	2 0.52% 100%	1 0.26% 100%
	404	21 5.20%	39 9.65%	13 3.22%	28 6.93%	52 12.87%	143 35.40%	53 13.12%	28 6.93%	1 0.25%	23 5.69%	2 0.50%	1 0.25%

Variable traitee:DISPOSEZ VOUS-MEME
Libele:DIPOSEZ-VOUS VOUS-MEME DES ORDURES MENAGERES ?

Croisement sur:DISPOSEZ VOUS-MEME
Libele:# STRATE HABITAT - LAVALIN

	Total	Val 1	Val 2	Val 3	Val 4	Val 5	Val 6	Val 7	Val 8	Val 9	Val 10	Val 11	Val 12
Val 1	88	6	10	2	7	5	37	12	7		1	1	
	21.78%	6.82%	11.36%	2.27%	7.95%	5.68%	42.05%	13.64%	7.95%	0.00%	1.14%	1.14%	0.00%
		28.57%	25.64%	15.38%	25.00%	9.62%	25.87%	22.64%	25.00%	0.00%	4.35%	50.00%	0.00%
Val 2	53	3	2	4		9	17	10	4		4		
	13.12%	5.66%	3.77%	7.55%	0.00%	16.98%	32.08%	18.87%	7.55%	0.00%	7.55%	0.00%	0.00%
		14.29%	5.13%	30.77%	0.00%	17.31%	11.89%	18.87%	14.29%	0.00%	17.39%	0.00%	0.00%
Val 3	69	2		1	7	8	28	10	9		3		1
	17.08%	2.90%	0.00%	1.45%	10.14%	11.59%	40.58%	14.49%	13.04%	0.00%	4.35%	0.00%	1.45%
		9.52%	0.00%	7.69%	25.00%	15.38%	19.58%	18.87%	32.14%	0.00%	13.04%	0.00%	100%
Val 4	41	1	2		1	10	15	9	2			1	
	10.15%	2.44%	4.88%	0.00%	2.44%	24.39%	36.59%	21.95%	4.88%	0.00%	0.00%	2.44%	0.00%
		4.76%	5.13%	0.00%	3.57%	19.23%	10.49%	16.98%	7.14%	0.00%	0.00%	50.00%	0.00%
Val 5	13			2	5	1	1	2	1		1		
	3.22%	0.00%	0.00%	15.38%	38.46%	7.69%	7.69%	15.38%	7.69%	0.00%	7.69%	0.00%	0.00%
		0.00%	0.00%	15.38%	17.86%	1.92%	0.70%	3.77%	3.57%	0.00%	4.35%	0.00%	0.00%
Val 6	7					4	3						
	1.73%	0.00%	0.00%	0.00%	0.00%	57.14%	42.86%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
		0.00%	0.00%	0.00%	0.00%	7.69%	2.10%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Val 7	133	9	25	4	8	15	42	10	5	1	14		
	32.92%	6.77%	18.80%	3.01%	6.02%	11.28%	31.58%	7.52%	3.76%	0.75%	10.53%	0.00%	0.00%
		42.86%	64.10%	30.77%	28.57%	28.85%	29.37%	18.87%	17.86%	100%	60.87%	0.00%	0.00%
	404	21	39	13	28	52	143	53	28	1	23	2	1
		5.20%	9.65%	3.22%	6.93%	12.87%	35.40%	13.12%	6.93%	0.25%	5.69%	0.50%	0.25%

Variable traitee:JOBBEUR/AUTRE
Libele:EST-CE UNE PERSONNE AUTRE PARTICULIERE QUI JETE LES FATRAS ?

Croisecent sur:JOBBEUR/AUTRE
Libele:# STRATE HABITAT - LAVALIN

	Total	Val 1	Val 2	Val 3	Val 4	Val 5	Val 6	Val 7	Val 8	Val 9	Val 10	Val 11	Val 12
Val 1	13	3	2			3	5						
	3.22%	23.08%	15.38%	0.00%	0.00%	23.08%	38.46%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
		14.29%	5.13%	0.00%	0.00%	5.77%	3.50%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Val 2	18	3	2			4	6	1	1		1		
	4.46%	16.67%	11.11%	0.00%	0.00%	22.22%	33.33%	5.56%	5.56%	0.00%	5.56%	0.00%	0.00%
		14.29%	5.13%	0.00%	0.00%	7.69%	4.20%	1.89%	3.57%	0.00%	4.35%	0.00%	0.00%
Val 3	18	4	1	2	2	1	3	2			3		
	4.46%	22.22%	5.56%	11.11%	11.11%	5.56%	16.67%	11.11%	0.00%	0.00%	16.67%	0.00%	0.00%
		19.05%	2.56%	15.38%	7.14%	1.92%	2.10%	3.77%	0.00%	0.00%	13.04%	0.00%	0.00%
Val 4	19	1	5	1	1	3	5	1	1		1		
	4.70%	5.26%	26.32%	5.26%	5.26%	15.79%	26.32%	5.26%	5.26%	0.00%	5.26%	0.00%	0.00%
		4.76%	12.82%	7.69%	3.57%	5.77%	3.50%	1.89%	3.57%	0.00%	4.35%	0.00%	0.00%
Val 5	6		1	1		1	2	1					
	1.49%	0.00%	16.67%	16.67%	0.00%	16.67%	33.33%	16.67%	0.00%	0.00%	0.00%	0.00%	0.00%
		0.00%	2.56%	7.69%	0.00%	1.92%	1.40%	1.89%	0.00%	0.00%	0.00%	0.00%	0.00%
Val 6	7	3				2	1	1					
	1.73%	42.86%	0.00%	0.00%	0.00%	28.57%	14.29%	14.29%	0.00%	0.00%	0.00%	0.00%	0.00%
		14.29%	0.00%	0.00%	0.00%	3.85%	0.70%	1.89%	0.00%	0.00%	0.00%	0.00%	0.00%
Val 7	323	7	28	9	25	38	121	47	26	1	18	2	1
	79.95%	2.17%	8.67%	2.79%	7.74%	11.76%	37.46%	14.55%	8.05%	0.31%	5.57%	0.62%	0.31%
		33.33%	71.79%	69.23%	89.29%	73.08%	84.62%	88.68%	92.86%	100%	78.26%	100%	100%
	404	21	39	13	28	52	143	53	28	1	23	2	1
		5.20%	9.65%	3.22%	6.93%	12.87%	35.40%	13.12%	6.93%	0.25%	5.69%	0.50%	0.25%

Variable traitee:SERV.PRIVE/COMBIEN
Libele:SI C'EST UN SERVICE PRIVE, COMBIEN PAYEZ-VOUS PAR MOIS ?

Croisement sur:SERV.PRIVE/COMBIEN
Libele:# STRATE HABITAT - LAVALIN

	Total	Val 1	Val 2	Val 3	Val 4	Val 5	Val 6	Val 7	Val 8	Val 9	Val 10	Val 11	Val 12
Val 1	1 0.25%	0.00% 0.00%	1 100% 2.56%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%
Val 2	2 0.50%	0.00% 0.00%	2 100% 5.13%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%
Val 3	1 0.25%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	1 100% 1.92%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%
Val 4	2 0.50%	0.00% 0.00%	1 50.00% 2.56%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	1 50.00% 0.70%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%
Val 5	0 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%
Val 6	0 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%
Val 7	0 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%
Val 8	398 98.51%	21 5.28% 100%	35 8.79% 89.74%	13 3.27% 100%	28 7.04% 100%	51 12.81% 98.08%	142 35.68% 99.30%	53 13.32% 100%	28 7.04% 100%	1 0.25% 100%	23 5.78% 100%	2 0.50% 100%	1 0.25% 100%
	404	21 5.20%	39 9.65%	13 3.22%	28 6.93%	52 12.87%	143 35.40%	53 13.12%	28 6.93%	1 0.25%	23 5.69%	2 0.50%	1 0.25%

Variable traitee:S. PRIVE/AVANTAGE 1
Libele:(SI C'EST UN SERVICE PRIVE) QUEL AVANTAGE VOUS PROCURE-IL ?

Croisement sur:S. PRIVE/AVANTAGE 1
Libele:# STRATE HABITAT - LAVALIN

	Total	Val 1	Val 2	Val 3	Val 4	Val 5	Val 6	Val 7	Val 8	Val 9	Val 10	Val 11	Val 12
Val 1	6 1.49%	 0.00% 0.00%	6 100% 15.38%	 0.00% 0.00%	 0.00% 0.00%	 0.00% 0.00%	 0.00% 0.00%	 0.00% 0.00%	 0.00% 0.00%	 0.00% 0.00%	 0.00% 0.00%	 0.00% 0.00%	 0.00% 0.00%
Val 2	0 0.00%	 0.00% 0.00%	 0.00% 0.00%	 0.00% 0.00%	 0.00% 0.00%	 0.00% 0.00%	 0.00% 0.00%	 0.00% 0.00%	 0.00% 0.00%	 0.00% 0.00%	 0.00% 0.00%	 0.00% 0.00%	 0.00% 0.00%
Val 3	0 0.00%	 0.00% 0.00%	 0.00% 0.00%	 0.00% 0.00%	 0.00% 0.00%	 0.00% 0.00%	 0.00% 0.00%	 0.00% 0.00%	 0.00% 0.00%	 0.00% 0.00%	 0.00% 0.00%	 0.00% 0.00%	 0.00% 0.00%
Val 4	398 98.51%	21 5.28% 100%	33 8.29% 84.62%	13 3.27% 100%	28 7.04% 100%	52 13.07% 100%	143 35.93% 100%	53 13.32% 100%	28 7.04% 100%	1 0.25% 100%	23 5.78% 100%	2 0.50% 100%	1 0.25% 100%
	404	21 5.20%	39 9.65%	13 3.22%	28 6.93%	52 12.87%	143 35.40%	53 13.12%	28 6.93%	1 0.25%	23 5.69%	2 0.50%	1 0.25%

Variable traitee:PRIVE/AVANTAGE 2
Libele:(SI C'EST UN SERVICE PRIVE) QUEL AVANTAGE PROCURE-T-IL ?

Croisement sur:PRIVE/AVANTAGE 2
Libele:# STRATE HABITAT - LAVALIN

	Total	Val 1	Val 2	Val 3	Val 4	Val 5	Val 6	Val 7	Val 8	Val 9	Val 10	Val 11	Val 12
Val 1	0 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%
Val 2	0 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%
Val 3	0 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%
Val 4	404 100%	21 5.20% 100%	39 9.65% 100%	13 3.22% 100%	28 6.93% 100%	52 12.87% 100%	143 35.40% 100%	53 13.12% 100%	28 6.93% 100%	1 0.25% 100%	23 5.69% 100%	2 0.50% 100%	1 0.25% 100%
	404	21 5.20%	39 9.65%	13 3.22%	28 6.93%	52 12.87%	143 35.40%	53 13.12%	28 6.93%	1 0.25%	23 5.69%	2 0.50%	1 0.25%

Variable traitee:PRIVE/AVANTAGE 3
Libele:(SI C'EST UN SERVICE PRIVE) QUEL AVANTAGE PROCURE-T-IL ?

Croisement sur:PRIVE/AVANTAGE 3
Libele:# STRATE HABITAT - LAVALIN

	Total	Val 1	Val 2	Val 3	Val 4	Val 5	Val 6	Val 7	Val 8	Val 9	Val 10	Val 11	Val 12
Val 1	0 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%
Val 2	0 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%
Val 3	0 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%
Val 4	404 100%	21 5.20% 100%	39 9.65% 100%	13 3.22% 100%	28 6.93% 100%	52 12.87% 100%	143 35.40% 100%	53 13.12% 100%	28 6.93% 100%	1 0.25% 100%	23 5.69% 100%	2 0.50% 100%	1 0.25% 100%
	404	21 5.20%	39 9.65%	13 3.22%	28 6.93%	52 12.87%	143 35.40%	53 13.12%	28 6.93%	1 0.25%	23 5.69%	2 0.50%	1 0.25%

Variable traitee:PRIVE/INCONVENIENT 1
Libele:(SI C'EST UN SERVICE PRIVE) QUEL INCONVENIENT A-T-IL ?

Croisement sur:PRIVE/INCONVENIENT 1
Libele:# STRATE HABITAT - LAVALIN

	Total	Val 1	Val 2	Val 3	Val 4	Val 5	Val 6	Val 7	Val 8	Val 9	Val 10	Val 11	Val 12
Val 1	9		1				1		7				
	2.23%	0.00%	11.11%	0.00%	0.00%	0.00%	11.11%	0.00%	77.78%	0.00%	0.00%	0.00%	0.00%
		0.00%	2.56%	0.00%	0.00%	0.00%	0.70%	0.00%	25.00%	0.00%	0.00%	0.00%	0.00%
Val 2	0												
	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
		0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Val 3	0												
	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
		0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Val 4	395	21	38	13	28	52	142	53	21	1	23	2	1
	97.77%	5.32%	9.62%	3.29%	7.09%	13.16%	35.95%	13.42%	5.32%	0.25%	5.82%	0.51%	0.25%
		100%	97.44%	100%	100%	100%	99.30%	100%	75.00%	100%	100%	100%	100%
	404	21	39	13	28	52	143	53	28	1	23	2	1
		5.20%	9.65%	3.22%	6.93%	12.87%	35.40%	13.12%	6.93%	0.25%	5.69%	0.50%	0.25%

Variable traitee:PRIVE/INCONVENIENT 2
Libele:(SI C'EST UN SERVICE PRIVE) QUEL INCONVENIENT A-T-IL ?

Croisement sur:PRIVE/INCONVENIENT 2
Libele:# STRATE HABITAT - LAVALIN

	Total	Val 1	Val 2	Val 3	Val 4	Val 5	Val 6	Val 7	Val 8	Val 9	Val 10	Val 11	Val 12
Val 1	1 0.25% 	 0.00% 0.00%	1 100% 2.56%	 0.00% 0.00%	 0.00% 0.00%	 0.00% 0.00%	 0.00% 0.00%	 0.00% 0.00%	 0.00% 0.00%	 0.00% 0.00%	 0.00% 0.00%	 0.00% 0.00%	 0.00% 0.00%
Val 2	0 0.00% 	 0.00% 0.00%	 0.00% 0.00%	 0.00% 0.00%	 0.00% 0.00%	 0.00% 0.00%	 0.00% 0.00%	 0.00% 0.00%	 0.00% 0.00%	 0.00% 0.00%	 0.00% 0.00%	 0.00% 0.00%	 0.00% 0.00%
Val 3	0 0.00% 	 0.00% 0.00%	 0.00% 0.00%	 0.00% 0.00%	 0.00% 0.00%	 0.00% 0.00%	 0.00% 0.00%	 0.00% 0.00%	 0.00% 0.00%	 0.00% 0.00%	- 0.00% 0.00%	 0.00% 0.00%	 0.00% 0.00%
Val 4	403 99.75% 	21 5.21% 100%	38 9.43% 97.44%	13 3.23% 100%	28 6.95% 100%	52 12.90% 100%	143 35.48% 100%	53 13.15% 100%	28 6.95% 100%	1 0.25% 100%	23 5.71% 100%	2 0.50% 100%	1 0.25% 100%
	404	21 5.20%	39 9.65%	13 3.22%	28 6.93%	52 12.87%	143 35.40%	53 13.12%	28 6.93%	1 0.25%	23 5.69%	2 0.50%	1 0.25%

Variable traitee:PRIVE/INCONVENIENT 3
Libele:(SI C'EST UN SERVICE PRIVE) QUEL INCONVENIENT A-T-IL ?

Croisement sur:PRIVE/INCONVENIENT 3
Libele:$ STRATE HABITAT - LAVALIN

	Total	Val 1	Val 2	Val 3	Val 4	Val 5	Val 6	Val 7	Val 8	Val 9	Val 10	Val 11	Val 12
Val 1	0 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%
Val 2	0 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%
Val 3	0 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%
Val 4	404 100%	21 5.20% 100%	39 9.65% 100%	13 3.22% 100%	28 6.93% 100%	52 12.87% 100%	143 35.40% 100%	53 13.12% 100%	28 6.93% 100%	1 0.25% 100%	23 5.69% 100%	2 0.50% 100%	1 0.25% 100%
	404	21 5.20%	39 9.65%	13 3.22%	28 6.93%	52 12.87%	143 35.40%	53 13.12%	28 6.93%	1 0.25%	23 5.69%	2 0.50%	1 0.25%

Variable traitee:JOBBEUR/PAIEMENT
Libele:(SI C'EST UN JOBBEUR) COMBIEN LE PAYEZ-VOUS ?

Croisement sur:JOBBEUR/PAIEMENT
Libele:# STRATE HABITAT - LAVALIN

	Total	Val 1	Val 2	Val 3	Val 4	Val 5	Val 6	Val 7	Val 8	Val 9	Val 10	Val 11	Val 12
Val 1	4 0.99% 	 0.00% 0.00%	 0.00% 0.00%	 0.00% 0.00%	1 25.00% 3.57%	2 50.00% 3.85%	1 25.00% 0.70%	 0.00% 0.00%	 0.00% 0.00%	 0.00% 0.00%	 0.00% 0.00%	 0.00% 0.00%	 0.00% 0.00%
Val 2	9 2.23% 	 0.00% 0.00%	2 22.22% 5.13%	 0.00% 0.00%	 0.00% 0.00%	2 22.22% 3.85%	2 22.22% 1.40%	3 33.33% 5.66%	 0.00% 0.00%	 0.00% 0.00%	 0.00% 0.00%	 0.00% 0.00%	 0.00% 0.00%
Val 3	10 2.48% 	2 20.00% 9.52%	 0.00% 0.00%	 0.00% 0.00%	2 20.00% 7.14%	3 30.00% 5.77%	3 30.00% 2.10%	 0.00% 0.00%	 0.00% 0.00%	 0.00% 0.00%	 0.00% 0.00%	 0.00% 0.00%	 0.00% 0.00%
Val 4	4 0.99% 	 0.00% 0.00%	2 50.00% 5.13%	 0.00% 0.00%	 0.00% 0.00%	 0.00% 0.00%	1 25.00% 0.70%	 0.00% 0.00%	 0.00% 0.00%	 0.00% 0.00%	1 25.00% 4.35%	 0.00% 0.00%	 0.00% 0.00%
Val 5	24 5.94% 	5 20.83% 23.81%	3 12.50% 7.69%	 0.00% 0.00%	 0.00% 0.00%	3 12.50% 5.77%	9 37.50% 6.29%	 0.00% 0.00%	1 4.17% 3.57%	 0.00% 0.00%	3 12.50% 13.04%	 0.00% 0.00%	 0.00% 0.00%
Val 6	14 3.47% 	2 14.29% 9.52%	3 21.43% 7.69%	1 7.14% 7.69%	 0.00% 0.00%	3 21.43% 5.77%	4 28.57% 2.80%	1 7.14% 1.8[illegible]%	 0.00% 0.00%	 0.00% 0.00%	 0.00% 0.00%	 0.00% 0.00%	 0.00% 0.00%
Val 7	14 3.47% 	4 28.57% 19.05%	2 14.29% 5.13%	2 14.29% 15.38%	3 21.43% 10.71%	1 7.14% 1.92%	1 7.14% 0.70%	1 7.14% [illegible].89%	 0.00% 0.00%	 0.00% 0.00%	 0.00% 0.00%	 0.00% 0.00%	 0.00% 0.00%
Val 8	1 0.25% 	1 100% 4.76%	 0.00% 0.00%	 0.00% 0.00%	 0.00% 0.00%	 0.00% 0.00%	 0.00% 0.00%	 0.00% 0.00%	 0.00% 0.00%	 0.00% 0.00%	 0.00% 0.00%	 0.00% 0.00%	 0.00% 0.00%
Val 9	324 80.20% 	7 2.16% 33.33%	27 8.33% 69.23%	10 3.09% 76.92%	22 6.79% 78.57%	38 11.73% 73.08%	122 37.65% 85.31%	48 14.81% 90.57%	27 8.33% 96.43%	1 0.31% 100%	19 5.86% 82.61%	2 0.62% 100%	1 0.31% 100%
	404	21 5.20%	39 9.65%	13 3.22%	28 6.93%	52 12.87%	143 35.40%	53 13.12%	28 6.93%	1 0.25	23 5.69%	2 0.50%	1 0.25%

186

Variable traitee:JOBBEUR/EVALUATION
Libele:(SI C'EST UN JOBBEUR) CE SERVICE OFFRE-T-IL DES AVANTAGES
OU DES INCONVENIENTS ?

Croisement sur:JOBBEUR/EVALUATION
Libele:♦ STRATE HABITAT - LAVALIN

	Total	Val 1	Val 2	Val 3	Val 4	Val 5	Val 6	Val 7	Val 8	Val 9	Val 10	Val 11	Val 12
Val 1	65	10	13	4	5	11	16	3	1		2		
	16.09%	15.38%	20.00%	6.15%	7.69%	16.92%	24.62%	4.62%	1.54%	0.00%	3.08%	0.00%	0.00%
		47.62%	33.33%	30.77%	17.86%	21.15%	11.19%	5.66%	3.57%	0.00%	8.70%	0.00%	0.00%
Val 2	17	3			1	3	6	2			2		
	4.21%	17.65%	0.00%	0.00%	5.88%	17.65%	35.29%	11.76%	0.00%	0.00%	11.76%	0.00%	0.00%
		14.29%	0.00%	0.00%	3.57%	5.77%	4.20%	3.77%	0.00%	0.00%	8.70%	0.00%	0.00%
Val 3	1					1							
	0.25%	0.00%	0.00%	0.00%	0.00%	100%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
		0.00%	0.00%	0.00%	0.00%	1.92%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Val 4	1	1											
	0.25%	100%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
		4.76%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Val 5	320	7	26	9	22	37	121	48	27	1	19	2	1
	79.21%	2.19%	8.13%	2.81%	6.88%	11.56%	37.81%	15.00%	8.44%	0.31%	5.74%	0.63%	0.31%
		33.33%	66.67%	69.23%	78.57%	71.15%	84.62%	90.57%	96.43%	100%	82.61%	100%	100%
	404	21	39	13	28	52	143	53	28	1	23	2	1
		5.20%	9.65%	3.22%	6.93%	12.87%	35.40%	13.12%	6.93%	0.25%	5.69%	0.50%	0.25%

Variable traitee:MAIRIE/EVALUATION
Libele:(POUR CEUX QUI BENEFICIENT DU SERVICE DE LA MAIRIE)
COMMENT ESTIMEZ-VOUS LE SERVICE DE LA MAIRIE ?

