

Chapter 23: Foristell

COMMUNITY PROFILE

The City of Foristell is located in St. Charles County on the eastern side of Missouri. It is part of the East Central Missouri Solid Waste Management District (District I). Foristell is located off of I-70 close to St. Louis and is a relatively small and rural. The Waste Management of St. Louis Transfer Station is located west of Foristell and has a steady flow of traffic due to the towns around the St. Louis metroplex area. Foristell is approximately 44.1 miles west of St. Louis, 199 miles northeast of Springfield, and 193 miles east of Kansas City.

Demographics:

	Foristell	St. Charles County
Area (sq. miles)	2.34	561.35
Population (1990)	114	212,907
Density (per sq. mile)	48.75	379.28
Pop. Change since 1980	-9.5%	47.7%
Number of households	48	74,402
Persons per household	2.40	2.83
High school graduates	31.6%	32.7%
Median Family Income	\$27,083	\$44,634
Percent below poverty level	7.0%	4.7%

Solid Waste Collection

Most of the cities in St. Charles County and the surrounding counties are contracted with private haulers (Waste Management and Love's Trash Service). Most rural communities are not contracted. There is no zoning or territories for haulers. Curbside recycling is done on a voluntary basis by Waste Management.

Solid Waste Disposal

Waste Management of St. Louis Transfer Station accepts waste from St. Charles County and the surrounding areas. The transfer station receives approximately 57,531 tons of waste per year and the current gate tipping fee is \$9.50 per company packer.

Waste Reduction and Recycling Programs

There are 9 drop-off recycling centers located in District I. These drop-offs collect aluminum, corrugated cardboard, plastics #1 and #2, phone books, magazines, ferrous cans, and newsprint. Waste Management also collects recyclables. Most cities (excluding rural towns) have some form of voluntary curbside recycling.

Waste Management of St. Louis Results

Information about sample size and composition are listed in tables 23-1 to 23-8.

All weights are listed in pounds and all volumes are in cubic feet.

SORT #1

Sort Conditions

The first sort was conducted March 31- April 1, 1997. A grassy site across from the tipping floor was selected as the sort location. The weather was mild and sunny.

Statistics	
Estimated MSW (lbs) Collected by Site During Sampling Period	1,018,092
Total Sample Weight (lbs)	2444.9
Significance Test Results	.000
Number of Samples Collected	12

OTHER WASTE CATEGORIES			
Over-the-counter Medication (OTC)	1	Beauty/Hygiene Aerosol Products	0
Prescription Medication (Rx)	2	Household Cleaning Aerosol Products	0
Beauty/Hygiene Products	3	Gardening/Yard Care Products	0
Household Cleaning Products	3	Pet Groom Products	0
Sharps/Blades	0	Disposable Razors	6
Syringes	12	Alkaline Batteries	11
Hardware/Shop Products	2	Automobile Maintenance/Cleaning Products	0
Aerosol Cans	0		
Miscellaneous items: 1 container of fluorescent glue, 11 containers of acrylic paints.			
Total Weight (lb): 9.2			
Total Volume (cubic ft.): 1.0			

**WASTE MANAGEMENT OF ST. LOUIS (FORISTELL)
SORT # 1**

Sample #	Sample Size		Composition		Recycling Activities	Collection Location
	Weight	Volume	Res.	Comm.		
1	213.3	40.2	100%	0%	Curbside/Drop-off	Montgomery City
2	211.7	43.7	100%	0%	Curbside/Drop-off	Montgomery City
3	220.7	55.3	100%	0%	Curbside/Drop-off	Warrenton
4	183.3	48.7	100%	0%	Curbside/Drop-off	Warrenton
5	213.4	42.5	100%	0%	Curbside/Drop-off	Troy
6	211.3	42.7	60%	40%	Curbside/Drop-off	Wright City
7	149.8	42.5	100%	0%	Curbside/Drop-off	Warrenton
8	197.2	51.6	100%	0%	Curbside/Drop-off	Warrenton
9	221.2	51.1	100%	0%	Curbside/Drop-off	Wentzville (rural)
10	213.5	50.9	100%	0%	Curbside/Drop-off	Wentzville (rural)
11	215.4	46.1	100%	0%	Curbside/Drop-off	Wentzville (rural)
12	194.5	41.9	100%	0%	Curbside/Drop-off	Warrenton
TOTALS	2444.9	557.2				
AVERAGE	203.7417	46.4	97%	3%		