Croisement sur:MAIRIE/EVALUATION
Libele:# STRATE HABITAT - LAVALIN

	Total	Val 1	Val 2	Val 3	Val 4	Val 5	Val 6	Val 7	Val 8	Val 9	Val 10	Val 11	Val 12
Val 1	49 12.13% 	1 2.04% 4.76%	5 10.20% 12.82%	1 2.04% 7.69%	2 4.08% 7.14%	5 10.20% 9.62%	24 48.98% 16.78%	5 10.20% 9.43%	4 8.16% 14.29%	 0.00% 0.00%	2 4.08% 8.70%	 0.00% 0.00%	 0.00% 0.00%
Val 2	11 2.72% 	1 9.09% 4.76%	3 27.27% 7.69%	 0.00% 0.00%	1 9.09% 3.57%	 0.00% 0.00%	4 36.36% 2.80%	 0.00% 0.00%	 0.00% 0.00%	 0.00% 0.00%	2 18.18% 8.70%	 0.00% 0.00%	 0.00% 0.00%
Val 3	19 4.70% 	 0.00% 0.00%	3 15.79% 7.69%	 0.00% 0.00%	 0.00% 0.00%	1 5.26% 1.92%	5 26.32% 3.50%	1 5.26% 1.89%	 0.00% 0.00%	1 5.26% 100%	8 42.11% 34.78%	 0.00% 0.00%	 0.00% 0.00%
Val 4	10 2.48% 	 0.00% 0.00%	3 30.00% 7.69%	 0.00% 0.00%	2 20.00% 7.14%	 0.00% 0.00%	3 30.00% 2.10%	2 20.00% 3.77%	 0.00% 0.00%	 0.00% 0.00%	 0.00% 0.00%	 0.00% 0.00%	 0.00% 0.00%
Val 5	315 77.97% 	19 6.03% 90.48%	25 7.94% 64.10%	12 3.81% 92.31%	23 7.30% 82.14%	46 14.60% 88.46%	107 33.97% 74.83%	45 14.29% 84.91%	24 7.62% 85.71%	 0.00% 0.00%	11 3.49% 47.83%	2 0.63% 100%	1 0.32% 100%
	404	21 5.20%	39 9.65%	13 3.22%	28 6.93%	52 12.87%	143 35.40%	53 13.12%	28 6.93%	1 0.25%	23 5.69%	2 0.50%	1 0.25%

Variable traitee:FACON PERSONNELLE
Libele:(SI VOUS DISPOSEZ VOUS-MEME DES ORDURES) QUE FAITES-VOUS
AVEC LES ORDURES MENAGERES ?

Croisement sur:FACON PERSONNELLE
Libele:# STRATE HABITAT - LAVALIN

	Total	Val 1	Val 2	Val 3	Val 4	Val 5	Val 6	Val 7	Val 8	Val 9	Val 10	Val 11	Val 12
Val 1	6 1.49% 	2 33.33% 9.52%	1 16.67% 2.56%	1 16.67% 7.69%	 0.00% 0.00%	1 16.67% 1.92%	 0.00% 0.00%	 0.00% 0.00%	1 16.67% 3.57%	 0.00% 0.00%	 0.00% 0.00%	 0.00% 0.00%	 0.00% 0.00%
Val 2	80 19.80% 	4 5.00% 19.05%	5 6.25% 12.82%	 0.00% 0.00%	4 5.00% 14.29%	14 17.50% 26.92%	26 32.50% 18.18%	10 12.50% 18.87%	13 16.25% 46.43%	 0.00% 0.00%	4 5.00% 17.39%	 0.00% 0.00%	 0.00% 0.00%
Val 3	96 23.76% 	4 4.17% 19.05%	9 9.38% 23.08%	5 5.21% 38.46%	7 7.29% 25.00%	10 10.42% 19.23%	58 60.42% 40.56%	1 1.04% 1.89%	1 1.04% 3.57%	 0.00% 0.00%	1 1.04% 4.35%	 0.00% 0.00%	 0.00% 0.00%
Val 4	41 10.15% 	1 2.44% 4.76%	2 4.88% 5.13%	2 4.88% 15.38%	 0.00% 0.00%	1 2.44% 1.92%	9 21.95% 6.29%	19 46.34% 35.85%	6 14.63% 21.43%	 0.00% 0.00%	 0.00% 0.00%	1 2.44% 50.00%	 0.00% 0.00%
Val 5	0 0.00% 	 0.00% 0.00%	 0.00% 0.00%	 0.00% 0.00%	 0.00% 0.00%	 0.00% 0.00%	 0.00% 0.00%	 0.00% 0.00%	 0.00% 0.00%	 0.00% 0.00%	 0.00% 0.00%	 0.00% 0.00%	 0.00% 0.00%
Val 6	25 6.19% 	2 8.00% 9.52%	1 4.00% 2.56%	1 4.00% 7.69%	1 4.00% 3.57%	3 12.00% 5.77%	6 24.00% 4.20%	9 36.00% 16.98%	1 4.00% 3.57%	 0.00% 0.00%	1 4.00% 4.35%	 0.00% 0.00%	 0.00% 0.00%
Val 7	8 1.98% 	 0.00% 0.00%	 0.00% 0.00%	 0.00% 0.00%	 0.00% 0.00%	2 25.00% 3.85%	2 25.00% 1.40%	2 25.00% 3.77%	 0.00% 0.00%	 0.00% 0.00%	1 12.50% 4.35%	1 12.50% 50.00%	 0.00% 0.00%
Val 8	33 8.17% 	 0.00% 0.00%	 0.00% 0.00%	1 3.03% 7.69%	7 21.21% 25.00%	6 18.18% 11.54%	8 24.24% 5.59%	5 15.15% 9.43%	3 9.09% 10.71%	 0.00% 0.00%	2 6.06% 8.70%	 0.00% 0.00%	1 3.03% 100%
Val 9	2 0.50% 	 0.00% 0.00%	 0.00% 0.00%	 0.00% 0.00%	1 50.00% 3.57%	 0.00% 0.00%	 0.00% 0.00%	 0.00% 0.00%	 0.00% 0.00%	 0.00% 0.00%	1 50.00% 4.35%	 0.00% 0.00%	 0.00% 0.00%
Val 10	2 0.50% 	 0.00% 0.00%	 0.00% 0.00%	 0.00% 0.00%	 0.00% 0.00%	 0.00% 0.00%	 0.00% 0.00%	1 50.00% 1.89%	1 50.00% 3.57%	 0.00% 0.00%	 0.00% 0.00%	 0.00% 0.00%	 0.00% 0.00%
Val 11	111 27.48% 	8 7.21% 38.10%	21 18.92% 53.85%	3 2.70% 23.08%	8 7.21% 28.57%	15 13.51% 28.85%	34 30.63% 23.78%	6 5.41% 11.32%	2 1.80% 7.14%	1 0.90% 100%	13 11.71% 56.52%	 0.00% 0.00%	 0.00% 0.00%
	404	21 5.20%	39 9.65%	13 3.22%	28 6.93%	52 12.87%	143 35.40%	53 13.12%	28 6.93%	1 0.25%	23 5.69%	2 0.50%	1 0.25%

Variable traitee:DISPOSEZ DES ORDURES
Libele:COMMENT DISPOSEZ-VOUS DES ORDURES CHEZ-VOUS?

Variable traitee:CONSEIL
Libele:QUEL CONSEIL AURIEZ-VOUS DONNE EN MATIERE DE COLLECTE DES ORDURES ?

Croisement sur:CONSEIL
Libele:# STRATE HABITAT - LAVALIN

	Total	Val 1	Val 2	Val 3	Val 4	Val 5	Val 6	Val 7	Val 8	Val 9	Val 10	Val 11	Val 12
Val 1	28 6.93%	2 7.14% 9.52%	5 17.86% 12.82%	1 3.57% 7.69%	1 3.57% 3.57%	5 17.86% 9.62%	10 35.71% 6.99%	1 3.57% 1.89%	2 7.14% 7.14%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	1 3.57% 100%
Val 2	28 6.93%	0.00% 0.00%	1 3.57% 2.56%	0.00% 0.00%	2 7.14% 7.14%	2 7.14% 3.85%	11 39.29% 7.69%	5 17.86% 9.43%	3 10.71% 10.71%	0.00% 0.00%	4 14.29% 17.39%	0.00% 0.00%	0.00% 0.00%
Val 3	101 25.00%	7 6.93% 33.33%	10 9.90% 25.64%	7 6.93% 53 85%	7 6.93% 25.00%	18 17.82% 34.62%	29 28.71% 20.28%	10 9.90% 18.87%	7 6.93% 25.00%	1 0.99% 100%	5 4.95% 21.74%	0.00% 0.00%	0.00% 0.00%
Val 4	21 5.20%	0.00% 0.00%	3 14.29% 7.69%	0.00% 0.00%	0.00% 0.00%	3 14.29% 5 77%	10 47.62% 6.99%	2 9.52% 3.77%	1 4.76% 3.57%	0.00% 0.00%	2 9.52% 8.70%	0.00% 0.00%	0.00% 0.00%
Val 5	12 2.97%	0.00% 0.00%	2 16.67% 5.13%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	4 33.33% 2.80%	1 8.33% 1.89%	0.00% 0.00%	0.00% 0.00%	4 33.33% 17.39%	1 8.33% 50.00%	0.00% 0.00%
Val 6	88 21.78%	6 6.82% 28.57%	7 7.95% 17.95%	1 1.14% 7.69%	5 5.68% 17.86%	6 6.82% 11.54%	38 43.18% 26.57%	15 17.05% 28.30%	5 5.68% 17.86%	0.00% 0.00%	5 5.68% 21.74%	0.00% 0.00%	0.00% 0.00%
Val 7	103 25.50%	5 4.85% 23.81%	9 8.74% 23.08%	2 1.94% 15.38%	12 11.65% 42.86%	12 11.65% 23.08%	34 33.01% 23.78%	17 16.50% 32.08%	8 7.77% 28.57%	0.00% 0.00%	3 2.91% 13.04%	1 0.97% 50.00%	0.00% 0.00%
Val 8	8 1.98%	0.00% 0.00%	2 25.00% 5.13%	1 12.50% 7.69%	0.00% 0.00%	1 12.50% 1.92%	3 37.50% 2.10%	1 12.50% 1.89%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%
Val 9	15 3.71%	1 6.67% 4.76%	0.00% 0.00%	1 6.67% 7.69%	1 6.67% 3.57%	5 33.33% 9.62%	4 26.67% 2.80%	1 6.67% 1.89%	2 13.33% 7.14%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%
	404	21 5.20%	39 9.65%	13 3.22%	28 6.93%	52 12.87%	143 35.40%	53 13.12%	28 6.93%	1 0.25%	23 5.69%	2 0.50%	1 0.25%

	5.20%	9.65%	3.22%	6.93%	12.87%	35.40%	13.12%	6.93%	0.25%	5.69%	0.50%	0.25%

Variable traitee:COMITE FATRA
Libele:D'APRES VOUS, Y-A-T-IL DES COMITES DE QUARTIER QUI S'OCCU-
PENT DE RAMMASSER LES ORDURES ?

Croisement sur:COMITE FATRA
Libele:# STRATE HABITAT - LAVALIN

	Total	Val 1	Val 2	Val 3	Val 4	Val 5	Val 6	Val 7	Val 8	Val 9	Val 10	Val 11	Val 12
Val 1	278	14	35	9	18	25	108	31	23	1	12	2	
	68.81%	5.04%	12.59%	3.24%	6.47%	8.99%	38.85%	11.15%	8.27%	0.36%	4.32%	0.72%	0.00%
		66.67%	89.74%	69.23%	64.29%	48.08%	75.52%	58.49%	82.14%	100%	52.17%	100%	0.00%
Val 2	31	4	4	2	1	3	9	8					
	7.67%	12.90%	12.90%	6.45%	3.23%	9.68%	29.03%	25.81%	0.00%	0.00%	0.00%	0.00%	0.00%
		19.05%	10.26%	15.38%	3.57%	5.77%	6.29%	15.09%	0.00%	0.00%	0.00%	0.00%	0.00%
Val 3	95	3		2	9	24	26	14	5		11		1
	23.51%	3.16%	0.00%	2.11%	9.47%	25.26%	27.37%	14.74%	5.26%	0.00%	11.58%	0.00%	1.05%
		14.29%	0.00%	15.38%	32.14%	46.15%	18.18%	26.42%	17.86%	0.00%	47.83%	0.00%	100%
	404	21	39	13	28	52	143	53	28	1	23	2	1
		5.20%	9.65%	3.22%	6.93%	12.87%	35.40%	13.12%	6.93%	0.25%	5.69%	0.50%	0.25%

Variable traitee:SOUHAIT/PREFERENCE
Libele:QUE PREFEREZ-VOUS,COMITE ORGANISE OU BIEN COMITE DU QUARTIER
POUR LE RAMASSAGE DES ORDURES ?

Croisement sur:SOUHAIT/PREFERENCE
Libele:# STRATE HABITAT - LAVALIN

	Total	Val 1	Val 2	Val 3	Val 4	Val 5	Val 6	Val 7	Val 8	Val 9	Val 10	Val 11	Val 12
Val 1	305 75.50%	15 4.92% 71.43%	24 7.87% 61.54%	8 2.62% 61.54%	24 7.87% 85.71%	40 13.11% 76.92%	101 33.11% 70.63%	45 14.75% 84.91%	25 8.20% 89.29%	1 0.33% 100%	20 6.56% 86.96%	1 0.33% 50.00%	1 0.33% 100%
Val 2	71 17.57%	2 2.82% 9.52%	9 12.68% 23.08%	4 5.63% 30.77%	4 5.63% 14.29%	10 14.08% 19.23%	30 42.25% 20.98%	5 7.04% 9.43%	3 4.23% 10.71%	0.00% 0.00%	3 4.23% 13.04%	1 1.41% 50.00%	0.00% 0.00%
Val 3	28 6.93%	4 14.29% 19.05%	6 21.43% 15.38%	1 3.57% 7.69%	0.00% 0.00%	2 7.14% 3.85%	12 42.86% 8.39%	3 10.71% 5.66%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%
	404	21 5.20%	39 9.65%	13 3.22%	28 6.93%	52 12.87%	143 35.40%	53 13.12%	28 6.93%	1 0.25%	23 5.69%	2 0.50%	1 0.25%

Variable traitee:PARTICIPATION COMMUN
Libele:(SI OUI A PARTICIPATION COMMUNAUTAIRE) AVEZ-VOUS L'INTENTION D'Y PARTICIPER ?

Croisement sur:PARTICIPATION COMMUN
Libele:# STRATE HABITAT - LAVALIN

	Total	Val 1	Val 2	Val 3	Val 4	Val 5	Val 6	Val 7	Val 8	Val 9	Val 10	Val 11	Val 12
Val 1	260	9	22	4	22	28	92	42	20	1	18	1	1
	64.36%	3.46%	8.46%	1.54%	8.46%	10.77%	35.38%	16.15%	7.69%	0.38%	6.92%	0.38%	0.38%
		42.86%	56.41%	30.77%	78.57%	53.85%	64.34%	79.25%	71.43%	100%	78.26%	50.00%	100%
Val 2	144	12	17	9	6	24	51	11	8		5	1	
	35.64%	8.33%	11.81%	6.25%	4.17%	16.67%	35.42%	7.64%	5.56%	0.00%	3.47%	0.69%	0.00%
		57.14%	43.59%	69.23%	21.43%	46.15%	35.66%	20.75%	28.57%	0.00%	21.74%	50.00%	0.00%
	404	21	39	13	28	52	143	53	28	1	23	2	1
		5.20%	9.65%	3.22%	6.93%	12.87%	35.40%	13.12%	6.93%	0.25%	5.69%	0.50%	0.25%

Variable traitee:ORG COM/RAISON
Libele:(SI C'EST OUI POUR UNE ORG. COM.) POUR QUELLE RAISON ?

Croisement sur:ORG COM/RAISON
Libele:# STRATE HABITAT - LAVALIN

	Total	Val 1	Val 2	Val 3	Val 4	Val 5	Val 6	Val 7	Val 8	Val 9	Val 10	Val 11	Val 12
Val 1	233 57.67% 	7 3.00% 33.33%	16 6.87% 41.03%	7 3.00% 53.85%	19 8.15% 67.86%	28 12.02% 53.85%	87 37.34% 60.84%	34 14.59% 64.15%	21 9.01% 75.00%	 0.00% 0.00%	13 5.58% 56.52%	 0.00% 0.00%	1 0.43% 100%
Val 2	18 4.46% 	1 5.56% 4.76%	1 5.56% 2.56%	1 5.56% 7.69%	2 11.11% 7.14%	 0.00% 0.00%	7 38.89% 4.90%	3 16.67% 5.66%	 0.00% 0.00%	 0.00% 0.00%	2 11.11% 8.70%	1 5.56% 50.00%	 0.00% 0.00%
Val 3	12 2.97% 	1 8.33% 4.76%	2 16.67% 5.13%	 0.00% 0.00%	1 8.33% 3.57%	1 8.33% 1.92%	 0.00% 0.00%	3 25.00% 5.66%	2 16.67% 7.14%	1 8.33% 100%	1 8.33% 4.35%	 0.00% 0.00%	 0.00% 0.00%
Val 4	18 4.46% 	2 11.11% 9.52%	1 5.56% 2.56%	 0.00% 0.00%	1 5.56% 3.57%	6 33.33% 11.54%	2 11.11% 1.40%	3 16.67% 5.66%	1 5.56% 3.57%	 0.00% 0.00%	2 11.11% 8.70%	 0.00% 0.00%	 0.00% 0.00%
Val 5	23 5.69% 	 0.00% 0.00%	2 8.70% 5.13%	 0.00% 0.00%	1 4.35% 3.57%	3 13.04% 5.77%	14 60.87% 9.79%	1 4.35% 1.89%	1 4.35% 3.57%	 0.00% 0.00%	1 4.35% 4.35%	 0.00% 0.00%	 0.00% 0.00%
Val 6	100 24.75% 	10 10.00% 47.62%	17 17.00% 43.59%	5 5.00% 38.46%	4 4.00% 14.29%	14 14.00% 26.92%	33 33.00% 23.08%	9 9.00% 16.98%	3 3.00% 10.71%	 0.00% 0.00%	4 4.00% 17.39%	1 1.00% 50.00%	 0.00% 0.00%
	404	21 5.20%	39 9.65%	13 3.22%	28 6.93%	52 12.87%	143 35.40%	53 13.12%	28 6.93%	1 0.25%	23 5.69%	2 0.50%	1 0.25%

Variable traitee:NON A PARTICIPATION
Libele:(SI C'EST NON A UNE PARTICIPATION COMMUNAUTAIRE) POUR QUELLE RAISON PRINCIPALE ?

Croisement sur:NON A PARTICIPATION
Libele:# STRATE HABITAT - LAVALIN

	Total	Val 1	Val 2	Val 3	Val 4	Val 5	Val 6	Val 7	Val 8	Val 9	Val 10	Val 11	Val 12
Val 1	10		4			3	2	1					
	2.48%	0.00%	40.00%	0.00%	0.00%	30.00%	20.00%	10.00%	0.00%	0.00%	0.00%	0.00%	0.00%
		0.00%	10.26%	0.00%	0.00%	5.77%	1.40%	1.89%	0.00%	0.00%	0.00%	0.00%	0.00%
Val 2	5	1					2		2				
	1.24%	20.00%	0.00%	0.00%	0.00%	0.00%	40.00%	0.00%	40.00%	0.00%	0.00%	0.00%	0.00%
		4.76%	0.00%	0.00%	0.00%	0.00%	1.40%	0.00%	7.14%	0.00%	0.00%	0.00%	0.00%
Val 3	11			1	2	2	4	1				1	
	2.72%	0.00%	0.00%	9.09%	18.18%	18.18%	36.36%	9.09%	0.00%	0.00%	0.00%	9.09%	0.00%
		0.00%	0.00%	7.69%	7.14%	3.85%	2.80%	1.89%	0.00%	0.00%	0.00%	50.00%	0.00%
Val 4	16	1	2	2	1		8	2					
	3.96%	6.25%	12.50%	12.50%	6.25%	0.00%	50.00%	12.50%	0.00%	0.00%	0.00%	0.00%	0.00%
		4.76%	5.13%	15.38%	3.57%	0.00%	5.59%	3.77%	0.00%	0.00%	0.00%	0.00%	0.00%
Val 5	362	19	33	10	25	47	127	49	26	1	23	1	1
	89.60%	5.25%	9.12%	2.76%	6.91%	12.98%	35.08%	13.54%	7.18%	0.28%	6.35%	0.28%	0.28%
		90.48%	84.62%	76.92%	89.29%	90.38%	88.81%	92.45%	92.86%	100%	100%	50.00%	100%
	404	21	39	13	28	52	143	53	28	1	23	2	1
		5.20%	9.65%	3.22%	6.93%	12.87%	35.40%	13.12%	6.93%	0.25%	5.69%	0.50%	0.25%

Variable traitee:PAIEMENT CONT/ABONEM
Libele:SERIEZ-VOUS D'ACCORD A PAYER UN ABONNEMENT OU UN CONTRAT
POUR LE RAMMASSAGE DES ORDURES MENAGERES ?

Croisement sur:PAIEMENT CONT/ABONEM
Libele:# STRATE HABITAT - LAVALIN

	Total	Val 1	Val 2	Val 3	Val 4	Val 5	Val 6	Val 7	Val 8	Val 9	Val 10	Val 11	Val 12
Val 1	200 49.50%	1 0.50% 4.76%	23 11.50% 58.97%	6 3.00% 46.15%	11 5.50% 39.29%	15 7.50% 28.85%	93 46.50% 65.03%	23 11.50% 43.40%	20 10.00% 71.43%	1 0.50% 100%	4 2.00% 17.39%	2 1.00% 100%	1 0.50% 100%
Val 2	159 39.36%	9 5.66% 42.86%	8 5.03% 20.51%	3 1.89% 23.08%	15 9.43% 53.57%	31 19.50% 59.62%	43 27.04% 30.07%	26 16.35% 49.06%	6 3.77% 21.43%	0.00% 0.00%	18 11.32% 78.26%	0.00% 0.00%	0.00% 0.00%
Val 3	22 5.45%	5 22.73% 23.81%	4 18.18% 10.26%	2 9.09% 15.38%	1 4.55% 3.57%	3 13.64% 5.77%	2 9.09% 1.40%	3 13.64% 5.66%	1 4.55% 3.57%	0.00% 0.00%	1 4.55% 4.35%	0.00% 0.00%	0.00% 0.00%
Val 4	13 3.22%	4 30.77% 19.05%	1 7.69% 2.56%	1 7.69% 7.69%	1 7.69% 3.57%	2 15.38% 3.85%	3 23.08% 2.10%	0.00% 0.00%	1 7.69% 3.57%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%
Val 5	10 2.48%	2 20.00% 9.52%	3 30.00% 7.69%	1 10.00% 7.69%	0.00% 0.00%	1 10.00% 1.92%	2 20.00% 1.40%	1 10.00% 1.89%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%
	404	21 5.20%	39 9.65%	13 3.22%	28 6.93%	52 12.87%	143 35.40%	53 13.12%	28 6.93%	1 0.25%	23 5.69%	2 0.50%	1 0.25%

Variable traitee:DISPOSITION PAIEMENT
Libele:D'APRES LES PRIX EN COURS DANS LES DIFFERENTES ZONES, SERIEZ VOUS DISPOSE A PAYER $10/SEM

Croisement sur:DISPOSITION PAIEMENT
Libele:# STRATE HABITAT - LAVALIN

	Total	Val 1	Val 2	Val 3	Val 4	Val 5	Val 6	Val 7	Val 8	Val 9	Val 10	Val 11	Val 12
Val 1	1 0.25% 	1 100% 4.76%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%
Val 2	403 99.75%	20 4.96% 95.24%	39 9.68% 100%	13 3.23% 100%	28 6.95% 100%	52 12.90% 100%	143 35.48% 100%	53 13.15% 100%	28 6.95% 100%	1 0.25% 100%	23 5.71% 100%	2 0.50% 100%	1 0.25% 100%
	404	21 5.20%	39 9.65%	13 3.22%	28 6.93%	52 12.87%	143 35.40%	53 13.12%	28 6.93%	1 0.25%	23 5.69%	2 0.50%	1 0.25%

Variable traitee:DIPOS/PAIEMENT 2
Libele:D'APRES LES PRIX PRATIQUES DANS LES DIFFERENTES ZONES,
SERIEZ-VOUS DISPOSE A PAYER $8/SEM

Croisement sur:DIPOS/PAIEMENT 2
Libele:# STRATE HABITAT - LAVALIN

	Total	Val 1	Val 2	Val 3	Val 4	Val 5	Val 6	Val 7	Val 8	Val 9	Val 10	Val 11	Val 12
Val 1	3 0.74% 	0.00% 0.00%	1 33.33% 2.56%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	1 33.33% 3.57%	0.00% 0.00%	1 33.33% 4.35%	0.00% 0.00%	0.00% 0.00%
Val 2	401 99.26% 	21 5.24% 100%	38 9.48% 97.44%	13 3.24% 100%	28 6.98% 100%	52 12.97% 100%	143 35.66% 100%	53 13.22% 100%	27 6.73% 96.43%	1 0.25% 100%	22 5.49% 95.65%	2 0.50% 100%	1 0.25% 100%
	404	21 5.20%	39 9.65%	13 3.22%	28 6.93%	52 12.87%	143 35.40%	53 13.12%	28 6.93%	1 0.25%	23 5.69%	2 0.50%	1 0.25%

Variable traitee:DIPOS/PAIEMENT 3
Libele:D'APRES LES PRIX PRATIQUES DANS LES DIFFERENTES ZONES,
SERIEZ-VOUS DISPOSE A PAYER $6/SEM

Croisement sur:DIPOS/PAIEMENT 3
Libele:# STRATE HABITAT - LAVALIN

	Total	Val 1	Val 2	Val 3	Val 4	Val 5	Val 6	Val 7	Val 8	Val 9	Val 10	Val 11	Val 12
Val 1	1 0.25%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	1 100% 100%
Val 2	403 99.75%	21 5.21% 100%	39 9.68% 100%	13 3.23% 100%	28 6.95% 100%	52 12.90% 100%	143 35.48% 100%	53 13.15% 100%	28 6.95% 100%	1 0.25% 100%	23 5.71% 100%	2 0.50% 100%	0.00% 0.00%
	404	21 5.20%	39 9.65%	13 3.22%	28 6.93%	52 12.87%	143 35.40%	53 13.12%	28 6.93%	1 0.25%	23 5.69%	2 0.50%	1 0.25%

Variable traitee:DIPOS/PAIEMENT 4
Libele:D'APRES LES PRIX PRATIQUES DANS LES DIFFERENTES ZONES,
SERIEZ-VOUS DISPOSE A PAYER $5/SEM ?

Croisement sur:DIPOS/PAIEMENT 4
Libele:# STRATE HABITAT - LAVALIN

	Total	Val 1	Val 2	Val 3	Val 4	Val 5	Val 6	Val 7	Val 8	Val 9	Val 10	Val 11	Val 12
Val 1	14	3	1		3	1	3	1	1		1		
	3.47%	21.43%	7.14%	0.00%	21.43%	7.14%	21.43%	7.14%	7.14%	0.00%	7.14%	0.00%	0.00%
		14.29%	2.56%	0.00%	10.71%	1.92%	2.10%	1.89%	3.57%	0.00%	4.35%	0.00%	0.00%
Val 2	390	18	38	13	25	51	140	52	27	1	22	2	1
	96.53%	4.62%	9.74%	3.33%	6.41%	13.08%	35.90%	13.33%	6.92%	0.26%	5.64%	0.51%	0.26%
		85.71%	97.44%	100%	89.29%	98.08%	97.90%	98.11%	96.43%	100%	95.65%	100%	100%
	404	21	39	13	28	52	143	53	28	1	23	2	1
		5.20%	9.65%	3.22%	6.93%	12.87%	35.40%	13.12%	6.93%	0.25%	5.69%	0.50%	0.25%

Variable traitee:DISP/PAIEMENT 5
Libele:D'APRES LES PRIX PRATIQUES DANS LES DIFFERENTES ZONES,
SERIEZ-VOUS DISPOSE A PAYER $3/SEM ?

Croisement sur:DISP/PAIEMENT 5
Libele:# STRATE HABITAT - LAVALIN

	Total	Val 1	Val 2	Val 3	Val 4	Val 5	Val 6	Val 7	Val 8	Val 9	Val 10	Val 11	Val 12
Val 1	25 6.19%	1 4.00% 4.76%	4 16.00% 10.26%	2 8.00% 15.38%	1 4.00% 3.57%	6 24.00% 11.54%	6 24.00% 4.20%	1 4.00% 1.89%	1 4.00% 3.57%	0.00% 0.00%	3 12.00% 13.04%	0.00% 0.00%	0.00% 0.00%
Val 2	379 93.81%	20 5.28% 95.24%	35 9.23% 89.74%	11 2.90% 84.62%	27 7.12% 96.43%	46 12.14% 88.46%	137 36.15% 95.80%	52 13.72% 98.11%	27 7.12% 96.43%	1 0.26% 100%	20 5.28% 86.96%	2 0.53% 100%	1 0.26% 100%
	404	21 5.20%	39 9.65%	13 3.22%	28 6.93%	52 12.87%	143 35.40%	53 13.12%	28 6.93%	1 0.25%	23 5.69%	2 0.50%	1 0.25%

Variable traitee:DISP/PAIEMENT 6
Libele:D'APRES LES PRIX PRATIQUES DANS LES DIFFERENTES ZONES,
SERIEZ-VOUS DISPOSE A PAYER $2/SEM ?

Croisement sur:DISP/PAIEMENT 6
Libele:# STRATE HABITAT - LAVALIN

	Total	Val 1	Val 2	Val 3	Val 4	Val 5	Val 6	Val 7	Val 8	Val 9	Val 10	Val 11	Val 12
Val 1	85	7	9	3	10	17	11	10	2		16		
	21.04%	8.24%	10.59%	3.53%	11.76%	20.00%	12.94%	11.76%	2.35%	0.00%	18.82%	0.00%	0.00%
		33.33%	23.08%	23.08%	35.71%	32.69%	7.69%	18.87%	7.14%	0.00%	69.57%	0.00%	0.00%
Val 2	319	14	30	10	18	35	132	43	26	1	7	2	1
	78.96%	4.39%	9.40%	3.13%	5.64%	10.97%	41.38%	13.48%	8.15%	0.31%	2.19%	0.63%	0.31%
		66.67%	76.92%	76.92%	64.29%	67.31%	92.31%	81.13%	92.86%	100%	30.43%	100%	100%
	404	21	39	13	28	52	143	53	28	1	23	2	1
		5.20%	9.65%	3.22%	6.93%	12.87%	35.40%	13.12%	6.93%	0.25%	5.69%	0.50%	0.25%

Variable traitee:DIPS/PAIEMENT 7
Libele:D'APRES LES PRIX PRATIQUES DANS LES DIFFERENTES ZONES,
SERIEZ-VOUS DISPOSE A PAYE $1/SEM

Croisement sur:DIPS/PAIEMENT 7
Libele:# STRATE HABITAT - LAVALIN

	Total	Val 1	Val 2	Val 3	Val 4	Val 5	Val 6	Val 7	Val 8	Val 9	Val 10	Val 11	Val 12
Val 1	82	9	1	4	6	14	20	18	6		4		
	20.30%	10.98%	1.22%	4.88%	7.32%	17.07%	24.39%	21.95%	7.32%	0.00%	4.88%	0.00%	0.00%
		42.86%	2.56%	30.77%	21.43%	26.92%	13.99%	33.96%	21.43%	0.00%	17.39%	0.00%	0.00%
Val 2	322	12	38	9	22	38	123	35	22	1	19	2	1
	79.70%	3.73%	11.80%	2.80%	6.83%	11.80%	38.20%	10.87%	6.83%	0.31%	5.90%	0.62%	0.31%
		57.14%	97.44%	69.23%	78.57%	73.08%	86.01%	66.04%	78.57%	100%	82.61%	100%	100%
	404	21	39	13	28	52	143	53	28	1	23	2	1
		5.20%	9.65%	3.22%	6.93%	12.87%	35.40%	13.12%	6.93%	0.25%	5.69%	0.50%	0.25%

Variable traitee:DISP/PAIEMENT 8
Libele:EN FONCTION DES PRIX EN APPLICATRION DANS LES DIFFERENTES ZONES, ETES VOUS VRAIMENT PAS DISPOSE A PAYER ?

Croisement sur:DISP/PAIEMENT 8
Libele:# STRATE HABITAT - LAVALIN

	Total	Val 1	Val 2	Val 3	Val 4	Val 5	Val 6	Val 7	Val 8	Val 9	Val 10	Val 11	Val 12
Val 1	53		3	2	1	10	24	5	6		2		
	13.12%	0.00%	5.66%	3.77%	1.89%	18.87%	45.28%	9.43%	11.32%	0.00%	3.77%	0.00%	0.00%
		0.00%	7.69%	15.38%	3.57%	19.23%	16.78%	9.43%	21.43%	0.00%	8.70%	0.00%	0.00%
Val 2	351	21	36	11	27	42	119	48	22	1	21	2	1
	86.88%	5.98%	10.26%	3.13%	7.69%	11.97%	33.90%	13.68%	6.27%	0.28%	5.98%	0.57%	0.28%
		100%	92.31%	84.62%	96.43%	80.77%	83.22%	90.57%	78.57%	100%	91.30%	100%	100%
	404	21	39	13	28	52	143	53	28	1	23	2	1
		5.20%	9.65%	3.22%	6.93%	12.87%	35.40%	13.12%	6.93%	0.25%	5.69%	0.50%	0.25%

Variable traitee:PAIEMENT TRIAGE
Libele:SERIEZ-VOUS DISPOSE A SEPARER LES ORDURES MENAGERES SI ON VOUS PAYAIT

Croisement sur:PAIEMENT TRIAGE
Libele:# STRATE HABITAT - LAVALIN

	Total	Val 1	Val 2	Val 3	Val 4	Val 5	Val 6	Val 7	Val 8	Val 9	Val 10	Val 11	Val 12
Val 1	3 70.05%	18 6.36% 85.71%	23 8.13% 58.97%	8 2.83% 61.54%	18 6.36% 64.29%	32 11.31% 61.54%	107 37.81% 74.83%	37 13.07% 69.81%	22 7.77% 78.57%	 0.00% 0.00%	18 6.36% 78.26%	 0.00% 0.00%	 0.00% 0.00%
Val 2	115 28.47%	1 0.87% 4.76%	14 12.17% 35.90%	5 4.35% 38.46%	10 8.70% 35.71%	20 17.39% 38.46%	36 31.30% 25.17%	15 13.04% 28.30%	6 5.22% 21.43%	1 0.87% 100%	4 3.48% 17.39%	2 1.74% 100%	1 0.87% 100%
Val 3	6 1.49%	2 33.33% 9.52%	2 33.33% 5.13%	 0.00% 0.00%	 0.00% 0.00%	 0.00% 0.00%	 0.00% 0.00%	1 16.67% 1.89%	 0.00% 0.00%	 0.00% 0.00%	1 16.67% 4.35%	 0.00% 0.00%	 0.00% 0.00%
	404	21 5.20%	39 9.65%	13 3.22%	28 6.93%	52 12.87%	143 35.40%	53 13.12%	28 6.93%	1 0.25%	23 5.69%	2 0.50%	1 0.25%

Variable traitee:FOSSE/LATRINE
Libele:TOUS LES COMBIEN DE TEMPS FAITES-VOUS NETTOYER VOTRE FOSSE OU LES LATRINES ?

Croisement sur:FOSSE/LATRINE
Libele:# STRATE HABITAT - LAVALIN

	Total	Val 1	Val 2	Val 3	Val 4	Val 5	Val 6	Val 7	Val 8	Val 9	Val 10	Val 11	Val 12
Val 1	19 4.70%	4 21.05% 19.05%	3 15.79% 7.69%	1 5.26% 7.69%	 0.00% 0.00%	3 15.79% 5.77%	4 21.05% 2.80%	2 10.53% 3.77%	 0.00% 0.00%	 0.00% 0.00%	2 10.53% 8.70%	 0.00% 0.00%	 0.00% 0.00%
Val 2	65 16.09%	2 3.08% 9.52%	2 3.08% 5.13%	1 1.54% 7.69%	7 10.77% 25.00%	14 21.54% 26.92%	14 21.54% 9.79%	15 23.08% 28.30%	3 4.62% 10.71%	 0.00% 0.00%	7 10.77% 30.43%	 0.00% 0.00%	 0.00% 0.00%
Val 3	50 12.38%	 0.00% 0.00%	3 6.00% 7.69%	4 8.00% 30.77%	5 10.00% 17.86%	7 14.00% 13.46%	18 36.00% 12.59%	4 8.00% 7.55%	2 4.00% 7.14%	1 2.00% 100%	6 12.00% 26.09%	 0.00% 0.00%	 0.00% 0.00%
Val 4	68 16.83%	5 7.35% 23.81%	5 7.35% 12.82%	 0.00% 0.00%	4 5.88% 14.29%	15 22.06% 28.85%	21 30.88% 14.69%	3 4.41% 5.66%	10 14.71% 35.71%	 0.00% 0.00%	5 7.35% 21.74%	 0.00% 0.00%	 0.00% 0.00%
Val 5	77 19.06%	5 6.49% 23.81%	19 24.68% 48.72%	2 2.60% 15.38%	7 9.09% 25.00%	3 3.90% 5.77%	31 40.26% 21.68%	3 3.90% 5.66%	6 7.79% 21.43%	 0.00% 0.00%	1 1.30% 4.35%	 0.00% 0.00%	 0.00% 0.00%
Val 6	125 30.94%	5 4.00% 23.81%	7 5.60% 17.95%	5 4.00% 38.46%	5 4.00% 17.86%	10 8.00% 19.23%	55 44.00% 38.46%	26 20.80% 49.06%	7 5.60% 25.00%	 0.00% 0.00%	2 1.60% 8.70%	2 1.60% 100%	1 0.80% 100%
	404	21 5.20%	39 9.65%	13 3.22%	28 6.93%	52 12.87%	143 35.40%	53 13.12%	28 6.93%	1 0.25%	23 5.69%	2 0.50%	1 0.25%

Variable traitee:NETTOYAGE FOSSE
Libele:(S'IL Y A UNE FOSSE) QUI EST-CE QUI LA NETTOYE ?

Croisement sur:NETTOYAGE FOSSE
Libele:# STRATE HABITAT - LAVALIN

	Total	Val 1	Val 2	Val 3	Val 4	Val 5	Val 6	Val 7	Val 8	Val 9	Val 10	Val 11	Val 12
Val 1	108	3	7	4	6	20	35	16	6	1	10		
	26.73%	2.78%	6.48%	3.70%	5.56%	18.52%	32.41%	14.81%	5.56%	0.93%	9.26%	0.00%	0.00%
		14.29%	17.95%	30.77%	21.43%	38.46%	24.48%	30.19%	21.43%	100%	43.48%	0.00%	0.00%
Val 2	38	5	4		2	5	8	7	1		6		
	9.41%	13.16%	10.53%	0.00%	5.26%	13.16%	21.05%	18.42%	2.63%	0.00%	15.79%	0.00%	0.00%
		23.81%	10.26%	0.00%	7.14%	9.62%	5.59%	13.21%	3.57%	0.00%	26.09%	0.00%	0.00%
Val 3	35	2	1	2	5	10	10	1			4		
	8.66%	5.71%	2.86%	5.71%	14.29%	28.57%	28.57%	2.86%	0.00%	0.00%	11.43%	0.00%	0.00%
		9.52%	2.56%	15.38%	17.86%	19.23%	6.99%	1.89%	0.00%	0.00%	17.39%	0.00%	0.00%
Val 4	13	1				1	3	2	6				
	3.22%	7.69%	0.00%	0.00%	0.00%	7.69%	23.08%	15.38%	46.15%	0.00%	0.00%	0.00%	0.00%
		4.76%	0.00%	0.00%	0.00%	1.92%	2.10%	3.77%	21.43%	0.00%	0.00%	0.00%	0.00%
Val 5	210	10	27	7	15	16	87	27	15		3	2	1
	51.98%	4.76%	12.86%	3.33%	7.14%	7.62%	41.43%	12.86%	7.14%	0.00%	1.43%	0.95%	0.48%
		47.62%	69.23%	53.85%	53.57%	30.77%	60.84%	50.94%	53.57%	0.00%	13.04%	100%	100%
	404	21	39	13	28	52	143	53	28	1	23	2	1
		5.20%	9.65%	3.22%	6.93%	12.87%	35.40%	13.12%	6.93%	0.25%	5.69%	0.50%	0.25%

Variable traitee:PRIX NETTOYAGE FOSSE
Libele:(S'IL Y A UNE FOSSE) COMBIEN LE NETTOYAGE VOUS COUTE-T-IL ?

Croisement sur:PRIX NETTOYAGE FOSSE
Libele:# STRATE HABITAT - LAVALIN

	Total	Val 1	Val 2	Val 3	Val 4	Val 5	Val 6	Val 7	Val 8	Val 9	Val 10	Val 11	Val 12
Val 1	2 0.50%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	2 100% 1.40%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%
Val 2	6 1.49%	0.00% 0.00%	2 33.33% 5.13%	0.00% 0.00%	0.00% 0.00%	1 16.67% 1.92%	2 33.33% 1.40%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	1 16.67% 50.00%	0.00% 0.00%
Val 3	12 2.97%	0.00% 0.00%	3 25.00% 7.69%	1 8.33% 7.69%	1 8.33% 3.57%	1 8.33% 1.92%	3 25.00% 2.10%	3 25.00% 5.66%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%
Val 4	44 10.89%	3 6.82% 14.29%	0.00% 0.00%	1 2.27% 7.69%	2 4.55% 7.14%	11 25.00% 21.15%	13 29.55% 9.09%	7 15.91% 13.21%	3 6.82% 10.71%	0.00% 0.00%	4 9.09% 17.39%	0.00% 0.00%	0.00% 0.00%
Val 5	52 12.87%	2 3.85% 9.52%	1 1.92% 2.56%	0.00% 0.00%	4 7.69% 14.29%	12 23.06% 23.08%	15 28.85% 10.49%	9 17.31% 16.98%	2 3.85% 7.14%	0.00% 0.00%	7 13.46% 30.43%	0.00% 0.00%	0.00% 0.00%
Val 6	42 10.40%	5 11.90% 23.81%	4 9.52% 10.26%	2 4.76% 15.38%	3 7.14% 10.71%	8 19.05% 15.38%	9 21.43% 6.29%	4 9.52% 7.55%	2 4.76% 7.14%	0.00% 0.00%	5 11.90% 21.74%	0.00% 0.00%	0.00% 0.00%
Val 7	17 4.21%	0.00% 0.00%	1 5.88% 2.56%	1 5.88% 7.69%	2 11.76% 7.14%	2 11.76% 3.85%	6 35.29% 4.20%	0.00% 0.00%	0.00% 0.00%	1 5.88% 100%	4 23.53% 17.39%	0.00% 0.00%	0.00% 0.00%
Val 8	229 56.68%	11 4.80% 52.38%	28 12.23% 71.79%	8 3.49% 61.54%	16 6.99% 57.14%	17 7.42% 32.69%	93 40.61% 65.03%	30 13.10% 56.60%	21 9.17% 75.00%	0.00% 0.00%	3 1.31% 13.04%	1 0.44% 50.00%	1 0.44% 100%
	404	21 5.20%	39 9.65%	13 3.22%	28 6.93%	52 12.87%	143 35.40%	53 13.12%	28 6.93%	1 0.25%	23 5.69%	2 0.50%	1 0.25%

404	21	39	13	28	52	143	53	28	1	23	2	1
	5.20%	9.65%	3.22%	6.93%	12.87%	35.40%	13.12%	6.93%	0.25%	5.69%	0.50%	0.25%

Variable traitee:EDUCATION
Libele:PENSEZ-VOUS QUE LES GENS SOIENT VRAIMENT CONSCIENTS OU
CONNAISSENT LA MEILLEURE FACON POUR DISPOSER DES ORDURES ?

Croisement sur:EDUCATION
Libele:# STRATE HABITAT - LAVALIN

	Total	Val 1	Val 2	Val 3	Val 4	Val 5	Val 6	Val 7	Val 8	Val 9	Val 10	Val 11	Val 12
Val 1	187	5	22	1	10	26	80	24	12		6	1	
	46.29%	2.67%	11.76%	0.53%	5.35%	13.90%	42.78%	12.83%	6.42%	0.00%	3.21%	0.53%	0.00%
		23.81%	56.41%	7.69%	35.71%	50.00%	55.94%	45.28%	42.86%	0.00%	26.09%	50.00%	0.00%
Val 2	116	13	8	11	13	14	20	17	5	1	13		1
	28.71%	11.21%	6.90%	9.48%	11.21%	12.07%	17.24%	14.66%	4.31%	0.86%	11.21%	0.00%	0.86%
		61.90%	20.51%	84.62%	46.43%	26.92%	13.99%	32.08%	17.86%	100%	56.52%	0.00%	100%
Val 3	95	3	7	1	4	11	41	12	11		4	1	
	23.51%	3.16%	7.37%	1.05%	4.21%	11.58%	43.16%	12.63%	11.58%	0.00%	4.21%	1.05%	0.00%
		14.29%	17.95%	7.69%	14.29%	21.15%	28.67%	22.64%	39.29%	0.00%	17.39%	50.00%	0.00%
Val 4	6		2		1	1	2						
	1.49%	0.00%	33.33%	0.00%	16.67%	16.67%	33.33%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
		0.00%	5.13%	0.00%	3.57%	1.92%	1.40%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
	404	21	39	13	28	52	143	53	28	1	23	2	1
		5.20%	9.65%	3.22%	6.93%	12.87%	35.40%	13.12%	6.93%	0.25%	5.69%	0.50%	0.25%

Variable traitee:SAVOIR PLUS 1
Libele:AURIEZ-VOUS SOUHAITE EN SAVOIR PLUS SUR LA BONNE FACON DE DISPOSER DES ORDURES ?