TABLE 23-1

WASTE MANAGEMENT OF ST. LOUIS (FORISTELL) SORT # 1

CATEGORY	TOTALS		AVERAGE		PERCENTAGE	
	wt.	vol.	wt.	vol.	Pct. by wt.	Pct. by vol.
Cardboard	156.1	51.5	13.0	4.3	6.38%	9.24%
Newsprint	169.6	30.0	14.1	2.5	6.94%	5.38%
Magazines	84.4	10.7	7.0	0.9	3.45%	1.92%
High Grade	72.0	16.0	6.0	1.3	2.94%	2.87%
Mixed	341.9	93.4	28.5	7.8	13.98%	16.76%
PAPER TOTALS	824.0	201.6	68.7	16.8	33.70%	36.17%
Clear	62.0	6.8	5.2	0.6	2.54%	1.22%
Brown	39.2	4.3	3.3	0.4	1.60%	0.77%
Green	27.8	2.0	2.3	0.2	1.14%	0.36%
Other	16.4	2.2	1.4	0.2	0.67%	0.39%
GLASS TOTALS	145.4	15.3	12.1	1.3	5.95%	2.74%
Alum. Cans	40.4	12.3	3.4	1.0	1.65%	2.21%
Other Alum	25.2	5.8	2.1	0.5	1.03%	1.04%
Non ferrous	6.0	0.5	0.5	0.0	0.25%	0.09%
Food Cans	77.3	15.0	6.4	1.3	3.16%	2.69%
Ferrous	26.4	3.6	2.2	0.3	1.08%	0.65%
Oil Filters	3.2	0.5	0.3	0.0	0.13%	0.09%
METAL TOTALS	178.5	37.7	14.9	3.1	7.30%	6.76%
PET # 1	52.0	17.3	4.3	1.4	2.13%	3.10%
HDPE # 2	50.8	23.0	4.2	1.9	2.08%	4.13%
Film	98.3	56.0	8.2	4.7	4.02%	10.05%
Other Plastic	231.0	92.0	19.3	7.7	9.45%	16.51%
PLASTIC TOTALS	432.1	188.3	36.0	15.7	17.67%	33.78%
Food Waste	505.0	50.2	42.1	4.2	20.66%	9.01%
Wood Waste	11.2	2.0	0.9	0.2	0.46%	0.36%
Textiles	125.8	28.2	10.5	2.4	5.15%	5.06%
Diapers	86.8	10.9	7.2	0.9	3.55%	1.96%
Other Organics	72.9	13.6	6.1	1.1	2.98%	2.44%
ORGANIC TOTALS	801.7	104.9	66.8	8.7	32.79%	18.82%
Fines	43.6	7.4	3.6	0.6	1.78%	1.33%
Other Inorganics	10.4	1.2	0.9	0.1	0.43%	0.22%
INORGANIC TOTALS	54.0	8.6	4.5	0.7	2.21%	1.54%
OTHER WASTE	9.2	1.0	0.8	0.1	0.38%	0.18%
GRAND TOTAL	2444.9	557.4	203.7	46.4	100.00%	100.00%

TABLE 23-2

SORT #2

Sort Conditions

The second sort was conducted June 23-24, 1997. The same location was used for sort activities as the previous sort. The weather was hot and humid.