Croisement sur:SAVOIR PLUS 1
Libele:# STRATE HABITAT - LAVALIN

	Total	Val 1	Val 2	Val 3	Val 4	Val 5	Val 6	Val 7	Val 8	Val 9	Val 10	Val 11	Val 12
Val 1	398 98.51%	21 5.28% 100%	37 9.30% 94.87%	13 3.27% 100%	27 6.78% 96.43%	51 12.81% 98.08%	142 35.68% 99.30%	53 13.32% 100%	27 6.78% 96.43%	1 0.25% 100%	23 5.78% 100%	2 0.50% 100%	1 0.25% 100%
Val 2	6 1.49%	0.00% 0.00%	2 33.33% 5.13%	0.00% 0.00%	1 16.67% 3.57%	1 16.67% 1.92%	1 16.67% 0.70%	0.00% 0.00%	1 16.67% 3.57%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%
	404	21 5.20%	39 9.65%	13 3.22%	28 6.93%	52 12.87%	143 35.40%	53 13.12%	28 6.93%	1 0.25%	23 5.69%	2 0.50%	1 0.25%

Variable traitee:SAVOIR PLUS 2
Libele:AURIEZ-VOUS SOUHAITE EN SAVOIR PLUS SUR LE RECYCLAGE DES DECHETS ORGANIQUES ?

Croisement sur:SAVOIR PLUS 2
Libele:# STRATE HABITAT - LAVALIN

	Total	Val 1	Val 2	Val 3	Val 4	Val 5	Val 6	Val 7	Val 8	Val 9	Val 10	Val 11	Val 12
Val 1	394 97.52% 	20 5.08% 95.24%	35 8.88% 89.74%	13 3.30% 100%	27 6.85% 96.43%	50 12.69% 96.15%	142 36.04% 99.30%	53 13.45% 100%	27 6.85% 96.43%	1 0.25% 100%	23 5.84% 100%	2 0.51% 100%	1 0.25% 100%
Val 2	10 2.48% 	1 10.00% 4.76%	4 40.00% 10.26%	 0.00% 0.00%	1 10.00% 3.57%	2 20.00% 3.85%	1 10.00% 0.70%	 0.00% 0.00%	1 10.00% 3.57%	 0.00% 0.00%	 0.00% 0.00%	 0.00% 0.00%	 0.00% 0.00%
	404 	21 5.20% 	39 9.65% 	13 3.22% 	28 6.93% 	52 12.87% 	143 35.40% 	53 13.12% 	28 6.93% 	1 0.25% 	23 5.69% 	2 0.50% 	1 0.25%

Variable traitee:SAVOIR PLUS 3
Libele:AURIEZ-VOUS SOUHAITE EN SAVOIR PLUS SUR LE RECYCLAGE DES DECHETS NON-ORGANIQUES ?

Croisement sur:SAVOIR PLUS 3
Libele:# STRATE HABITAT - LAVALIN

	Total	Val 1	Val 2	Val 3	Val 4	Val 5	Val 6	Val 7	Val 8	Val 9	Val 10	Val 11	Val 12
Val 1	393 97.28% 	20 5.09% 95.24%	36 9.16% 92.31%	13 3.31% 100%	26 6.62% 92.86%	49 12.47% 94.23%	142 36.13% 99.30%	53 13.49% 100%	27 6.87% 96.43%	1 0.25% 100%	23 5.85% 100%	2 0.51% 100%	1 0.25% 100%
Val 2	11 2.72% 	1 9.09% 4.76%	3 27.27% 7.69%	 0.00% 0.00%	2 18.18% 7.14%	3 27.27% 5.77%	1 9.09% 0.70%	 0.00% 0.00%	1 9.09% 3.57%	 0.00% 0.00%	 0.00% 0.00%	 0.00% 0.00%	 0.00% 0.00%
	404	21 5.20%	39 9.65%	13 3.22%	28 6.93%	52 12.87%	143 35.40%	53 13.12%	28 6.93%	1 0.25%	23 5.69%	2 0.50%	1 0.25%

Variable traitee:NIVEAU D'ETUDE
Libele:AVEZ-VOUS ETE A L'ECOLE; SI OUI, JUSQU'A QUEL NIVEAU ?

Croisement sur:NIVEAU D'ETUDE
Libele:# STRATE HABITAT - LAVALIN

	Total	Val 1	Val 2	Val 3	Val 4	Val 5	Val 6	Val 7	Val 8	Val 9	Val 10	Val 11	Val 12
Val 1	47 11.63%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	2 4.26% 7.14%	1 2.13% 1.92%	22 46.81% 15.38%	14 29.79% 26.42%	7 14.89% 25.00%	0.00% 0.00%	0.00% 0.00%	1 2.13% 50.00%	0.00% 0.00%
Val 2	64 15.84%	1 1.56% 4.76%	1 1.56% 2.56%	1 1.56% 7.69%	2 3.13% 7.14%	10 15.63% 19.23%	20 31.25% 13.99%	18 28.13% 33.96%	7 10.94% 25.00%	0.00% 0.00%	4 6.25% 17.39%	0.00% 0.00%	0.00% 0.00%
Val 3	91 22.52%	4 4.40% 19.05%	8 8.79% 20.51%	3 3.30% 23.08%	3 3.30% 10.71%	12 13.19% 23.08%	37 40.66% 25.87%	14 15.38% 26.42%	4 4.40% 14.29%	0.00% 0.00%	5 5.49% 21.74%	0.00% 0.00%	1 1.10% 100%
Val 4	131 32.43%	6 4.58% 28.57%	16 12.21% 41.03%	6 4.58% 46.15%	14 10.69% 50.00%	16 12.21% 30.77%	47 35.88% 32.87%	6 4.58% 11.32%	8 6.11% 28.57%	1 0.76% 100%	10 7.63% 43.48%	1 0.76% 50.00%	0.00% 0.00%
Val 5	36 8.91%	8 22.22% 38.10%	6 16.67% 15.38%	1 2.78% 7.69%	4 11.11% 14.29%	8 22.22% 15.38%	4 11.11% 2.80%	1 2.78% 1.89%	1 2.78% 3.57%	0.00% 0.00%	3 8.33% 13.04%	0.00% 0.00%	0.00% 0.00%
Val 6	29 7.18%	0.00% 0.00%	8 27.59% 20.51%	2 6.90% 15.38%	3 10.34% 10.71%	5 17.24% 9.62%	10 34.48% 6.99%	0.00% 0.00%	1 3.45% 3.57%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%
Val 7	2 0.50%	1 50.00% 4.76%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	1 50.00% 4.35%	0.00% 0.00%	0.00% 0.00%
Val 8	4 0.99%	1 25.00% 4.76%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	3 75.00% 2.10%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%
	404	21 5.20%	39 9.65%	13 3.22%	28 6.93%	52 12.87%	143 35.40%	53 13.12%	28 6.93%	1 0.25%	23 5.69%	2 0.50%	1 0.25%

Variable traitee:OCCUPATION
Libele:QUELLE EST VOTRE ACTIVITE ?

Croisement sur:OCCUPATION
Libele:# STRATE HABITAT - LAVALIN

	Total	Val 1	Val 2	Val 3	Val 4	Val 5	Val 6	Val 7	Val 8	Val 9	Val 10	Val 11	Val 12
Val 1	143 35.40%	4 2.80% 19.05%	15 10.49% 38.46%	1 0.70% 7.69%	8 5.59% 28.57%	15 10.49% 28.85%	62 43.36% 43.36%	21 14.69% 39.62%	11 7.69% 39.29%	0.00% 0.00%	5 3.50% 21.74%	1 0.70% 50.00%	0.00% 0.00%
Val 2	67 16.58%	3 4.48% 14.29%	6 8.96% 15.38%	1 1.49% 7.69%	2 2.99% 7.14%	12 17.91% 23.08%	24 35.82% 16.78%	7 10.45% 13.21%	6 8.96% 21.43%	0.00% 0.00%	4 5.97% 17.39%	1 1.49% 50.00%	1 1.49% 100%
Val 3	84 20.79%	3 3.57% 14.29%	2 2.38% 5.13%	5 5.95% 38.46%	6 7.14% 21.43%	8 9.52% 15.38%	25 29.76% 17.48%	20 23.81% 37.74%	7 8.33% 25.00%	0.00% 0.00%	8 9.52% 34.78%	0.00% 0.00%	0.00% 0.00%
Val 4	44 10.89%	4 9.09% 19.05%	6 13.64% 15.38%	3 6.82% 23.08%	2 4.55% 7.14%	6 13.64% 11.54%	16 36.36% 11.19%	3 6.82% 5.66%	1 2.27% 3.57%	1 2.27% 100%	2 4.55% 8.70%	0.00% 0.00%	0.00% 0.00%
Val 5	62 15.35%	4 6.45% 19.05%	10 16.13% 25.64%	3 4.84% 23.08%	10 16.13% 35.71%	11 17.74% 21.15%	15 24.19% 10.49%	2 3.23% 3.77%	3 4.84% 10.71%	0.00% 0.00%	4 6.45% 17.39%	0.00% 0.00%	0.00% 0.00%
Val 6	4 0.99%	3 75.00% 14.29%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	1 25.00% 0.70%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%
	404	21 5.20%	39 9.65%	13 3.22%	28 6.93%	52 12.87%	143 35.40%	53 13.12%	28 6.93%	1 0.25%	23 5.69%	2 0.50%	1 0.25%

Variable traitee:C.S.E.
Libele:STATUT SOCIO-ECONOMIQUE DE L'INTERVIEWE

Croisement sur:C.S.E.
Libele:# STRATE HABITAT - LAVALIN

	Total	Val 1	Val 2	Val 3	Val 4	Val 5	Val 6	Val 7	Val 8	Val 9	Val 10	Val 11	Val 12
Val 1	244 60.40%	5 2.05% 23.81%	9 3.69% 23.08%	2 0.82% 15.38%	9 3.69% 32.14%	34 13.93% 65.38%	105 43.03% 73.43%	45 18.44% 84.91%	21 8.61% 75.00%	0.00% 0.00%	13 5.33% 56.52%	1 0.41% 50.00%	0.00% 0.00%
Val 2	120 29.70%	12 10.00% 57.14%	18 15.00% 46.15%	8 6.67% 61.54%	13 10.83% 46.43%	14 11.67% 26.92%	32 26.67% 22.38%	7 5.83% 13.21%	5 4.17% 17.86%	1 0.83% 100%	8 6.67% 34.78%	1 0.83% 50.00%	1 0.83% 100%
Val 3	30 7.43%	3 10.00% 14.29%	7 23.33% 17.95%	2 6.67% 15.38%	6 20.00% 21.43%	4 13.33% 7.69%	5 16.67% 3.50%	0.00% 0.00%	1 3.33% 3.57%	0.00% 0.00%	2 6.67% 8.70%	0.00% 0.00%	0.00% 0.00%
Val 4	10 2.48%	1 10.00% 4.76%	5 50.00% 12.82%	1 10.00% 7.69%	0.00% 0.00%	0.00% 0.00%	1 10.00% 0.70%	1 10.00% 1.89%	1 10.00% 3.57%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%
	404	21 5.20%	39 9.65%	13 3.22%	28 6.93%	52 12.87%	143 35.40%	53 13.12%	28 6.93%	1 0.25%	23 5.69%	2 0.50%	1 0.25%

Variable traitee:FUMIER/RAISON
Libele:POUR QUEL USAGE ACHETEZ-VOUS DU FUMIER ?

Croisement sur:FUMIER/RAISON
Libele:$ STRATE HABITAT - LAVALIN

	Total	Val 1	Val 2	Val 3	Val 4	Val 5	Val 6	Val 7	Val 8	Val 9	Val 10	Val 11	Val 12
Val 1	14 3.47%	 0.00% 0.00%	10 71.43% 25.64%	1 7.14% 7.69%	2 14.29% 7.14%	1 7.14% 1.92%	 0.00% 0.00%	 0.00% 0.00%	 0.00% 0.00%	 0.00% 0.00%	 0.00% 0.00%	 0.00% 0.00%	 0.00% 0.00%
Val 2	0 0.00%	 0.00% 0.00%	 0.00% 0.00%	 0.00% 0.00%	 0.00% 0.00%	 0.00% 0.00%	 0.00% 0.00%	 0.00% 0.00%	 0.00% 0.00%	 0.00% 0.00%	 0.00% 0.00%	 0.00% 0.00%	 0.00% 0.00%
Val 3	390 96.53%	21 5.38% 100%	29 7.44% 74.36%	12 3.08% 92.31%	26 6.67% 92.86%	51 13.08% 98.08%	143 36.67% 100%	53 13.59% 100%	28 7.18% 100%	1 0.26% 100%	23 5.90% 100%	2 0.51% 100%	1 0.26% 100%
	404	21 5.20%	39 9.65%	13 3.22%	28 6.93%	52 12.87%	143 35.40%	53 13.12%	28 6.93%	1 0.25%	23 5.69%	2 0.50%	1 0.25%

Variable traitee:S. PRIVE/AVANTAGE 1
Libele:(SI C'EST UN SERVICE PRIVE) QUEL AVANTAGE VOUS PROCURE-IL ?

Croisement sur:S. PRIVE/AVANTAGE 1
Libele:# STRATE HABITAT - LAVALIN

	Total	Val 1	Val 2	Val 3	Val 4	Val 5	Val 6	Val 7	Val 8	Val 9	Val 10	Val 11	Val 12
Val 1	6 1.49% 	 0.00% 0.00%	6 100% 15.38%	 0.00% 0.00%	 0.00% 0.00%	 0.00% 0.00%	 0.00% 0.00%	 0.00% 0.00%	 0.00% 0.00%	 0.00% 0.00%	 0.00% 0.00%	 0.00% 0.00%	 0.00% 0.00%
Val 2	0 0.00% 	 0.00% 0.00%	 0.00% 0.00%	 0.00% 0.00%	 0.00% 0.00%	 0.00% 0.00%	 0.00% 0.00%	 0.00% 0.00%	 0.00% 0.00%	 0.00% 0.00%	 0.00% 0.00%	 0.00% 0.00%	 0.00% 0.00%
Val 3	0 0.00% 	 0.00% 0.00%	 0.00% 0.00%	 0.00% 0.00%	 0.00% 0.00%	 0.00% 0.00%	 0.00% 0.00%	 0.00% 0.00%	 0.00% 0.00%	 0.00% 0.00%	 0.00% 0.00%	 0.00% 0.00%	 0.00% 0.00%
Val 4	398 98.51% 	21 5.28% 100%	33 8.29% 84.62%	13 3.27% 100%	28 7.04% 100%	52 13.07% 100%	143 35.93% 100%	53 13.32% 100%	28 7.04% 100%	1 0.25% 100%	23 5.78% 100%	2 0.50% 100%	1 0.25% 100%
	404	21 5.20%	39 9.65%	13 3.22%	28 6.93%	52 12.87%	143 35.40%	53 13.12%	28 6.93%	1 0.25%	23 5.69%	2 0.50%	1 0.25%

APPENDIX I

COMMERCIAL QUESTIONNAIRE

File name:COMORDU.SYS
Questionaire:COMMERCE-ORDURES
Date created:22-09-90
Variables: 66

Comments:VOLET COMMERCIAL DES ENQUETES SUR LA COLLECTE DES ORDURES
CLIENT W.A.S.H

-- -- -- -- -- -- -- -- -- -- -- -- -- -- -- --

Variable: 1
Name:CARACTERISTIQUES
Designation:Type de commerce

Values:10

Val.	Designation	Value
1	Bazar	1
2	Supermarche	2
3	Hardware	3
4	Electro/Musique	4
5	Vetements	5
6	Hotel	6
7	Mat de Const.	7
8	Rest/Bar/Snack	8
9	Hopital	9
10	Autres	10

- -

Variable: 2
Name:STATUT INTERVIEWE
Designation:STATUT DE LA PERSONNE INTERVIEWEE

Values: 2

Val.	Designation	Value
1	Proprietaire	1
2	Directeur	2

- -

Variable: 3
Name:UNITE DE DISPOSITION
Designation:Comment disposez-vous des ordures (unites)

Values: 6

Val.	Designation	Value
1	Panier	1
2	Grand sac	2
3	seau	3
4	Drum	4
5	Brouette	5

6	Poubelles	6

- -

Variable: 4
Name:TS LES COMBIEN DE TS
Designation:TOUS LES COMBIEN DE TEMPS DISPOSEZ-VOUS DE CETTE QUANTITE ?

Values: 5

Val.	Designation	Value
1	Chaque jour	1
2	Ts les 2 jrs	2
3	Ts les 3 jrs	3
4	1 X / sem	4
5	1 jr precis	5

- -

Variable: 5
Name:MATIERES ORGANIQUES
Designation:Disposez-vous de dechets vegetaux, alimentaires ou autres ?

Values: 2

Val.	Designation	Value
1	OUI	1
2	NON	2

- -

Variable: 6
Name:NON-ORG>(PLASTIQUE)
Designation:Avez-vous l'habitude de jeter des matieres organiques (plastique)

Values: 2

Val.	Designation	Value
1	OUI	1
2	NON	2

- -

Variable: 7
Name:NON-ORGA (METAL)
Designation:Jeter des boites de conserves et/ou du metal

Values: 2

Val.	Designation	Value
1	OUI	1
2	NON	2

- -

Variable: 8
Name:NON-ORGA (CARTON)
Designation:Avez-vous l'habitude de jeter du carton

Values: 2

Val.	Designation	Value
1	OUI	1
2	NON	2

- -

Variable: 9
Name:NON-ORGA (huile/grai
Designation:AVEZ-VOUS L'HABITUDE DE JETER DE L'HUILE

Values: 2

Val.	Designation	Value
1	OUI	1
2	NON	2

- -

Variable: 10
Name:NON-ORGA (BOUTEILLES
Designation:AVEZ-VOUS L'HABITUDE DE JETER DES BOUTEILLES OU DU VERRE

Values: 2

Val.	Designation	Value
1	OUI	1
2	NON	2

- -

Variable: 11
Name:NO -ORGA (AUTRES)
Designation:Avez-vous l'habitude de jeter d'autres articles non-organiqe

Values: 2

Val.	Designation	Value
1	OUI	1
2	NON	2

- -

Variable: 12
Name:NON-ORGA (MAT CONST)
Designation:AVEZ-VOUS L'HABITUDE DE JETER DES MATERIAUX DE CONSTRUCTION

Values: 2

Val.	Designation	Value
1	OUI	1

2	NON	2

- -

Variable: 13
Name:RECYCLAGE A
Designation:TYPE DE MATERIEL OU DECHETS UTILISER A D'AUTRES USAGES OU RECYCLES
Values: 4

Val.	Designation	Value
1	BOUTEILLES	1
2	BOIS	2
3	COMPOST	3
4	PDR	0

- -

Variable: 14
Name:RECLYCLAGE B
Designation:TYPE DE MATERIEL/DECHETS UTILISES A D'AUTRES USAGES OU RECYCLES
Values: 4

Val.	Designation	Value
1	BOUTEILLES	1
2	BOIS	2
3	COMPOST	3
4	PDR	0

- -

Variable: 15
Name:JETER DECHETS DURS
Designation:A PART DES DECHETS DELA CITES, QUEL AUTRES DECHETS DURS METTEZ-VOUS AU REBUS
Values: 4

Val.	Designation	Value
1	.	1
2	Fer	2
3	Un peu de tout	3
4	PDR	0

- -

Variable: 16
Name:ACHAT MAT RECYCLE
Designation:AVEZ-VOUS DEJA ACHETE DES OBJETS OU DU MATERIEL RECYCLE ?

Values: 4

Val.	Designation	Value
1	OCCASIONNELEMENT	1
2	REGULIEREMENT	2
3	SOUVENT	3
4	NON	0

Variable: 17
Name:MAT-RECY/ LESQUELS A
Designation:SI VOUS ACHETEZ DU MATERIEL RECYCLE, LESQUELS

Values: 8

Val.	Designation	Value
1	EMBALLAGE	1
2	PAPIER/CARTON	2
3	BOUTEILLES	3
4	GALLONS PLASTIQUE	4
5	PLAST. RECYCLE	5
6	ARTICLES EN FER	6
7	AUTRES	7
8	NSP	0

Variable: 18
Name:MAT-RECY//LESQUELS B
Designation:SI VOUS ACHETEZ DU MATERIEL RECYCLE, LESQUELS B

Values: 8

Val.	Designation	Value
1	EMBALLAGE	1
2	CARTON/PAPIER	2
3	BOUTEILLES	3
4	GALLONS PLASTIQUE	4
5	PLASTIQUE RECYCLE	5
6	ARTICLES EN FER	6
7	AUTRES	7
8	NSP	0

Variable: 19
Name:MAT-RECY//LESQUELS C
Designation:SI VOUS ACHETEZ DU MATERIEL RECYCLE, LESQUELS C

Values: 8

Val.	Designation	Value
1	EMBALLAGE	1
2	CARTON/PAPIER	2
3	BOUTEILLES	3
4	GALLONS PLASTIQUE	4
5	PLASTIQUE RECYCLE	5
6	ARTICLES EN FER	6
7	AUTRES	7
8	NSP	0

Variable: 20
Name:MAT-RECY//LESQUELS D
Designation:SI VOUS ACHETEZ DU MATERIEL RECYCLE, LESQUELS D

Values: 8

Val.	Designation	Value
1	EMBALLAGE	1
2	CARTON/PAPIER	2
3	BOUTEILLES	3
4	GALLONS PLASTIQUE	4
5	PLASTIQUE RECYCLE	5
6	ARTICLES EN FER	6
7	AUTRES	7
8	NSP	0

- -

Variable: 21
Name:MAT-RECY//LESQUELS E
Designation:SI VOUS ACHETEZ DU MATERIEL RECYCLE, LESQUELS E

Values: 8

Val.	Designation	Value
1	EMBALLAGE	1
2	CARTON/PAPIER	2
3	BOUTEILLES	3
4	GALLONS PLASTIQUE	4
5	PLASTIQUE RECYCLE	5
6	ARTICLES EN FER	6
7	AUTRES	7
8	NSP	0

- -

Variable: 22
Name:ACHAT TERRE NOIRE
Designation:SAVEZ-VOUS ACHETER DE LA TERRE NOIRE

Values: 2

Val.	Designation	Value
1	OUI	1
2	NON	2

- -

Variable: 23
Name:TERRE NOIRE/RAISON
Designation:POUR QUEL USAGE - TERRE NOIRE

Values: 3

Val.	Designation	Value
1		1

3	NSP/PDR

- -

Variable: 24
Name:ACHAT ENGRAIS
Designation:SAVEZ-VOUS ACHETER DE L'ENGRAIS OU DES FERTILISANTS

Values: 2

Val.	Designation	Value
1	OUI	1
2	NON	2

- -

Variable: 25
Name:ENGRAIS / RAISON
Designation:POUR QUEL USAGE - ENGRAIS/FERTILISANTS

Values: 3

Val.	Designation	Value
1	.	1
2	..	2
3	NSP/PDR	0

- -

Variable: 26
Name:ACHAT COMPOST
Designation:SAVEZ-VOUS ACHETER DU COMPOST

Values: 2

Val.	Designation	Value
1	OUI	1
2	NON	2

- -

Variable: 27
Name:COMPOST / USAGE
Designation:POUR QUEL USAGE - COMPOST

Values: 3

Val.	Designation	Value
1	.	1
2	..	2
3	NSP/PDR	0

- -

Variable: 28
Name:ACHAT FUMIER
Designation:SAVEZ-VOUS ACHETER DU FUMIER

Values: 2

Val.	Designation	Value
1	OUI	1
2	NON	2

- -

Variable: 29
Name:FUMIER / RAISON
Designation:POUR QUEL USAGE - FUMIER

Values: 3

Val.	Designation	Value
1	Trop de tracas	1
2	Autre	2
3	NSP/PDR	0

- -

Variable: 30
Name:RAMASSAGE MAIRIE
Designation:EST-CE LA MAIRIE QUI RAMASSE VOS ORDURES

Values: 7

Val.	Designation	Value
1	CHQ JOUR	1
2	TS 2 JRS	2
3	TS 3 JRS	3
4	1 X / SEM	4
5	JOUR PRECIS	5
6	AUTRE	6
7	NON/PDR	0

- -

Variable: 31
Name:RAMASSAGE SERV PRIVE
Designation:EST-CE UN SERVICE PRIVE QUI RAMASSE VOS ORDURES

Values: 7

Val.	Designation	Value
1	CHQ JOUR	1
2	TS 2 JRS	2
3	TS 3 JRS	3
4	1 X / SEM	4
5	JOUR PRECIS	5
6	AUTRE	6
7	NON/PDR	0

- -

Variable: 32
Name:ORDURES VOUS-MEME
Designation:EST-CE VOUS-MEME QUI DISPOSEZ DES ORDURES

Values: 7

Val.	Designation	Value
1	CHQ JOUR	1
2	TS 2 JRS	2
3	TS 3 JRS	3
4	1 X / SEM	4
5	JOUR PRECIS	5
6	AUTRE	6
7	NON/PDR	0

- -

Variable: 33
Name:AUTRE/JOBBEUR
Designation:SI C'EST UN JOBBEUR COMBIEN LUI PAYEZ-VOUS ?

Values: 6

Val.	Designation	Value
1	CH/JOUR	1
2	TS 2J	2
3	TS 3J	3
4	1X/SEM	4
5	JOUR PRECIS	5
6	AUTRE	6

- -

Variable: 34
Name:SERVICE PRIVE
Designation:S'IL S'AGIT D'UN SERVICE PRIVE COMBIEN PAYEZ-VOUS PAR MOIS ?

Values: 6

Val.	Designation	Value
1	$1-5	1
2	$6-10	2
3	$11-15	3
4	$16-20	4
5	$21 +	5
6	$ P.D.R	0

- -

Variable: 35
Name:SERVICE P.AVANTAGE
Designation:S'IL S'AGIT D'UN SERVICE PRIVE QUEL AVANTAGE OFFRE T-IL ?

Values: 4

Val.	Designation	Value

2	..	2
3	...	3
4	PDR/NSP	0

- -

Variable: 36
Name:SERV PRIVE-AVANT. 2
Designation:QUEL AVANTAGE OFFRE LE SERVICE PRIVE ?

Values: 4

Val.	Designation	Value
1	+ facile a disposer	1
2	Autre	2
3	Aucun	3
4	PRD	0

- -

Variable: 37
Name:SERV PRIVE - INCONVT
Designation:QUEL INCONVENIENT OFFRE LE SERVICE PRIVE?

Values: 4

Val.	Designation	Value
1	.	1
2	..	2
3	Pas regulier	3
4	PDR	0

- -

Variable: 38
Name:EVALUATION MAIRIE
Designation:COMMENT ESTIMEZ-VOUS LA COLLECTE DES ORDURES (SATISFACTION)

Values: 6

Val.	Designation	Value
1	TRES MAUVAIS	1
2	MAUVAIS	2
3	PASSABLE	3
4	ADEQUAT	4
5	PARFAIT	5
6	PDR/NSP	0

- -

Variable: 39
Name:COMMENT DISP. VS-MEM
Designation:SI VOUS DISPOSEZ VOUS-MEME, QUE FAITES VOUS DES ORDURES ?

Values: 7

Val. Designation Value

1	PERSONNEL SS INSTRUC	1
2	PERSONNEL AVEC INSTR	2
3	COIN DE LA RUE	3
4	DEVANT CHEZ MOI	4
5	N'IMPORTE OU	5
6	AUTRE	6
7	PDR/NSP	0

Variable: 40
Name:SUGGESTIONS/CONSEIL
Designation:QU'AURIEZ-VOUS SUGGERE EN MATIERE DE COLLECTE DES ORDURES

Values: 6

Val.	Designation	Value
1	PAYER SOUS CONDITION	1
2	FAIT PAR ORG. PRIVE	2
3	MAIRIE Dt TRAVAILLER	3
4	PARTAGE DES TACHES	4
5	AUTRES	5
6	PDR/NSP	0

Variable: 41
Name:ORG. COMMUNAUTAIRE
Designation:SERIEZ-VOUS EN FAVEUR D'UNE ORGANISATION OU PARTICIPATION COMMUNAUTAIRE POUR LA COLLECTE DES ORDURES ?
Values: 2

Val.	Designation	Value
1	OUI	1
2	NON	2

Variable: 42
Name:OUI PARTICIPATION
Designation:SI OUI, Y PARTICIPERIEZ-VOUS

Values: 3

Val.	Designation	Value
1	OUI	1
2	NON	2
3	PDR/NSP	0

Variable: 43
Name:SEPARER DECHETS
Designation:SERIEZ-VOUS DISPOSE A SEPARER LES DECHETS ORGANIQUES DES DECHETS NON-ORGANIQUES
Values: 2

Val.	Designation	Value
1	OUI	1
2	NON	2

- -

Variable: 44
Name:OUI SEPARER/RAISON
Designation:SI OUI POUR SEPARER LES DECHETS, POUR QUELLE RAISON

Values: 4

Val.	Designation	Value
1	Pr facilite/+ propre	1
2	Pr aider la collecte	2
3	Par habitude	3
4	PDR/NSP	0

- -

Variable: 45
Name:NOMBRE D'EMPLOYES
Designation:COMBIEN D'EMPLOYES TRAVAILLENT DANS LE BUSINESS

Values: 4

Val.	Designation	Value
1	1-5	1
2	6-10	2
3	11-25	3
4	26 +	4

- -

Variable: 46
Name:SPEPARER PR CONTENEU
Designation:SERIEZ-VOUS DISPOSE A SEPARER LES DECHETS EN LES PLACANT DANS DE CONTENEURS DIFFERENTS

Values: 2

Val.	Designation	Value
1	OUI	1
2	NON	2

- -

Variable: 47
Name:OUI-SEPARER PR CONT.
Designation:SI OUI, POUR QUELLE RAISON

Values: 4

Val.	Designation	Value
1	Pr facilite/+ propre	1
2	Pr aider la collecte	2
3	Par sans civic/servi	3
4	PDR/NSP	0

Variable: 48
Name:NON-SEPARER PR CONT.
Designation:SI NON, POUR QUELLE RAISON

Values: 4

Val.	Designation	Value
1	travail/tracas/temps	1
2	Pas d'org pr ca/cont	2
3	Pas mat dur/p.necess	3
4	PDR/NSP	0

Variable: 49
Name:PAYER CONTRAT
Designation:SERIEZ-VOUS DISPOSE A PAYER UN CONTRAT OU UN ABONNEMENT POUR LA COLLECTE DES ORDURES
Values: 6

Val.	Designation	Value
1	NON	0
2	HESITE	1
3	A DOMICILE	2
4	POINT PRECIS	3
5	L'UN OU L'AUTRE	4
6	PDR/NSP	6

Variable: 50
Name:DISPOSER PAYER 1
Designation:SERIEZ-VOUS DISPOSE A PAYER $10

Values: 2

Val.	Designation	Value
1	OUI	1
2	NON	2

Variable: 51
Name:DISPOSE PAYER 2
Designation:ESTS-VOUS DISPOSE A PAYER $8

Values: 2

Val.	Designation	Value
1	OUI	1
2	NON	2

Variable: 52
Name:DISPOSE PAYER 3
Designation:ETES-VOUS DISPOSE A PAYER $6

Values: 2

Val.	Designation	Value
1	OUI	1
2	NON	2

- -

Variable: 53
Name:DISPOSE PAYER 4
Designation:ETES-VOUS DISPOSE A PAYER $5

Values: 2

Val.	Designation	Value
1	OUI	1
2	NON	2

- -

Variable: 54
Name:DISPOSE A PAYER 5
Designation:ETES-VOUS DISPOSE A PAYER $3

Values: 2

Val.	Designation	Value
1	OUI	1
2	NON	2

- -

Variable: 55
Name:DISPOSE PAYER 6
Designation:ETES-VOUS DISPOSE A PAYER $2

Values: 2

Val.	Designation	Value
1	OUI	1
2	NON	2

- -

Variable: 56
Name:PAYER POUR SEPARER
Designation:SI ON VOUS PAIE, SERIEZ-VOUS DISPOSER A SEPARER LES DECHETS
ET LES AMENER A UN POINT DE COLLECTE ?
Values: 3

1	OUI	1
2	NON	0
3	NSP	2

- -

Variable: 57
Name:NETTOYER FOSSE
Designation:TOUS LES COMBIEN DE TEMPS FAITES-VOUS NETTOYER VOTRE FOSSE SEPTIQUE (OU VOTRE LATRINE) ?
Values: 6

Val.	Designation	Value
1	2 X/AN	1
2	CHQ ANNEE	2
3	TS LES 2 ANS	3
4	VARIABLE	4
5	PDR	5
6	N'A PAS DE FOSSE	0

- -

Variable: 58
Name:FOSSE LATRINE
Designation: (SI A UNE FOSSE /LATRINE) QUI LE FAIT ?

Values: 4

Val.	Designation	Value
1	BAYAKOU	1
2	SERVICE PRIVE	2
3	SERVICE D'HYGIENE	3
4	PDR	0

- -

Variable: 59
Name:FOSSE/LATRINE COMB.
Designation:(SI A UNE FOSSE/LATRINE) COMBIEN CELA VOUS COUTE-T-IL ?

Values: 7

Val.	Designation	Value
1	$ 0-25	1
2	$ 26-50	2
3	$ 51-80	3
4	$ 81-100	4
5	101 +	5
6	PDR/HESITE	6
7	NSP	0

- -

Variable: 60
Name:EDUCATION
Designation:PENSER-VOUS QUE LES GENS EN GENERAL SOIENT TOUS IMBUS DE LA ADEQUATE D'ELIMINER LES ORDURES MENAGERES ?

Values: 4

Val.	Designation	Value
1	OUI	1
2	NON	0
3	HESITE	2
4	PDR	3

- -

Variable: 61
Name:SAVOIR PLUS 1
Designation:A- LA FACON CORRECTE DE DISPOSER DES DECHETS

Values: 2

Val.	Designation	Value
1	OUI	1
2	NON	0

- -

Variable: 62
Name:SAVOIR PLUS 2
Designation:B- LE REWCYCLAGE DES DECHETS ORGANIQUES

Values: 2

Val.	Designation	Value
1	OUI	1
2	NON	0

- -

Variable: 63
Name:SAVOIR PLUS 3
Designation:C- LE RECYCLAGE DES DECHETS NON-ORGANIQUES

Values: 2

Val.	Designation	Value
1	OUI	1
2	NON	0

- -

Variable: 64
Name:DECHETS ACCUMULES
Designation:VOULEZ-VOUS APPRENDRE PLUS SUR LES EFFETS PRODUITS PAR LES DECHETS ACCUMULES ?

Values: 4

Val.	Designation	Value
1	OUI	1
2	NON	0
3	HESITE	2
4	PDR	3

APPENDIX J

COMMERCIAL SURVEY RESULTS

Variable traitee:STATUT INTERVIEWE
Libelle:STATUT DE LA PERSONNE INTERVIEWEE

Croisement sur:STATUT INTERVIEWE
Libelle:Type de commerce

	Total	Val 1	Val 2	Val 3	Val 4	Val 5	Val 6	Val 7	Val 8	Val 9	Val 10
Val 1	15 50.00%	4 26.67% 66.67%	1 6.67% 50.00%	1 6.67% 50.00%	1 6.67% 50.00%	1 6.67% 50.00%	1 6.67% 50.00%	1 6.67% 50.00%	2 13.33% 33.33%	0.00% 0.00%	3 20.00% 75.00%
Val 2	15 50.00%	2 13.33% 33.33%	1 6.67% 50.00%	1 6.67% 50.00%	1 6.67% 50.00%	1 6.67% 50.00%	1 6.67% 50.00%	1 6.67% 50.00%	4 26.67% 66.67%	2 13.33% .0%	1 6.67% 25.00%
	30	6 20.00%	2 6.67%	2 6.67%	2 6.67%	2 6.67%	2 6.67%	2 6.67%	6 20.00%	2 6.67%	4 13.33%

Variable traitee:UNITE DE DISPOSITION
Libele:Comment disposez-vous des ordures (unites)

Croisement sur:UNITE DE DISPOSITION
Libele:Type de commerce

	Total	Val 1	Val 2	Val 3	Val 4	Val 5	Val 6	Val 7	Val 8	Val 9	Val 10
Val 1	3 10.00%	2 66.67% 33.33%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	1 33.33% 25.00%
Val 2	11 36.67%	1 9.09% 16.67%	0.00% 0.00%	1 9.09% 50.00%	0.00% 0.00%	1 9.09% 50.00%	1 9.09% 50.00%	0.00% 0.00%	4 36.36% 66.67%	0.00% 0.00%	3 27.27% 75.00%
Val 3	0 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%
Val 4	9 30.00%	2 22.22% 33.33%	2 22.22% 100%	1 11.11% 50.00%	0.00% 0.00%	1 11.11% 50.00%	1 11.11% 50.00%	0.00% 0.00%	1 11.11% 16.67%	1 11.11% 50.00%	0.00% 0.00%
Val 5	0 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%
Val 6	7 23.33%	1 14.29% 16.67%	0.00% 0.00%	0.00% 0.00%	2 28.57% 100%	0.00% 0.00%	0.00% 0.00%	2 28.57% 100%	1 14.29% 16.67%	1 14.29% 50.00%	0.00% 0.00%
	30	6 20.00%	2 6.67%	2 6.67%	2 6.67%	2 6.67%	2 6.67%	2 6.67%	6 20.00%	2 6.67%	4 13.33%

Variable traitee:QUANTITE ORDURES
Libele:PAR QUELLE QUANTITE ?

Croisement sur:QUANTITE ORDURES
Libele:Type de commerce

	Total	Val 1	Val 2	Val 3	Val 4	Val 5	Val 6	Val 7	Val 8	Val 9	Val 10
Val 1	10 33.33%	3 30.00% 50.00%	 0.00% 0.00%	1 10.00% 50.00%	 0.00% 0.00%	1 10.00% 50.00%	1 10.00% 50.00%	1 10.00% 50.00%	1 10.00% 16.67%	1 10.00% 50.00%	1 10.00% 25.00%
Val 2	4 13.33%	 0.00% 0.00%	 0.00% 0.00%	 0.00% 0.00%	1 25.00% 50.00%	1 25.00% 50.00%	 0.00% 0.00%	 0.00% 0.00%	2 50.00% 33.33%	 0.00% 0.00%	 0.00% 0.00%
Val 3	5 16.67%	1 20.00% 16.67%	 0.00% 0.00%	 0.00% 0.00%	 0.00% 0.00%	 0.00% 0.00%	 0.00% 0.00%	1 20.00% 50.00%	2 40.00% 33.33%	 0.00% 0.00%	1 20.00% 25.00%
Val 4	4 13.33%	1 25.00% 16.67%	 0.00% 0.00%	1 25.00% 50.00%	1 25.00% 50.00%	 0.00% 0.00%	1 25.00% 50.00%	 0.00% 0.00%	 0.00% 0.00%	 0.00% 0.00%	 0.00% 0.00%
Val 5	7 23.33%	1 14.29% 16.67%	2 28.57% 100%	 0.00% 0.00%	 0.00% 0.00%	 0.00% 0.00%	 0.00% 0.00%	 0.00% 0.00%	1 14.29% 16.67%	1 14.29% 50.00%	2 28.57% 50.00%
	30	6 20.00%	2 6.67%	2 6.67%	2 6.67%	2 6.67%	2 6.67%	2 6.67%	6 20.00%	2 6.67%	4 13.33%

Variable traitee:TS LES COMBIEN DE TS
Libele:TOUS LES COMBIEN DE TEMPS DISPOSEZ-VOUS DE CETTE QUANTITE ?

Croisement sur:TS LES COMBIEN DE TS
Libele:Type de commerce

	Total	Val 1	Val 2	Val 3	Val 4	Val 5	Val 6	Val 7	Val 8	Val 9	Val 10
Val 1	17 56.67%	2 11.76% 33.33%	1 5.88% 50.00%	1 5.88% 50.00%	2 11.76% 100%	0.00% 0.00%	2 11.76% 100%	1 5.88% 50.00%	5 29.41% 83.33%	2 11.76% 100%	1 5.88% 25.00%
Val 2	6 20.00%	3 50.00% 50.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	1 16.67% 50.00%	0.00% 0.00%	0.00% 0.00%	1 16.67% 16.67%	0.00% 0.00%	1 16.67% 25.00%
Val 3	2 6.67%	1 50.00% 16.67%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	1 50.00% 25.00%
Val 4	4 13.33%	0.00% 0.00%	0.00% 0.00%	1 25.00% 50.00%	0.00% 0.00%	1 25.00% 50.00%	0.00% 0.00%	1 25.00% 50.00%	0.00% 0.00%	0.00% 0.00%	1 25.00% 25.00%
Val 5	1 3.33%	0.00% 0.00%	1 100% 50.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%
	30	6 20.00%	2 6.67%	2 6.67%	2 6.67%	2 6.67%	2 6.67%	2 6.67%	6 20.00%	2 6.67%	4 13.33%

Variable traitee:NOA-0484 (BOUTEILLES
Libele:AVEZ-VOUS L'HABITUDE DE JETER DES BOUTEILLES OU DU VERRE

Croissement sur:NOA-0484 (BOUTEILLES
Libele:Type de commerce

	Total	Val 1	Val 2	Val 3	Val 4	Val 5	Val 6	Val 7	Val 8	Val 9	Val 10
Val 1	14 46.67%	4 28.57% 66.67%	2 14.29% 100%	 0.00% 0.00%	 0.00% 0.00%	1 7.14% 50.00%	2 14.29% 100%	 0.00% 0.00%	3 21.43% 50.00%	2 14.29% 100%	 0.00% 0.00%
Val 2	16 53.33%	2 12.50% 33.33%	 0.00% 0.00%	2 12.50% 100%	2 12.50% 100%	1 6.25% 50.00%	 0.00% 0.00%	2 12.50% 100%	3 18.75% 50.00%	 0.00% 0.00%	4 25.00% 100%
	30	6 20.00%	2 6.67%	2 6.67%	2 6.67%	2 6.67%	2 6.67%	2 6.67%	6 20.00%	2 6.67%	4 13.33%

Variable traitee:NO -OR6A (AUTRES)
Libele:Avez-vous l habitude de jeter d'autres articles non-organiqe

Croisement sur:NO -OR6A (AUTRES)
Libele:Type de commerce

	Total	Val 1	Val 2	Val 3	Val 4	Val 5	Val 6	Val 7	Val 8	Val 9	Val 10
Val 1	10 33.33%	2 20.00% 33.33%	1 10.00% 50.00%	0.00% 0.00%	2 20.00% 100%	1 10.00% 50.00%	0.00% 0.00%	1 10.00% 50.00%	1 10.00% 16.67%	1 10.00% 50.00%	1 10.00% 25.00%
Val 2	20 66.67%	4 20.00% 66.67%	1 5.00% 50.00%	2 10.00% 100%	0.00% 0.00%	1 5.00% 50.00%	2 10.00% 100%	1 5.00% 50.00%	5 25.00% 83.33%	1 5.00% 50.00%	3 15.00% 75.00%
	30	6 20.00%	2 6.67%	2 6.67%	2 6.67%	2 6.67%	2 6.67%	2 6.67%	6 20.00%	2 6.67%	4 13.33%

Variable traitee:NON-0664 (MAT CONST)
Libele:AVEZ-VOUS L'HABITUDE DE JETER DES MATERIAUX DE CONSTRUCTION

Croisement sur:NON-0664 (MAT CONST)
Libele:Type de commerce

	Total	Val 1	Val 2	Val 3	Val 4	Val 5	Val 6	Val 7	Val 8	Val 9	Val 10
Val 1	3 10.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	1 33.33% 50.00%	0.00% 0.00%	1 33.33% 50.00%	1 33.33% 25.00%
Val 2	27 90.00%	6 22.22% 100%	2 7.41% 100%	2 7.41% 100%	2 7.41% 100%	2 7.41% 100%	2 7.41% 100%	1 3.70% 50.00%	6 22.22% 100%	1 3.70% 50.00%	3 11.11% 75.00%
	30	6 20.00%	2 6.67%	2 6.67%	2 6.67%	2 6.67%	2 6.67%	2 6.67%	6 20.00%	2 6.67%	4 13.33%

variable traitee:RECYCLAGE A
Libele:TYPE DE MATERIEL OU DECHETS UTILISER A D'AUTRES USAGES OU RECYCLES

Croisement sur:RECYCLAGE A
Libele:Type de commerce

	Total	Val 1	Val 2	Val 3	Val 4	Val 5	Val 6	Val 7	Val 8	Val 9	Val 10
Val 1	16 53.33%	5 31.25% 83.33%	2 12.50% 100%	1 6.25% 50.00%	0.00% 0.00%	1 6.25% 50.00%	1 6.25% 50.00%	1 6.25% 50.00%	4 25.00% 66.67%	0.00% 0.00%	1 6.25% 25.00%
Val 2	2 6.67%	1 50.00% 16.67%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	1 50.00% 25.00%
Val 3	1 3.33%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	1 100% 50.00%	0.00% 0.00%
Val 4	11 36.67%	0.00% 0.00%	0.00% 0.00%	1 9.09% 50.00%	2 18.18% 100%	1 9.09% 50.00%	1 9.09% 50.00%	1 9.09% 50.00%	2 18.18% 33.33%	1 9.09% 50.00%	2 18.18% 50.00%
	30	6 20.00%	2 6.67%	2 6.67%	2 6.67%	2 6.67%	2 6.67%	2 6.67%	6 20.00%	2 6.67%	4 13.33%

-24?