Statistics	
Estimated MSW (lbs) Collected by Site During Sampling Period	1,018,092
Total Sample Weight (lbs)	3076.6
Significance Test Results	.000
Number of Samples Collected	12

OTHER WASTE CATEGORIES			
Over-the-counter Medication (OTC)	6	Beauty/Hygiene Aerosol Products	1
Prescription Medication (Rx)	1	Household Cleaning Aerosol Products	0
Beauty/Hygiene Products	12	Gardening/Yard Care Products	1
Household Cleaning Products	0	Pet Groom Products	1
Sharps/Blades	0	Disposable Razors	11
Syringes	2	Alkaline Batteries	18
Hardware/Shop Products	12	Automobile Maintenance/Cleaning Products	0
Aerosol Cans	0		
Miscellaneous items: 1 container of motor oil.			
Total Weight (lb): 16.2			
Total Volume (cubic ft.): 1.0			

WASTE MANAGEMENT OF ST. LOUIS (FORISTELL)
SORT # 2

Sample #	Sample Size		Composition		Recycling Activities	Collection Location
	Weight	Volume	Res.	Comm.		
1	281.8	53.1	100%	0%		
2	280.5	48.9	20%	80%	None	Montgomery City (in-town)
3	274.5	48.2	50%	50%	Drop-off	Troy (in-town)
4	233.1	50.8	50%	50%	Drop-off	Troy (in-town)
5	278.9	57.1	50%	50%	Curbside	Wentzville (in-town)
6	213.4	54.3	50%	50%	Curbside	Wentzville (in-town)
7	246	52.3	50%	50%	Drop-off/Curbside	Washington and Union
8	282.8	53.8	100%	0%	Curbside	St. Charles (in-town)
9	255.1	57.1	100%	0%	Curbside	St. Charles (in-town)
10	228.2	52.4	30%	70%	None	Marthasville (in-town)
11	241.6	50.1	20%	80%	Curbside	Wentzville (in-town)
12	261.3	57.4	20%	80%	Curbside	Wentzville (in-town)
TOTALS	3076.6	635.6				
AVERAGE	256.3833	53.0	53%	47%		

TABLE 23-3

WASTE MANAGEMENT OF ST. LOUIS (FORISTELL) SORT # 2

CATEGORY	TOTALS		AVERAGE		PERCENTAGE	
	wt.	vol.	wt.	vol.	Pct. by wt.	Pct. by vol.
Cardboard	228.0	82.5	19.0	6.9	7.41%	12.98%
Newsprint	374.8	46.5	31.2	3.9	12.18%	7.32%
Magazines	122.7	10.2	10.2	0.9	3.99%	1.60%
High Grade	135.4	24.3	11.3	2.0	4.40%	3.82%
Mixed	391.5	99.3	32.6	8.3	12.73%	15.62%
PAPER TOTALS	1252.4	262.8	104.4	21.9	40.71%	41.34%
Clear	99.1	8.0	8.3	0.7	3.22%	1.26%
Brown	37.0	6.4	3.1	0.5	1.20%	1.01%
Green	15.2	1.4	1.3	0.1	0.49%	0.22%
Other	15.0	1.4	1.3	0.1	0.49%	0.22%
GLASS TOTALS	166.3	17.2	13.9	1.4	5.41%	2.71%
Alum. Cans	42.6	19.6	3.6	1.6	1.38%	3.08%
Other Alum	20.2	7.0	1.7	0.6	0.66%	1.10%
Non ferrous	3.4	0.5	0.3	0.0	0.11%	0.08%
Food Cans	62.2	12.6	5.2	1.1	2.02%	1.98%
Ferrous	28.3	3.2	2.4	0.3	0.92%	0.50%
Oil Filters	10.5	0.5	0.9	0.0	0.34%	0.08%
METAL TOTALS	167.2	43.4	13.9	3.6	5.43%	6.83%
PET # 1	41.9	21.0	3.5	1.8	1.36%	3.30%
HDPE # 2	57.1	33.0	4.8	2.8	1.86%	5.19%
Film	102.2	51.0	8.5	4.3	3.32%	8.02%
Other Plastic	178.6	81.6	14.9	6.8	5.81%	12.84%
PLASTIC TOTALS	379.8	186.6	31.7	15.6	12.34%	29.36%
Food Waste	527.1	47.3	43.9	3.9	17.13%	7.43%
Wood Waste	11.6	1.7	1.0	0.1	0.38%	0.27%
Textiles	231.9	35.5	19.3	3.0	7.54%	5.58%
Diapers	148.2	15.7	12.4	1.3	4.82%	2.47%
Other Organics	44.5	7.4	3.7	0.6	1.45%	1.16%
ORGANIC TOTALS	963.3	107.6	80.3	9.0	31.31%	16.92%
Fines	66.5	10.3	5.5	0.9	2.16%	1.62%
Other Inorganics	64.9	6.8	5.4	0.6	2.11%	1.07%
INORGANIC TOTALS	131.4	17.1	11.0	1.4	4.27%	2.69%
OTHER WASTE	16.2	1.0	1.4	0.1	0.53%	0.16%
GRAND TOTAL	3076.6	635.6	256.4	53.0	100.00%	100.00%