Variable traitee:RECLYCLAGE B
Libele:TYPE DE MATERIEL/DECHETS UTILISES A D AUTRES USAGES OU RECYCLES

Croisement sur:RECLYCLAGE B
Libele:Type de commerce

	Total	Val 1	Val 2	Val 3	Val 4	Val 5	Val 6	Val 7	Val 8	Val 9	Val 10
Val 1	1 3.33%	1 100% 16.67%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%
Val 2	0 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%
Val 3	0 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%
Val 4	29 96.67%	5 17.24% 83.33%	2 6.90% 100%	2 6.90% 100%	2 6.90% 100%	2 6.90% 100%	2 6.90% 100%	2 6.90% 100%	6 20.69% 100%	2 6.90% 100%	4 13.79% 100%
	30	6 20.00%	2 6.67%	2 6.67%	2 6.67%	2 6.67%	2 6.67%	2 6.67%	6 20.00%	2 6.67%	4 13.33%

Variable traitee:JETER DECHETS DURS
Libele:A PART DES DECHETS DELA CITES, QUEL AUTRES DECHETS DURS METTEZ-VOUS AU REBUS

Croisement sur:JETER DECHETS DURS
Litele:Type de commerce

	Total	Val 1	Val 2	Val 3	Val 4	Val 5	Val 6	Val 7	Val 8	Val 9	Val 10
Val 1	1 3.33%	1 100% 16.67%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%
Val 2	1 3.33%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	1 100% 50.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%
Val 3	2 6.67%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	1 50.00% 50.00%	0.00% 0.00%	0.00% 0.00%	1 50.00% 50.00%	0.00% 0.00%
Val 4	26 86.67%	5 19.23% 83.33%	2 7.69% 100%	2 7.69% 100%	2 7.69% 100%	1 3.85% 50.00%	1 3.85% 50.00%	2 7.69% 100%	6 23.08% 100%	1 3.85% 50.00%	4 15.38% 100%
	30	6 20.00%	2 6.67%	2 6.67%	2 6.67%	2 6.67%	2 6.67%	2 6.67%	6 20.00%	2 6.67%	4 13.33%

Variable traitee:ACHAT MAT RECYCLE
Libele:AVEZ-VOUS DEJA ACHETE DES OBJETS OU DU MATERIEL RECYCLE ?

Croisement sur:ACHAT MAT RECYCLE
Libele:Type de commerce

	Total	Val 1	Val 2	Val 3	Val 4	Val 5	Val 6	Val 7	Val 8	Val 9	Val 10
Val 1	5 16.67%	1 20.00% 16.67%	 0.00% 0.00%	1 20.00% 50.00%	 0.00% 0.00%	 0.00% 0.00%	 0.00% 0.00%	 0.00% 0.00%	1 20.00% 16.67%	1 20.00% 50.00%	1 20.00% 25.00%
Val 2	13 43.33%	3 23.08% 50.00%	1 7.69% 50.00%	1 7.69% 50.00%	 0.00% 0.00%	 0.00% 0.00%	1 7.69% 50.00%	1 7.69% 50.00%	4 30.77% 66.67%	 0.00% 0.00%	2 15.38% 50.00%
Val 3	1 3.33%	 0.00% 0.00%	 0.00% 0.00%	 0.00% 0.00%	 0.00% 0.00%	1 100% 50.00%	 0.00% 0.00%	 0.00% 0.00%	 0.00% 0.00%	 0.00% 0.00%	 0.00% 0.00%
Val 4	11 36.67%	2 18.18% 33.33%	1 9.09% 50.00%	 0.00% 0.00%	2 18.18% 100%	1 9.09% 50.00%	1 9.09% 50.00%	1 9.09% 50.00%	1 9.09% 16.67%	1 9.09% 50.00%	1 9.09% 25.00%
	30	6 20.00%	2 6.67%	2 6.67%	2 6.67%	2 6.67%	2 6.67%	2 6.67%	6 20.00%	2 6.67%	4 13.33%

Variable traitee:MAT-RECY/ LESQUELS A
Libele:SI VOUS ACHETEZ DU MATERIEL RECYCLE, LESQUELS

Croisement sur:MAT-RECY/ LESQUELS A
Libele:Type de commerce

	Total	Val 1	Val 2	Val 3	Val 4	Val 5	Val 6	Val 7	Val 8	Val 9	Val 10
Val 1	1 3.33%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	1 100% 16.67%	0.00% 0.00%	0.00% 0.00%
Val 2	7 23.33%	1 14.29% 16.67%	0.00% 0.00%	1 14.29% 50.00%	0.00% 0.00%	1 14.29% 50.00%	1 14.29% 50.00%	0.00% 0.00%	3 42.86% 50.00%	0.00% 0.00%	0.00% 0.00%
Val 3	1 3.33%	1 100% 16.67%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%
Val 4	2 6.67%	0.00% 0.00%	0.00% 0.00%	1 50.00% 50.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	1 50.00% 16.67%	0.00% 0.00%	0.00% 0.00%
Val 5	0 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%
Val 6	1 3.33%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	1 100% 25.00%
Val 7	3 10.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	1 33.33% 50.00%	2 66.67% 50.00%
Val 8	15 50.00%	4 26.67% 66.67%	2 13.33% 100%	0.00% 0.00%	2 13.33% 100%	1 6.67% 50.00%	1 6.67% 50.00%	2 13.33% 100%	1 6.67% 16.67%	1 6.67% 50.00%	1 6.67% 25.00%
	30	6 20.00%	2 6.67%	2 6.67%	2 6.67%	2 6.67%	2 6.67%	2 6.67%	6 20.00%	2 6.67%	4 13.33%

Variable traitee:MAT-RECY//LESQUELS B
Libele:SI VOUS ACHETEZ DU MATERIEL RECYCLE, LESQUELS B

Croisement sur:MAT-RECY//LESQUELS B
Libele:Type de commerce

	Total	Val 1	Val 2	Val 3	Val 4	Val 5	Val 6	Val 7	Val 8	Val 9	Val 10
Val 1	2 6.67% 	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	2 100% 33.33%	0.00% 0.00%	0.00% 0.00%
Val 2	2 6.67%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	1 50.00% 16.67%	0.00% 0.00%	1 50.00% 25.00%
Val 3	1 3.33%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	1 100% 50.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%
Val 4	1 3.33%	1 100% 16.67%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%
Val 5	2 6.67%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	2 100% 33.33%	0.00% 0.00%	0.00% 0.00%
Val 6	0 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%
Val 7	0 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%
Val 8	22 73.33%	5 22.73% 83.33%	2 9.09% 100%	2 9.09% 100%	2 9.09% 100%	2 9.09% 100%	1 4.55% 50.00%	2 9.09% 100%	1 4.55% 16.67%	2 9.09% 100%	3 13.64% 75.00%
	30	6 20.00%	2 6.67%	2 6.67%	2 6.67%	2 6.67%	2 6.67%	2 6.67%	6 20.00%	2 6.67%	4 13.33%

Variable traitee:MAT-RECY//LESQUELS C
Libele:SI VOUS ACHETEZ DU MATERIEL RECYCLE, LESQUELS C

Croisement sur:MAT-RECY//LESQUELS C
Libele:Type de commerce

	Total	Val 1	Val 2	Val 3	Val 4	Val 5	Val 6	Val 7	Val 8	Val 9	Val 10
Val 1	2 6.67%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	2 100% 33.33%	0.00% 0.00%	0.00% 0.00%
Val 2	0 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%
Val 3	0 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%
Val 4	2 6.67%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	2 100% 33.33%	0.00% 0.00%	0.00% 0.00%
Val 5	1 3.33%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	1 100% 50.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%
Val 6	0 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%
Val 7	0 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%
Val 8	25 83.33%	6 24.00% 100%	2 8.00% 100%	2 8.00% 100%	2 8.00% 100%	2 8.00% 100%	1 4.00% 50.00%	2 8.00% 100%	2 8.00% 33.33%	2 8.00% 100%	4 16.00% 100%
	30	6 20.00%	2 6.67%	2 6.67%	2 6.67%	2 6.67%	2 6.67%	2 6.67%	6 20.00%	2 6.67%	4 13.33%

Variable traitee:MAT-RECY//LESQUELS D
Libele:SI VOUS ACHETEZ DU MATERIEL RECYCLE, LESQUELS D

Croisement sur:MAT-RECY//LESQUELS D
Libele:Type de commerce

	Total	Val 1	Val 2	Val 3	Val 4	Val 5	Val 6	Val 7	Val 8	Val 9	Val 10
Val 1	1 3.33%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	1 100% 50.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%
Val 2	0 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%
Val 3	1 3.33%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	1 100% 16.67%	0.00% 0.00%	0.00% 0.00%
Val 4	0 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%
Val 5	0 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%
Val 6	0 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%
Val 7	0 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%
Val 8	28 93.33%	6 21.43% 100%	2 7.14% 100%	2 7.14% 100%	2 7.14% 100%	2 7.14% 100%	1 3.57% 50.00%	2 7.14% 100%	5 17.86% 83.33%	2 7.14% 100%	4 14.29% 100%
	30	6 20.00%	2 6.67%	2 6.67%	2 6.67%	2 6.67%	2 6.67%	2 6.67%	6 20.00%	2 6.67%	4 13.33%

Variable traitee:MAT-RECY//LESQUELS E
Libele:Si VOUS ACHETEZ DU MATERIEL RECYCLE, LESQUELS E

Croisement sur:MAT-RECY//LESQUELS E
Libele:Type de commerce

	Total	Val 1	Val 2	Val 3	Val 4	Val 5	Val 6	Val 7	Val 8	Val 9	Val 10
Val 1	0 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%
Val 2	0 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%
Val 3	0 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%
Val 4	0 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%
Val 5	0 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%
Val 6	0 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%
Val 7	1 3.33%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	1 100% 50.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%
Val 8	29 96.67%	6 20.69% 100%	2 6.90% 100%	2 6.90% 100%	2 6.90% 100%	2 6.90% 100%	1 3.45% 50.00%	2 6.90% 100%	6 20.69% 100%	2 6.90% 100%	4 13.79% 100%
	30	6 20.00%	2 6.67%	2 6.67%	2 6.67%	2 6.67%	2 6.67%	2 6.67%	6 20.00%	2 6.67%	4 13.33%

Variable traitee:ACHAT TERRE NOIRE
Libele:SAVEZ-VOUS ACHETER DE LA TERRE NOIRE

Croisement sur:ACHAT TERRE NOIRE
Libele:Type de commerce

	Total	Val 1	Val 2	Val 3	Val 4	Val 5	Val 6	Val 7	Val 8	Val 9	Val 10
Val 1	1 3.33% 	 0.00% 0.00%	 0.00% 0.00%	 0.00% 0.00%	 0.00% 0.00%	 0.00% 0.00%	1 100% 50.00%	 0.00% 0.00%	 0.00% 0.00%	 0.00% 0.00%	 0.00% 0.00%
Val 2	29 96.67% 	6 20.69% 100%	2 6.90% 100%	2 6.90% 100%	2 6.90% 100%	2 6.90% 100%	1 3.45% 50.00%	2 6.90% 100%	6 20.69% 100%	2 6.90% 100%	4 13.79% 100%
	30	6 20.00%	2 6.67%	2 6.67%	2 6.67%	2 6.67%	2 6.67%	2 6.67%	6 20.00%	2 6.67%	4 13.33%

Variable traitee:ACHAT ENGRAIS
Libele:SAVEZ-VOUS ACHETER DE L'ENGRAIS OU DES FERTILISANTS

Croisement sur:ACHAT ENGRAIS
Libele:Type de commerce

	Total	Val 1	Val 2	Val 3	Val 4	Val 5	Val 6	Val 7	Val 8	Val 9	Val 10
Val 1	1 3.33% 	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	1 100% 50.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%
Val 2	29 96.67% 	6 20.69% 100%	2 6.90% 100%	2 6.90% 100%	2 6.90% 100%	2 6.90% 100%	1 3.45% 50.00%	2 6.90% 100%	6 20.69% 100%	2 6.90% 100%	4 13.79% 100%
	30	6 20.00%	2 6.67%	2 6.67%	2 6.67%	2 6.67%	2 6.67%	2 6.67%	6 20.00%	2 6.67%	4 13.33%

Variable traitee:ENGRAIS / RAISON
Libele:POUR QUEL USAGE - ENGRAIS/FERTILISANTS

Croisement sur:ENGRAIS / RAISON
Libele:Type de commerce

	Total	Val 1	Val 2	Val 3	Val 4	Val 5	Val 6	Val 7	Val 8	Val 9	Val 10
Val 1	1 3.33%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	1 100% 50.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%
Val 2	0 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%
Val 3	29 96.67%	6 20.69% 100%	2 6.90% 100%	2 6.90% 100%	2 6.90% 100%	2 6.90% 100%	1 3.45% 50.00%	2 6.90% 100%	6 20.69% 100%	2 6.90% 100%	4 13.79% 100%
	30	6 20.00%	2 6.67%	2 6.67%	2 6.67%	2 6.67%	2 6.67%	2 6.67%	6 20.00%	2 6.67%	4 13.33%

Variable traitee:ACHAT COMPOST
Libele:SAVEZ-VOUS ACHETER DU COMPOST

Croisement sur:ACHAT COMPOST
Libelle:type de commerce

	Total	Val 1	Val 2	Val 3	Val 4	Val 5	Val 6	Val 7	Val 8	Val 9	Val 10
Val 1	2 6.67%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	1 50.00% 50.00%	0.00% 0.00%	0.00% 0.00%	1 50.00% 50.00%	0.00% 0.00%
Val 2	28 93.33%	6 21.43% 100%	2 7.14% 100%	2 7.14% 100%	2 7.14% 100%	2 7.14% 100%	1 3.57% 50.00%	2 7.14% 100%	6 21.43% 100%	1 3.57% 50.00%	4 14.29% 100%
	30	6 20.00%	2 6.67%	2 6.67%	2 6.67%	2 6.67%	2 6.67%	2 6.67%	6 20.00%	2 6.67%	4 13.33%

Variable traitee:COMFOST / USAGE
Libele:FOUR QUEL USAGE - COMFOST

Croisement sur:COMFOST / USAGE
Libele:Type de commerce

	Total	Val 1	Val 2	Val 3	Val 4	Val 5	Val 6	Val 7	Val 8	Val 9	Val 10
Val 1	0 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%
Val 2	0 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%
Val 3	30 100%	6 20.00% 100%	2 6.67% 100%	2 6.67% 100%	2 6.67% 100%	2 6.67% 100%	2 6.67% 100%	2 6.67% 100%	6 20.00% 100%	2 6.67% 100%	4 13.33% 100%
	30	6 20.00%	2 6.67%	2 6.67%	2 6.67%	2 6.67%	2 6.67%	2 6.67%	6 20.00%	2 6.67%	4 13.33%

Variable traitee:ACHAT FUMIER
Libele:SAVEZ-VOUS ACHETER DU FUMIER

Croisement sur:ACHAT FUMIER
Libele:Type de commerce

	Total	Val 1	Val 2	Val 3	Val 4	Val 5	Val 6	Val 7	Val 8	Val 9	Val 10
Val 1	0 0.00% 	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%
Val 2	30 100%	6 20.00% 100%	2 6.67% 100%	2 6.67% 100%	2 6.67% 100%	2 6.67% 100%	2 6.67% 100%	2 6.67% 100%	6 20.00% 100%	2 6.67% 100%	4 13.33% 100%
	30	6 20.00%	2 6.67%	2 6.67%	2 6.67%	2 6.67%	2 6.67%	2 6.67%	6 20.00%	2 6.67%	4 13.33%

Variable traitee:FUMIER / RAISON
Libele:POUR QUEL USAGE - FUMIER

Croisement sur:FUMIER / RAISON
Libele:Type de commerce

	Total	Val 1	Val 2	Val 3	Val 4	Val 5	Val 6	Val 7	Val 8	Val 9	Val 10
Val 1	0 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%
Val 2	0 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%
Val 3	30 100%	6 20.00% 100%	2 6.67% 100%	2 6.67% 100%	2 6.67% 100%	2 6.67% 100%	2 6.67% 100%	2 6.67% 100%	6 20.00% 100%	2 6.67% 100%	4 13.33% 100%
	30	6 20.00%	2 6.67%	2 6.67%	2 6.67%	2 6.67%	2 6.67%	2 6.67%	6 20.00%	2 6.67%	4 13.33%

Variable traitee:RAMASSAGE MAIRIE
Libele:EST-CE LA MAIRIE QUI RAMASSE VOS ORDURES

Croisement sur:RAMASSAGE MAIRIE
Libele:Type de commerce

	Total	Val 1	Val 2	Val 3	Val 4	Val 5	Val 6	Val 7	Val 8	Val 9	Val 10
Val 1	0 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%
Val 2	2 6.67%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	1 50.00% 50.00%	0.00% 0.00%	0.00% 0.00%	1 50.00% 16.67%	0.00% 0.00%	0.00% 0.00%
Val 3	0 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%
Val 4	6 20.00%	1 16.67% 16.67%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	1 16.67% 50.00%	1 16.67% 50.00%	0.00% 0.00%	2 33.33% 33.33%	0.00% 0.00%	1 16.67% 25.00%
Val 5	0 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%
Val 6	4 13.33%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	2 50.00% 100%	0.00% 0.00%	1 25.00% 50.00%	0.00% 0.00%	0.00% 0.00%	1 25.00% 50.00%	0.00% 0.00%
Val 7	18 60.00%	5 27.78% 83.33%	2 11.11% 100%	2 11.11% 100%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	2 11.11% 100%	3 16.67% 50.00%	1 5.56% 50.00%	3 16.67% 75.00%
	30	6 20.00%	2 6.67%	2 6.67%	2 6.67%	2 6.67%	2 6.67%	2 6.67%	6 20.00%	2 6.67%	4 13.33%

Variable traitee:RAMASSAGE SERV PRIVE
Libele:EST-CE UN SERVICE PRIVE QUI RAMASSE VOS ORDURES

Croisement sur:RAMASSAGE SERV PRIVE
Libele:Type de commerce

	Total	Val 1	Val 2	Val 3	Val 4	Val 5	Val 6	Val 7	Val 8	Val 9	Val 10
Val 1	0 0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%
Val 2	0 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%
Val 3	4 13.33%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	2 50.00% 33.33%	1 25.00% 50.00%	1 25.00% 25.00%
Val 4	4 13.33%	2 50.00% 33.33%	1 25.00% 50.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	1 25.00% 16.67%	0.00% 0.00%	0.00% 0.00%
Val 5	0 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%
Val 6	0 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%
Val 7	22 73.33%	4 18.18% 66.67%	1 4.55% 50.00%	2 9.09% 100%	2 9.09% 100%	2 9.09% 100%	2 9.09% 100%	2 9.09% 100%	3 13.64% 50.00%	1 4.55% 50.00%	3 13.64% 75.00%
	30	6 20.00%	2 6.67%	2 6.67%	2 6.67%	2 6.67%	2 6.67%	2 6.67%	6 20.00%	2 6.67%	4 13.33%

Variable traitee:DROGUES VOUS-MEME
Libele:EST-CE VOUS-MEME QUI DISPOSEZ DES DROGUES

Croisement sur:DROGUES VOUS-MEME
Libele:Type de commerce

	Total	Val 1	Val 2	Val 3	Val 4	Val 5	Val 6	Val 7	Val 8	Val 9	Val 10
Val 1	10 33.33%	3 30.00% 50.00%	1 10.00% 50.00%	1 10.00% 50.00%	0.00% 0.00%	0.00% 0.00%	1 10.00% 50.00%	0.00% 0.00%	2 20.00% 33.33%	2 20.00% 100%	0.00% 0.00%
Val 2	5 16.67%	3 60.00% 50.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	1 20.00% 50.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	1 20.00% 25.00%
Val 3	0 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%
Val 4	7 23.33%	0.00% 0.00%	0.00% 0.00%	1 14.29% 50.00%	0.00% 0.00%	1 14.29% 50.00%	1 14.29% 50.00%	2 28.57% 100%	1 14.29% 16.67%	0.00% 0.00%	1 14.29% 25.00%
Val 5	0 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%
Val 6	1 3.33%	0.00% 0.00%	1 100% 50.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%
Val 7	7 23.33%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	2 28.57% 100%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	3 42.86% 50.00%	0.00% 0.00%	2 28.57% 50.00%
	30	6 20.00%	2 6.67%	2 6.67%	2 6.67%	2 6.67%	2 6.67%	2 6.67%	6 20.00%	2 6.67%	4 13.33%

Variable traitee:AUTRE/JOBBEUR
Libele:SI C EST UN JOBBEUR COMBIEN LUI PAYEZ-VOUS ?

Croisement sur:AUTRE/JOBBEUR
Libele:Type de commerce

	Total	Val 1	Val 2	Val 3	Val 4	Val 5	Val 6	Val 7	Val 8	Val 9	Val 10
Val 1	1 3.33%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	1 100% 16.67%	0.00% 0.00%	0.00% 0.00%
Val 2	0 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%
Val 3	0 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%
Val 4	1 3.33%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	1 100% 25.00%
Val 5	0 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%
Val 6	28 93.33%	6 21.43% 100%	2 7.14% 100%	2 7.14% 100%	2 7.14% 100%	2 7.14% 100%	2 7.14% 100%	2 7.14% 100%	5 17.86% 83.33%	2 7.14% 100%	3 10.71% 75.00%
	30	6 20.00%	2 6.67%	2 6.67%	2 6.67%	2 6.67%	2 6.67%	2 6.67%	6 20.00%	2 6.67%	4 13.33%

Variable traitee:SERVICE PRIVE
Libele:S IL S'AGIT D'UN SERVICE PRIVE COMBIEN PAYEZ-VOUS PAR MOIS ?

Croisement sur:SERVICE PRIVE
Libele:Type de commerce

	Total	Val 1	Val 2	Val 3	Val 4	Val 5	Val 6	Val 7	Val 8	Val 9	Val 10
Val 1	0 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%
Val 2	3 10.00%	1 33.33% 16.67%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	1 33.33% 16.67%	0.00% 0.00%	1 33.33% 25.00%
Val 3	0 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%
Val 4	2 6.67%	1 50.00% 16.67%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	1 50.00% 16.67%	0.00% 0.00%	0.00% 0.00%
Val 5	4 13.33%	0.00% 0.00%	1 25.00% 50.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	1 25.00% 16.67%	1 25.00% 50.00%	1 25.00% 25.00%
Val 6	21 70.00%	4 19.05% 66.67%	1 4.76% 50.00%	2 9.52% 100%	2 9.52% 100%	2 9.52% 100%	2 9.52% 100%	2 9.52% 100%	3 14.29% 50.00%	1 4.76% 50.00%	2 9.52% 50.00%
	30	6 20.00%	2 6.67%	2 6.67%	2 6.67%	2 6.67%	2 6.67%	2 6.67%	6 20.00%	2 6.67%	4 13.33%

Variable traitee:SERVICE F.AVANTAGE
Libele:S IL S AGIT D UN SERVICE PRIVE QUEL AVANTAGE OFFRE T-IL ?

Croisement sur:SERVICE F.AVANTAGE
Libele:Type de commerce

	Total	Val 1	Val 2	Val 3	Val 4	Val 5	Val 6	Val 7	Val 8	Val 9	Val 10
Val 1	3 10.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	1 33.33% 16.67%	1 33.33% 50.00%	1 33.33% 25.00%
Val 2	0 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%
Val 3	3 10.00%	0.00% 0.00%	1 33.33% 50.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	2 66.67% 33.33%	0.00% 0.00%	0.00% 0.00%
Val 4	24 80.00%	6 25.00% 100%	1 4.17% 50.00%	2 8.33% 100%	2 8.33% 100%	2 8.33% 100%	2 8.33% 100%	2 8.33% 100%	3 12.50% 50.00%	1 4.17% 50.00%	3 12.50% 75.00%
	30	6 20.00%	2 6.67%	2 6.67%	2 6.67%	2 6.67%	2 6.67%	2 6.67%	6 20.00%	2 6.67%	4 13.33%

Variable traitee:SERV PRIVE-AVANT. 2
Libele:QUEL AVANTAGE OFFRE LE SERVICE PRIVE ?

Croisement sur:SERV PRIVE-AVANT. 2
Libele:Type de commerce

	Total	Val 1	Val 2	Val 3	Val 4	Val 5	Val 6	Val 7	Val 8	Val 9	Val 10
Val 1	1 3.33%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	1 100% 25.00%
Val 2	0 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%
Val 3	0 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%
Val 4	29 96.67%	6 20.69% 100%	2 6.90% 100%	2 6.90% 100%	2 6.90% 100%	2 6.90% 100%	2 6.90% 100%	2 6.90% 100%	6 20.69% 100%	2 6.90% 100%	3 10.34% 75.00%
	30	6 20.00%	2 6.67%	2 6.67%	2 6.67%	2 6.67%	2 6.67%	2 6.67%	6 20.00%	2 6.67%	4 13.33%

Variable traitee:SERV PRIVE - INCONV1
Libele:QUEL INCONVENIENT OFFRE LE SERVICE PRIVE?

Croisement sur:SERV PRIVE - INCONV1
Libele:Type de commerce

	Total	Val 1	Val 2	Val 3	Val 4	Val 5	Val 6	Val 7	Val 8	Val 9	Val 10
Val 1	0 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%
Val 2	0 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	. 0.00% 0.00%
Val 3	1 3.33%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	1 100% 16.67%	0.00% 0.00%	0.00% 0.00%
Val 4	29 96.67%	6 20.69% 100%	2 6.90% 100%	2 6.90% 100%	2 6.90% 100%	2 6.90% 100%	2 6.90% 100%	2 6.90% 100%	5 17.24% 83.33%	2 6.90% 100%	4 13.79% 100%
	30	6 20.00%	2 6.67%	2 6.67%	2 6.67%	2 6.67%	2 6.67%	2 6.67%	6 20.00%	2 6.67%	4 13.33%

Variable traitee:EVALUATION MAIRIE
Libele:COMMENT ESTIMEZ-VOUS LA COLLECTE DES ORDURES (SATISFACTION)

Croisement sur:EVALUATION MAIRIE
Libele:Type de commerce

	Total	Val 1	Val 2	Val 3	Val 4	Val 5	Val 6	Val 7	Val 8	Val 9	Val 10
Val 1	3 10.00%	1 33.33% 16.67%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	1 33.33% 50.00%	1 33.33% 50.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%
Val 2	11 36.67%	4 36.36% 66.67%	0.00% 0.00%	1 9.09% 50.00%	0.00% 0.00%	2 18.18% 100%	0.00% 0.00%	0.00% 0.00%	1 9.09% 16.67%	0.00% 0.00%	3 27.27% 75.00%
Val 3	12 40.00%	0.00% 0.00%	2 16.67% 100%	0.00% 0.00%	1 8.33% 50.00%	0.00% 0.00%	1 8.33% 50.00%	1 8.33% 50.00%	4 33.33% 66.67%	2 16.67% 100%	1 8.33% 25.00%
Val 4	0 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%
Val 5	1 3.33%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	1 100% 16.67%	0.00% 0.00%	0.00% 0.00%
Val 6	3 10.00%	1 33.33% 16.67%	0.00% 0.00%	1 33.33% 50.00%	1 33.33% 50.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%
	30	6 20.00%	2 6.67%	2 6.67%	2 6.67%	2 6.67%	2 6.67%	2 6.67%	6 20.00%	2 6.67%	4 13.33%

Variable traitee:COMMENT DISP. VS-MEM
Libele:SI VOUS DISPOSEZ VOUS-MEME, QUE FAITES VOUS DES ORDURES ?

Croisement sur:COMMENT DISP. VS-MEM
Libele:Type de commerce

	Total	Val 1	Val 2	Val 3	Val 4	Val 5	Val 6	Val 7	Val 8	Val 9	Val 10
Val 1	3 10.00% 	1 33.33% 16.67%	 0.00% 0.00%	 0.00% 0.00%	 0.00% 0.00%	 0.00% 0.00%	2 66.67% 100%	 0.00% 0.00%	 0.00% 0.00%	 0.00% 0.00%	 0.00% 0.00%
Val 2	8 26.67%	1 12.50% 16.67%	2 25.00% 100%	2 25.00% 100%	 0.00% 0.00%	 0.00% 0.00%	 0.00% 0.00%	1 12.50% 50.00%	 0.00% 0.00%	2 25.00% 100%	 0.00% 0.00%
Val 3	4 13.33%	1 25.00% 16.67%	 0.00% 0.00%	 0.00% 0.00%	 0.00% 0.00%	1 25.00% 50.00%	 0.00% 0.00%	 0.00% 0.00%	2 50.00% 33.33%	 0.00% 0.00%	 0.00% 0.00%
Val 4	5 16.67%	 0.00% 0.00%	 0.00% 0.00%	 0.00% 0.00%	1 20.00% 50.00%	 0.00% 0.00%	 0.00% 0.00%	 0.00% 0.00%	2 40.00% 33.33%	 0.00% 0.00%	2 40.00% 50.00%
Val 5	0 0.00%	 0.00% 0.00%	 0.00% 0.00%	 0.00% 0.00%	 0.00% 0.00%	 0.00% 0.00%	 0.00% 0.00%	 0.00% 0.00%	 0.00% 0.00%	 0.00% 0.00%	 0.00% 0.00%
Val 6	6 20.00%	3 50.00% 50.00%	 0.00% 0.00%	 0.00% 0.00%	 0.00% 0.00%	 0.00% 0.00%	 0.00% 0.00%	1 16.67% 50.00%	2 33.33% 33.33%	 0.00% 0.00%	 0.00% 0.00%
Val 7	4 13.33%	 0.00% 0.00%	 0.00% 0.00%	 0.00% 0.00%	1 25.00% 50.00%	1 25.00% 50.00%	 0.00% 0.00%	 0.00% 0.00%	 0.00% 0.00%	 0.00% 0.00%	2 50.00% 50.00%
	30	6 20.00%	2 6.67%	2 6.67%	2 6.67%	2 6.67%	2 6.67%	2 6.67%	6 20.00%	2 6.67%	4 13.33%

Variable traitee:SUGGESTIONS/CONSEIL
Libele:QU'AUREZ-VOUS SUGGERE EN MATIERE DE COLLECTE DES ORDURES

Croisement sur:SUGGESTIONS/CONSEIL
Libele:Type de commerce

	Total	Val 1	Val 2	Val 3	Val 4	Val 5	Val 6	Val 7	Val 8	Val 9	Val 10
Val 1	1 3.33%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	1 100% 50.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%
Val 2	4 13.33%	2 50.00% 33.33%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	1 25.00% 50.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	1 25.00% 25.00%
Val 3	14 46.67%	3 21.43% 50.00%	1 7.14% 50.00%	2 14.29% 100%	0.00% 0.00%	1 7.14% 50.00%	1 7.14% 50.00%	1 7.14% 50.00%	4 28.57% 66.67%	0.00% 0.00%	1 7.14% 25.00%
Val 4	3 10.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	1 33.33% 50.00%	0.00% 0.00%	1 33.33% 50.00%	1 33.33% 25.00%
Val 5	1 3.33%	1 100% 16.67%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%
Val 6	7 23.33%	0.00% 0.00%	1 14.29% 50.00%	0.00% 0.00%	1 14.29% 50.00%	0.00% 0.00%	1 14.29% 50.00%	0.00% 0.00%	2 28.57% 33.33%	1 14.29% 50.00%	1 14.29% 25.00%
	30	6 20.00%	2 6.67%	2 6.67%	2 6.67%	2 6.67%	2 6.67%	2 6.67%	6 20.00%	2 6.67%	4 13.33%

Variable traitee:OR6. COMMUNAUTAIRE
Libele:SERIEZ-VOUS EN FAVEUR D UNE ORGANISATION OU PARTICIPATION
COMMUNAUTAIRE POUR LA COLLECTE DES ORDURES ?

Croisement sur:OR5. COMMUNAUTAIRE
Libele:Type de commerce

	Total	Val 1	Val 2	Val 3	Val 4	Val 5	Val 6	Val 7	Val 8	Val 9	Val 10
Val 1	10 33.33%	2 20.00% 33.33%	 0.00% 0.00%	 0.00% 0.00%	1 10.00% 50.00%	 0.00% 0.00%	1 10.00% 50.00%	2 20.00% 100%	3 30.00% 50.00%	1 10.00% 50.00%	 0.00% 0.00%
Val 2	20 66.67%	4 20.00% 66.67%	2 10.00% 100%	2 10.00% 100%	1 5.00% 50.00%	2 10.00% 100%	1 5.00% 50.00%	 0.00% 0.00%	3 15.00% 50.00%	1 5.00% 50.00%	4 20.00% 100%
	30	6 20.00%	2 6.67%	2 6.67%	2 6.67%	2 6.67%	2 6.67%	2 6.67%	6 20.00%	2 6.67%	4 13.33%

Variable traitee:Q01 PARTICIPATION
Libele:SI Q01, V PARTICIPERIEZ-VOUS

Croisement sur:Q1 PARTICIPATION
Libele:Type de commerce

	Total	Val 1	Val 2	Val 3	Val 4	Val 5	Val 6	Val 7	Val 8	Val 9	Val 10
Val 1	7 23.33%	2 28.57% 33.33%	 0.00% 0.00%	 0.00% 0.00%	1 14.29% 50.00%	 0.00% 0.00%	 0.00% 0.00%	2 28.57% 100%	1 14.29% 16.67%	1 14.29% 50.00%	 0.00% 0.00%
Val 2	0 0.00%	 0.00% 0.00%	 0.00% 0.00%	 0.00% 0.00%	 0.00% 0.00%	 0.00% 0.00%	 0.00% 0.00%	 0.00% 0.00%	 0.00% 0.00%	 0.00% 0.00%	 0.00% 0.00%
Val 3	23 76.67%	4 17.39% 66.67%	2 8.70% 100%	2 8.70% 100%	1 4.35% 50.00%	2 8.70% 100%	2 8.70% 100%	 0.00% 0.00%	5 21.74% 83.33%	1 4.35% 50.00%	4 17.39% 100%
	30	6 20.00%	2 6.67%	2 6.67%	2 6.67%	2 6.67%	2 6.67%	2 6.67%	6 20.00%	2 6.67%	4 13.33%

Variable traitee:SEPARER DECHETS
Libele:SERIEZ-VOUS DISPOSE A SEPARER LES DECHETS ORGANIQUES DES DECHETS NON-ORGANIQUES

Croisement sur:SEPARER DECHETS
Libele:Type de commerce

	Total	Val 1	Val 2	Val 3	Val 4	Val 5	Val 6	Val 7	Val 8	Val 9	Val 10
Val 1	9 30.00%	3 33.33% 50.00%	 0.00% 0.00%	1 11.11% 50.00%	 0.00% 0.00%	 0.00% 0.00%	 0.00% 0.00%	1 11.11% 50.00%	2 22.22% 33.33%	2 22.22% 100%	 0.00% 0.00%
Val 2	21 70.00%	3 14.29% 50.00%	2 9.52% 100%	1 4.76% 50.00%	2 9.52% 100%	2 9.52% 100%	2 9.52% 100%	1 4.76% 50.00%	4 19.05% 66.67%	 0.00% 0.00%	4 19.05% 100%
	30	6 20.00%	2 6.67%	2 6.67%	2 6.67%	2 6.67%	2 6.67%	2 6.67%	6 20.00%	2 6.67%	4 13.33%

Variable traitee:QU1 SEPARER/RAISON
Libele:SI OUI POUR SEPARER LES DECHETS, POUR QUELLE RAISON

Croisement: sur:QU1 SEPARER/RAISON
Libele:Type de commerce

	Total	Val 1	Val 2	Val 3	Val 4	Val 5	Val 6	Val 7	Val 8	Val 9	Val 10
Val 1	6 20.00%	1 16.67% 16.67%	0.00% 0.00%	1 16.67% 50.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	1 16.67% 50.00%	2 33.33% 33.33%	1 16.67% 50.00%	0.00% 0.00%
Val 2	3 10.00%	2 66.67% 33.33%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	1 33.33% 50.00%	0.00% 0.00%
Val 3	1 3.33%	1 100% 16.67%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%
Val 4	20 66.67%	2 10.00% 33.33%	2 10.00% 100%	1 5.00% 50.00%	2 10.00% 100%	2 10.00% 100%	2 10.00% 100%	1 5.00% 50.00%	4 20.00% 66.67%	0.00% 0.00%	4 20.00% 100%
	30	6 20.00%	2 6.67%	2 6.67%	2 6.67%	2 6.67%	2 6.67%	2 6.67%	6 20.00%	2 6.67%	4 13.33%

Variable traitee:NOMBRE D EMPLOYES
Libele:COMBIEN D EMPLOYES TRAVAILLENT DANS LE BUSINESS

Croisement sur:NOMBRE D EMPLOYES
Libele:Type de commerce

	Total	Val 1	Val 2	Val 3	Val 4	Val 5	Val 6	Val 7	Val 8	Val 9	Val 10
Val 1	15 50.00%	5 33.33% 83.33%	 0.00% 0.00%	2 13.33% 100%	1 6.67% 50.00%	 0.00% 0.00%	 0.00% 0.00%	1 6.67% 50.00%	3 20.00% 50.00%	 0.00% 0.00%	3 20.00% 75.00%
Val 2	4 13.33%	 0.00% 0.00%	 0.00% 0.00%	 0.00% 0.00%	 0.00% 0.00%	1 25.00% 50.00%	1 25.00% 50.00%	 0.00% 0.00%	2 50.00% 33.33%	 0.00% 0.00%	 0.00% 0.00%
Val 3	5 16.67%	1 20.00% 16.67%	 0.00% 0.00%	 0.00% 0.00%	1 20.00% 50.00%	1 20.00% 50.00%	1 20.00% 50.00%	 0.00% 0.00%	 0.00% 0.00%	 0.00% 0.00%	1 20.00% 25.00%
Val 4	6 20.00%	 0.00% 0.00%	2 33.33% 100%	 0.00% 0.00%	 0.00% 0.00%	 0.00% 0.00%	 0.00% 0.00%	1 16.67% 50.00%	1 16.67% 16.67%	2 33.33% 100%	 0.00% 0.00%
	30	6 20.00%	2 6.67%	2 6.67%	2 6.67%	2 6.67%	2 6.67%	2 6.67%	6 20.00%	2 6.67%	4 13.33%

Variable traitee:SPEPARER PR CONTENEU
Libele:SERIEZ-VOUS DISPOSE A SEPARER LES DECHETS EN LES PLACANT
DANS DE CONTENEURS DIFFERENTS

Croisepert sur:SPEPARER PR CONTENEU
Litele:Type de commerce

	Total	Val 1	Val 2	Val 3	Val 4	Val 5	Val 6	Val 7	Val 8	Val 9	Val 10
Val 1	9 30.00%	3 33.33% 50.00%	 0.00% 0.00%	1 11.11% 50.00%	1 11.11% 50.00%	 0.00% 0.00%	1 11.11% 50.00%	 0.00% 0.00%	1 11.11% 16.67%	2 22.22% 100%	 0.00% 0.00%
Val 2	21 70.00%	3 14.29% 50.00%	2 9.52% 100%	1 4.76% 50.00%	1 4.76% 50.00%	2 9.52% 100%	1 4.76% 50.00%	2 9.52% 100%	5 23.81% 83.33%	 0.00% 0.00%	4 19.05% 100%
	30	6 20.00%	2 6.67%	2 6.67%	2 6.67%	2 6.67%	2 6.67%	2 6.67%	6 20.00%	2 6.67%	4 13.33%

Variable traitee:Q61-SEPARER PR CONT.
Libelle:SI OUI, POUR QUELLE RAISON

Croisement sur:Q1-SEPARER PR CONT.
Libelle:Type de commerce

	Total	Val 1	Val 2	Val 3	Val 4	Val 5	Val 6	Val 7	Val 8	Val 9	Val 10
Val 1	4 13.33%	0.00% 0.00%	0.00% 0.00%	1 25.00% 50.00%	0.00% 0.00%	0.00% 0.00%	1 25.00% 50.00%	0.00% 0.00%	1 25.00% 16.67%	1 25.00% 50.00%	0.00% 0.00%
Val 2	2 6.67%	1 50.00% 16.67%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	1 50.00% 50.00%	0.00% 0.00%
Val 3	2 6.67%	2 100% 33.33%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%
Val 4	22 73.33%	3 13.64% 50.00%	2 9.09% 100%	1 4.55% 50.00%	2 9.09% 100%	2 9.09% 100%	1 4.55% 50.00%	2 9.09% 100%	5 22.73% 83.33%	0.00% 0.00%	4 18.18% 100%
	30	6 20.00%	2 6.67%	2 6.67%	2 6.67%	2 6.67%	2 6.67%	2 6.67%	6 20.00%	2 6.67%	4 13.33%

Variable traitee:NON-SEPARER PR CONT.
Libele:SI NON, POUR QUELLE RAISON

Croisement sur:NON-SEPARER PR CONT.
Libele:Type de commerce

	Total	Val 1	Val 2	Val 3	Val 4	Val 5	Val 6	Val 7	Val 8	Val 9	Val 10
Val 1	12 40.00%	2 16.67% 33.33%	1 8.33% 50.00%	1 8.33% 50.00%	2 16.67% 100%	2 16.67% 100%	1 8.33% 50.00%	 0.00% 0.00%	2 16.67% 33.33%	 0.00% 0.00%	1 8.33% 25.00%
Val 2	2 6.67%	 0.00% 0.00%	 0.00% 0.00%	 0.00% 0.00%	 0.00% 0.00%	 0.00% 0.00%	 0.00% 0.00%	 0.00% 0.00%	 0.00% 0.00%	 0.00% 0.00%	2 100% 50.00%
Val 3	2 6.67%	 0.00% 0.00%	1 50.00% 50.00%	 0.00% 0.00%	 0.00% 0.00%	 0.00% 0.00%	 0.00% 0.00%	 0.00% 0.00%	1 50.00% 16.67%	 0.00% 0.00%	 0.00% 0.00%
Val 4	14 46.67%	4 28.57% 66.67%	 0.00% 0.00%	1 7.14% 50.00%	 0.00% 0.00%	 0.00% 0.00%	1 7.14% 50.00%	2 14.29% 100%	3 21.43% 50.00%	2 14.29% 100%	1 7.14% 25.00%
	30	6 20.00%	2 6.67%	2 6.67%	2 6.67%	2 6.67%	2 6.67%	2 6.67%	6 20.00%	2 6.67%	4 13.33%

Variable traitee:PAYER CONTRAT
Libelle:SERIEZ-VOUS DISPOSE A PAYER UN CONTRAT OU UN ABONNEMENT
POUR LA COLLECTE DES ORDURES

Croisement sur:PAYER CONTRAT
Libelle:Type de commerce

	Total	Val 1	Val 2	Val 3	Val 4	Val 5	Val 6	Val 7	Val 8	Val 9	Val 10
Val 1	12 40.00%	2 16.67% 33.33%	1 8.33% 50.00%	0.00% 0.00%	0.00% 0.00%	1 8.33% 50.00%	1 8.33% 50.00%	1 8.33% 50.00%	2 16.67% 33.33%	1 8.33% 50.00%	3 25.00% 75.00%
Val 2	1 3.33%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	1 100% 50.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%
Val 3	15 50.00%	3 20.00% 50.00%	0.00% 0.00%	2 13.33% 100%	2 13.33% 100%	1 6.67% 50.00%	0.00% 0.00%	1 6.67% 50.00%	4 26.67% 66.67%	1 6.67% 50.00%	1 6.67% 25.00%
Val 4	2 6.67%	1 50.00% 16.67%	1 50.00% 50.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%
Val 5	0 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%
Val 6	0 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%
	30	6 20.00%	2 6.67%	2 6.67%	2 6.67%	2 6.67%	2 6.67%	2 6.67%	6 20.00%	2 6.67%	4 13.33%

Variable traitee:DISPOSER PAYER 1
Libele:SERIEZ-VOUS DISPOSE A PAYER $10

Croisement sur:DISPOSER PAYER 1
Libele:Type de commerce

	Total	Val 1	Val 2	Val 3	Val 4	Val 5	Val 6	Val 7	Val 8	Val 9	Val 10
Val 1	2 6.67% 	0.00% 0.00%	1 50.00% 50.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	1 50.00% 16.67%	0.00% 0.00%	0.00% 0.00%
Val 2	28 93.33% 	6 21.43% 100%	1 3.57% 50.00%	2 7.14% 100%	2 7.14% 100%	2 7.14% 100%	2 7.14% 100%	2 7.14% 100%	5 17.86% 83.33%	2 7.14% 100%	4 14.29% 100%
	30	6 20.00%	2 6.67%	2 6.67%	2 6.67%	2 6.67%	2 6.67%	2 6.67%	6 20.00%	2 6.67%	4 13.33%

Variable traitee:DISPOSE PAYER 2
Libelle:ESTS-VOUS DISPOSE A PAYER $B

Croisement sur:DISPOSE PAYER 2
Libelle:Type de commerce

	Total	Val 1	Val 2	Val 3	Val 4	Val 5	Val 6	Val 7	Val 8	Val 9	Val 10
Val 1	1 3.33%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	1 100% 25.00%
Val 2	29 96.67%	6 20.69% 100%	2 6.90% 100%	2 6.90% 100%	2 6.90% 100%	2 6.90% 100%	2 6.90% 100%	2 6.90% 100%	6 20.69% 100%	2 6.90% 100%	3 10.34% 75.00%
	30	6 20.00%	2 6.67%	2 6.67%	2 6.67%	2 6.67%	2 6.67%	2 6.67%	6 20.00%	2 6.67%	4 13.33%

Variable traitee:DISPOSE PAYER 3
Libelle:ETES-VOUS DISPOSE A PAYER $6

Croisement sur:DISPOSE PAYER 3
Libelle:Type de commerce

	Total	Val 1	Val 2	Val 3	Val 4	Val 5	Val 6	Val 7	Val 8	Val 9	Val 10
Val 1	3 10.00%	1 33.33% 16.67%	 0.00% 0.00%	1 33.33% 50.00%	1 33.33% 50.00%	 0.00% 0.00%	 0.00% 0.00%	 0.00% 0.00%	 0.00% 0.00%	 0.00% 0.00%	 0.00% 0.00%
Val 2	27 90.00%	5 16.52% 83.33%	2 7.41% 100%	1 3.70% 50.00%	1 3.70% 50.00%	2 7.41% 100%	2 7.41% 100%	2 7.41% 100%	6 22.22% 100%	2 7.41% 100%	4 14.81% 100%
	30	6 20.00%	2 6.67%	2 6.67%	2 6.67%	2 6.67%	2 6.67%	2 6.67%	6 20.00%	2 6.67%	4 13.33%

Variable traitee:DISPOSE PAYER 4
Libelle:ETES-VOUS DISPOSE A PAYER $5

Croisement sur:DISPOSE PAYER 4
Libelle:Type de commerce

	Total	Val 1	Val 2	Val 3	Val 4	Val 5	Val 6	Val 7	Val 8	Val 9	Val 10
Val 1	5 16.67% 	 0.00% 0.00%	 0.00% 0.00%	 0.00% 0.00%	1 20.00% 50.00%	1 20.00% 50.00%	1 20.00% 50.00%	 0.00% 0.00%	2 40.00% 33.33%	 0.00% 0.00%	 0.00% 0.00%
Val 2	25 83.33% 	6 24.00% 100%	2 8.00% 100%	2 8.00% 100%	1 4.00% 50.00%	1 4.00% 50.00%	1 4.00% 50.00%	2 8.00% 100%	4 16.00% 66.67%	2 8.00% 100%	4 16.00% 100%
	30	6 20.00%	2 6.67%	2 6.67%	2 6.67%	2 6.67%	2 6.67%	2 6.67%	6 20.00%	2 6.67%	4 13.33%

Variable traitee:DISPOSE A PAYER 5
Libelle:ETES-VOUS DISPOSE A PAYER $?

Croisement sur:DISPOSE A PAYER 5
Libelle:Type de commerce

	Total	Val 1	Val 2	Val 3	Val 4	Val 5	Val 6	Val 7	Val 8	Val 9	Val 10
Val 1	0 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%
Val 2	30 100%	6 20.00% 100%	2 6.67% 100%	2 6.67% 100%	2 6.67% 100%	2 6.67% 100%	2 6.67% 100%	2 6.67% 100%	6 20.00% 100%	2 6.67% 100%	4 13.33% 100%
	30	6 20.00%	2 6.67%	2 6.67%	2 6.67%	2 6.67%	2 6.67%	2 6.67%	6 20.00%	2 6.67%	4 13.33%

Variable traitee:DISPOSE PAYER 6
Libele:ETES-VOUS DISPOSE A PAYER $?

Croisement sur:DISPOSE PAYER 6
Libele:Type de commerce

	Total	Val 1	Val 2	Val 3	Val 4	Val 5	Val 6	Val 7	Val 8	Val 9	Val 10
Val 1	8 26.67%	4 50.00% 66.67%	 0.00% 0.00%	1 12.50% 50.00%	 0.00% 0.00%	 0.00% 0.00%	 0.00% 0.00%	1 12.50% 50.00%	1 12.50% 16.67%	 0.00% 0.00%	1 12.50% 25.00%
Val 2	22 73.33%	2 9.09% 33.33%	2 9.09% 100%	1 4.55% 50.00%	2 9.09% 100%	2 9.09% 100%	2 9.09% 100%	1 4.55% 50.00%	5 22.73% 83.33%	2 9.09% 100%	3 13.64% 75.00%
	30	6 20.00%	2 6.67%	2 6.67%	2 6.67%	2 6.67%	2 6.67%	2 6.67%	6 20.00%	2 6.67%	4 13.33%

Variable traitee:FAIRE POUR SEPARER
Libele:SI ON VOUS FAIE, SERIEZ-VOUS DISPOSER A SEPARER LES DECHETS
ET LES AMENER A UN POINT DE COLLECTE ?

Croisement sur:FAIRE POUR SEPARER
Libele:Type de commerce

	Total	Val 1	Val 2	Val 3	Val 4	Val 5	Val 6	Val 7	Val 8	Val 9	Val 10
Val 1	3 10.00%	 0.00% 0.00%	 0.00% 0.00%	 0.00% 0.00%	 0.00% 0.00%	1 33.33% 50.00%	 0.00% 0.00%	1 33.33% 50.00%	1 33.33% 16.67%	 0.00% 0.00%	 0.00% 0.00%
Val 2	21 70.00%	4 19.05% 66.67%	1 4.76% 50.00%	1 4.76% 50.00%	2 9.52% 100%	1 4.76% 50.00%	2 9.52% 100%	1 4.76% 50.00%	4 19.05% 66.67%	1 4.76% 50.00%	4 19.05% 100%
Val 3	6 20.00%	2 33.33% 33.33%	1 16.67% 50.00%	1 16.67% 50.00%	 0.00% 0.00%	 0.00% 0.00%	 0.00% 0.00%	 0.00% 0.00%	1 16.67% 16.67%	1 16.67% 50.00%	 0.00% 0.00%
	30	6 20.00%	2 6.67%	2 6.67%	2 6.67%	2 6.67%	2 6.67%	2 6.67%	6 20.00%	2 6.67%	4 13.33%

Variable traitee:NETTOYER FOSSE
Libele:TOUS LES COMBIEN DE TEMPS FAITES-VOUS NETTOYER VOTRE FOSSE SEPTIQUE (OU VOTRE LATRINE) ?

Croisement sur:NETTOYER FOSSE
Libele:Type de commerce

	Total	Val 1	Val 2	Val 3	Val 4	Val 5	Val 6	Val 7	Val 8	Val 9	Val 10
Val 1	1 3.33%	 0.00% 0.00%	 0.00% 0.00%	 0.00% 0.00%	 0.00% 0.00%	 0.00% 0.00%	1 100% 50.00%	 0.00% 0.00%	 0.00% 0.00%	 0.00% 0.00%	 0.00% 0.00%
Val 2	6 20.00%	1 16.67% 16.67%	 0.00% 0.00%	1 16.67% 50.00%	 0.00% 0.00%	 0.00% 0.00%	 0.00% 0.00%	 0.00% 0.00%	2 33.33% 33.33%	 0.00% 0.00%	2 33.33% 50.00%
Val 3	3 10.00%	2 66.67% 33.33%	 0.00% 0.00%	 0.00% 0.00%	 0.00% 0.00%	1 33.33% 50.00%	 0.00% 0.00%	 0.00% 0.00%	 0.00% 0.00%	 0.00% 0.00%	 0.00% 0.00%
Val 4	5 16.67%	1 20.00% 16.67%	2 40.00% 100%	 0.00% 0.00%	1 20.00% 50.00%	 0.00% 0.00%	 0.00% 0.00%	 0.00% 0.00%	1 20.00% 16.67%	 0.00% 0.00%	 0.00% 0.00%
Val 5	7 23.33%	1 14.29% 16.67%	 0.00% 0.00%	 0.00% 0.00%	 0.00% 0.00%	1 14.29% 50.00%	1 14.29% 50.00%	1 14.29% 50.00%	2 28.57% 33.33%	 0.00% 0.00%	1 14.29% 25.00%
Val 6	8 26.67%	1 12.50% 16.67%	 0.00% 0.00%	1 12.50% 50.00%	1 12.50% 50.00%	 0.00% 0.00%	 0.00% 0.00%	1 12.50% 50.00%	1 12.50% 16.67%	2 25.00% 100%	1 12.50% 25.00%
	30	6 20.00%	2 6.67%	2 6.67%	2 6.67%	2 6.67%	2 6.67%	2 6.67%	6 20.00%	2 6.67%	4 13.33%

Variable traitee:FOSSE LATRINE
Libele: (SI A UNE FOSSE /LATRINE) DUI LE FAIT ?

Croisement sur:FOSSE LATRINE
Libele:Type de commerce

	Total	Val 1	Val 2	Val 3	Val 4	Val 5	Val 6	Val 7	Val 8	Val 9	Val 10
Val 1	7 23.33%	1 14.29% 16.67%	 0.00% 0.00%	1 14.29% 50.00%	 0.00% 0.00%	1 14.29% 50.00%	 0.00% 0.00%	 0.00% 0.00%	3 42.86% 50.00%	 0.00% 0.00%	1 14.29% 25.00%
Val 2	1 3.33%	 0.00% 0.00%	 0.00% 0.00%	 0.00% 0.00%	 0.00% 0.00%	 0.00% 0.00%	 0.00% 0.00%	 0.00% 0.00%	 0.00% 0.00%	 0.00% 0.00%	1 100% 25.00%
Val 3	5 16.67%	3 60.00% 50.00%	1 20.00% 50.00%	 0.00% 0.00%	 0.00% 0.00%	 0.00% 0.00%	1 20.00% 50.00%	 0.00% 0.00%	 0.00% 0.00%	 0.00% 0.00%	 0.00% 0.00%
Val 4	17 56.67%	2 11.76% 33.33%	1 5.88% 50.00%	1 5.88% 50.00%	2 11.76% 100%	1 5.88% 50.00%	1 5.88% 50.00%	2 11.76% 100%	3 17.65% 50.00%	2 11.76% 100%	2 11.76% 50.00%
	30	6 20.00%	2 6.67%	2 6.67%	2 6.67%	2 6.67%	2 6.67%	2 6.67%	6 20.00%	2 6.67%	4 13.33%

Variable traitee:FOSSE/LATRINE COME.
Libele:(SI A UNE FOSSE/LATRINE) COMBIEN CELA VOUS COUTE-T-IL ?

Croisement sur:FOSSE/LATRINE COME.
Libele:Type de commerce

	Total	Val 1	Val 2	Val 3	Val 4	Val 5	Val 6	Val 7	Val 8	Val 9	Val 10
Val 1	0 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%
Val 2	0 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%
Val 3	3 10.00%	1 33.33% 16.67%	0.00% 0.00%	1 33.33% 50.00%	0.00% 0.00%	1 33.33% 50.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%
Val 4	8 26.67%	3 37.50% 50.00%	1 12.50% 50.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	2 25.00% 100%	0.00% 0.00%	1 12.50% 16.67%	0.00% 0.00%	1 12.50% 25.00%
Val 5	0 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%
Val 6	1 3.33%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	1 100% 50.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%
Val 7	18 60.00%	2 11.11% 33.33%	1 5.56% 50.00%	1 5.56% 50.00%	1 5.56% 50.00%	1 5.56% 50.00%	0.00% 0.00%	2 11.11% 100%	5 27.78% 83.33%	2 11.11% 100%	3 16.67% 75.00%
	30	6 20.00%	2 6.67%	2 6.67%	2 6.67%	2 6.67%	2 6.67%	2 6.67%	6 20.00%	2 6.67%	4 13.33%

Variable traitee:EDUCATION
Libele:PENSER-VOUS QUE LES GENS EN GENERAL SOIENT TOUS IMBUS DE LA ADEQUATE D'ELIMINER LES ORDURES MENAGERES ?

Croisement sur:EDUCATION
Libele:Type de commerce

	Total	Val 1	Val 2	Val 3	Val 4	Val 5	Val 6	Val 7	Val 8	Val 9	Val 10
Val 1	0 0.00% 	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%
Val 2	27 90.00%	6 22.22% 100%	2 7.41% 100%	2 7.41% 100%	2 7.41% 100%	1 3.70% 50.00%	2 7.41% 100%	2 7.41% 100%	5 18.52% 83.33%	2 7.41% 100%	3 11.11% 75.00%
Val 3	3 10.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	1 33.33% 50.00%	0.00% 0.00%	0.00% 0.00%	1 33.33% 16.67%	0.00% 0.00%	1 33.33% 25.00%
Val 4	0 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%
	30	6 20.00%	2 6.67%	2 6.67%	2 6.67%	2 6.67%	2 6.67%	2 6.67%	6 20.00%	2 6.67%	4 13.33%

Variable traitee:SAVOIR PLUS 1
Libele:A- LA FACON CORRECTE DE DISPOSER DES DECHETS

Croisement sur:SAVOIR PLUS 1
Libele:Type de commerce

	Total	Val 1	Val 2	Val 3	Val 4	Val 5	Val 6	Val 7	Val 8	Val 9	Val 10
Val 1	24 80.00%	4 16.67% 66.67%	2 8.33% 100%	2 8.33% 100%	1 4.17% 50.00%	2 8.33% 100%	1 4.17% 50.00%	2 8.33% 100%	6 25.00% 100%	2 8.33% 100%	2 8.33% 50.00%
Val 2	6 20.00%	2 33.33% 33.33%	0.00% 0.00%	0.00% 0.00%	1 16.67% 50.00%	0.00% 0.00%	1 16.67% 50.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	2 33.33% 50.00%
	30	6 20.00%	2 6.67%	2 6.67%	2 6.67%	2 6.67%	2 6.67%	2 6.67%	6 20.00%	2 6.67%	4 13.33%

Variable traitee:S4V01F PLUS 2
Libele:F- LE RECYCLAGE DES DECHETS ORGANIQUES

Croisement sur:S4V01F PLUS 2
Libele:Type de commerce

	Total	Val 1	Val 2	Val 3	Val 4	Val 5	Val 6	Val 7	Val 8	Val 9	Val 10
Val 1	23 76.67% 	4 17.39% 66.67%	2 8.70% 100%	2 8.70% 100%	1 4.35% 50.00%	2 8.70% 100%	1 4.35% 50.00%	2 8.70% 100%	5 21.74% 83.33%	2 8.70% 100%	2 8.70% 50.00%
Val 2	7 23.33%	2 28.57% 33.33%	 0.00% 0.00%	 0.00% 0.00%	1 14.29% 50.00%	 0.00% 0.00%	1 14.29% 50.00%	 0.00% 0.00%	1 14.29% 16.67%	 0.00% 0.00%	2 28.57% 50.00%
	30	6 20.00%	2 6.67%	2 6.67%	2 6.67%	2 6.67%	2 6.67%	2 6.67%	6 20.00%	2 6.67%	4 13.33%

Variable traitee:SAVOIR PLUS 3
Libele:C- LE RECYCLAGE DES DECHETS NON-ORGANIQUES

Croisement sur:SAVOIR PLUS 3
Libele:Type de commerce

	Total	Val 1	Val 2	Val 3	Val 4	Val 5	Val 6	Val 7	Val 8	Val 9	Val 10
Val 1	24 80.00%	4 16.67% 66.67%	2 8.33% 100%	2 8.33% 100%	1 4.17% 50.00%	2 8.33% 100%	2 8.33% 100%	2 8.33% 100%	5 20.83% 83.33%	2 8.33% 100%	2 8.33% 50.00%
Val 2	6 20.00%	2 33.33% 33.33%	 0.00% 0.00%	 0.00% 0.00%	1 16.67% 50.00%	 0.00% 0.00%	 0.00% 0.00%	 0.00% 0.00%	1 16.67% 16.67%	 0.00% 0.00%	2 33.33% 50.00%
	30	6 20.00%	2 6.67%	2 6.67%	2 6.67%	2 6.67%	2 6.67%	2 6.67%	6 20.00%	2 6.67%	4 13.33%

Variable traitee:DECHETS ACCUMULES
Libele:VOULEZ-VOUS APPRENDRE PLUS SUR LES EFFETS PRODUITS PAR LES DECHETS ACCUMULES ?

Croisement sur:DECHETS ACCUMULES
Libele:Type de commerce

	Total	Val 1	Val 2	Val 3	Val 4	Val 5	Val 6	Val 7	Val 8	Val 9	Val 10
Val 1	24 80.00%	5 20.83% 83.33%	2 8.33% 100%	2 8.33% 100%	2 8.33% 100%	1 4.17% 50.00%	0.00% 0.00%	2 8.33% 100%	4 16.67% 66.67%	2 8.33% 100%	4 16.67% 100%
Val 2	3 10.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	1 33.33% 50.00%	2 66.67% 100%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%
Val 3	1 3.33%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	1 100% 16.67%	0.00% 0.00%	0.00% 0.00%
Val 4	2 6.67%	1 50.00% 16.67%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	1 50.00% 16.67%	0.00% 0.00%	0.00% 0.00%
	30	6 20.00%	2 6.67%	2 6.67%	2 6.67%	2 6.67%	2 6.67%	2 6.67%	6 20.00%	2 6.67%	4 13.33%

Variable traitee:OUI/HESITE
Libele:(SI OUI/OU/HESITE) QUEL SERAIT LE MOYEN LE PLUS EFFICACE
LA RADIO, LA TELEVISION OU LES JOURNAUX ?

Croisement sur:OUI/HESITE
Libele:Type de commerce

	Total	Val 1	Val 2	Val 3	Val 4	Val 5	Val 6	Val 7	Val 8	Val 9	Val 10
Val 1	6 20.00% 	1 16.67% 16.67%	 0.00% 0.00%	 0.00% 0.00%	1 16.67% 50.00%	1 16.67% 50.00%	 0.00% 0.00%	 0.00% 0.00%	1 16.67% 16.67%	 0.00% 0.00%	2 33.33% 50.00%
Val 2	2 6.67%	1 50.00% 16.67%	 0.00% 0.00%	 0.00% 0.00%	1 50.00% 50.00%	 0.00% 0.00%	 0.00% 0.00%	 0.00% 0.00%	 0.00% 0.00%	 0.00% 0.00%	 0.00% 0.00%
Val 3	1 3.33%	 0.00% 0.00%	1 100% 50.00%	 0.00% 0.00%	 0.00% 0.00%	 0.00% 0.00%	 0.00% 0.00%	 0.00% 0.00%	 0.00% 0.00%	 0.00% 0.00%	 0.00% 0.00%
Val 4	2 6.67%	 0.00% 0.00%	 0.00% 0.00%	 0.00% 0.00%	 0.00% 0.00%	 0.00% 0.00%	1 50.00% 50.00%	 0.00% 0.00%	1 50.00% 16.67%	 0.00% 0.00%	 0.00% 0.00%
Val 5	2 6.67%	 0.00% 0.00%	 0.00% 0.00%	 0.00% 0.00%	 0.00% 0.00%	 0.00% 0.00%	 0.00% 0.00%	 0.00% 0.00%	1 50.00% 16.67%	 0.00% 0.00%	1 50.00% 25.00%
Val 6	17 56.67%	4 23.53% 66.67%	1 5.88% 50.00%	2 11.76% 100%	 0.00% 0.00%	1 5.88% 50.00%	1 5.88% 50.00%	2 11.76% 100%	3 17.65% 50.00%	2 11.76% 100%	1 5.88% 25.00%
	30	6 20.00%	2 6.67%	2 6.67%	2 6.67%	2 6.67%	2 6.67%	2 6.67%	6 20.00%	2 6.67%	4 13.33%

APPENDIX K

FINANCIAL ANALYSIS FOR SMALL BUSINESS

Financial Analysis for Small Business

Equipment			Cost/month
Truck	75000		
Interest @ 18% Payment per month (60m)		1905	
Misc.		300	
Total per month			2205
Operational Cost			
Price of fuel per g	1.87		
Maint and reps 30% of original cost/m		375	
Gaz: 60g/d for 26 d		2917	2917
Labor (assume 16 h/d)			
Operators	2 @ 550/per m	1100	
6 Labor		750	
Subtotal		1850	
Surcharge labor	21.71%	402	
Total		2252	
Hollidays Additional Crew 116 days *2*33$/day		638	
Total labor /month		2890	3528
Overhead			
Insurance		400	400
Administration			
Office		500	
Telephone and Electricity		450	
Office clerk		365	
Accountant- part time		400	
Misc.		300	
Permit and taxes		500	2515
Total			11564
Overhead percentage	21.75		

Cash Flow per 5 years

Descript.	year 1	year 2	year 3	year 4	year 5
Oper cost	97920	97920	97920	97920	97920
Loan truck	26454	26454	26454	26454	26454
Truck rem. value					-7500
Cont. 5%	6219	6219	6219	6219	6219
Total	130592	130592	130592	130592	123092
Cost/oper cash	3482	3482	3482	3482	3282

G-total	134075	134075	134075	134075	126375
Revenues	153900	153900	153900	153900	153900
Profit	19825	19825	19825	19825	27525

Fee per ton	9.5
Profit	
Total operation cost	662674
Total Profit	106826
Profit	16.12

APPENDIX L

SAMPLE CIRCULARS FOR GARBAGE COLLECTION SERVICES

LICONFADO

« LA LIGUE
CONTRE LES FATRAS DOMESTIQUES »
met à votre disposition une machine
qui assurera le transport de vos immondices
jusqu'au bord de la mer.

Pour vous faciliter la tâche,
un Grand Sachet en plastic vous sera donné,
un chauffeur et un travailleur
passeront chez vous une fois par semaine
pour prendre le sachet rempli
en remettant un neuf.

Vous donnerez seulement
douze dollars ($ 12.00) le mois
et vos agents de moustiques, de ravets,
de mouches, de rats et de beaucoup de maladie
vous seront déchouqués et brûlés.

ADRESSE : Thor 10, rue Romaire No 27

PHONES : 4-2000 • 4-0521

DEMANDEZ POUR : HENRI LOUIS

CLEANIC ENTERPRISE

INDUSTRIAL PEST-CONTROL

RAMASSAGE D'ORDURES MENAGERES

Un service qui vous est offert une ou deux fois par semaine a un prix tres abordable. (sachets inclus)

TARIFS UNE FOIS PAR SEMAINE - 8 sachets/mois

Thomassin 44 a Fermathe	Mensualite	: $ 20/mois
Montagne Noire	3 mois d'avance	: $ 18/mois soit $ 54.00
Thomassin/Laboule/Pelerin	Mensualite	: $ 18/mois
Pequy-Ville/Morne Calvaire	3 mois d'avance	: $ 15/mois soit $ 45.00
Petion-Ville/Bourdon Musseau/Delmas/Debussy Turqeau/La Ville	Mensualite	: $ 15/mois
	3 mois d'avance	: $ 13/mois soit $ 39.00

TARIFS DEUX FOIS PAR SEMAINE 16 sachets par mois

Thomassin 44 a Fermathe	Mensualite	: $ 28/mois
Montagne Noire	3 mois d'avance	: $ 25/mois soit $ 75.00
Thomassin/Laboule/Pelerin	Mensualite	: $ 25/mois
Pequy-ville/Morne Calvaire	3 mois d'avance	: $ 22/mois soit $ 66.00
Petion-Ville/Bourdon Musseau/Delmas/Debussy Turqeau/La Ville	Mensualite	: $ 22/mois
	3 mois d'avance	: $ 20/mois soit $ 60.00

Aéroport International Maïs Gaté Building Air Express Int. • Port-au-Prince, Haïti W.I. • Tél.: 6-0102/6-4075/6-0194

30