SORT #3

Sort Conditions

The third sort was conducted September 2-4, 1997. The same location was used for sort activities as the previous sort. The weather was sunny and humid.

Statistics	
Estimated MSW (lbs) Collected by Site During Sampling Period	1,018,092
Total Sample Weight (lbs)	2327.3
Significance Test Results	.000
Number of Samples Collected	12

OTHER WASTE CATEGORIES			
Over-the-counter Medication (OTC)	0	Beauty/Hygiene Aerosol Products	4
Prescription Medication (Rx)	16	Household Cleaning Aerosol Products	0
Beauty/Hygiene Products	2	Gardening/Yard Care Products	2
Household Cleaning Products	0	Pet Groom Products	0
Sharps/Blades	0	Disposable Razors	1
Syringes	17	Alkaline Batteries	13
Hardware/Shop Products	1	Automobile Maintenance/Cleaning Products	0
Aerosol Cans	4		
Miscellaneous items: 1 package of ice gel, 2 butane lighters.			
Total Weight (lb): 8.2			
Total Volume (cubic ft.): 1.0			

**WASTE MANAGEMENT OF ST. LOUIS (FORISTELL)
SORT # 3**

Sample #	Sample Size		Composition		Recycling Activities	Collection Location
	Weight	Volume	Res.	Comm.		
1	172.9	36.6	100%	0%	None	Earth City (business park)
2	164	43.5	100%	0%	None	Earth City (business park)
3	227.5	49.4	100%	0%	Curbside/Drop-off	St. Peters and O'Fallon
4	233.6	48.6	100%	0%	Curbside/Drop-off	St. Peters and O'Fallon
5	256.9	57.7	70%	30%	None	New Florence
6	232.9	49	70%	30%	None	New Florence
7	163.5	46.9	100%	0%	Curbside	St. Charles
8	175.3	50.7	100%	0%	Curbside	St. Charles
9	124.7	43.1	100%	0%	Curbside	St. Charles
10	225.1	51.8	100%	0%	Curbside	St. Charles (trailer park)
11	189.4	47.9	80%	20%	None	Montgomery City
12	161.7	43	90%	10%	Curbside/Drop-off	Warrenton
TOTALS	2327.5	567.5				
AVERAGE	193.9583	47.3	93%	7%		

TABLE 23-5

WASTE MANAGEMENT OF ST. LOUIS (FORISTELL) SORT # 3

CATEGORY	TOTALS		AVERAGE		PERCENTAGE	
	wt.	vol.	wt.	vol.	Pct. by wt.	Pct. by vol.
Cardboard	172.8	65.8	14.4	5.5	7.42%	11.59%
Newsprint	241.8	35.6	20.2	3.0	10.39%	6.27%
Magazines	108.8	13.4	9.1	1.1	4.67%	2.36%
High Grade	87.3	21.7	7.3	1.8	3.75%	3.82%
Mixed	302.8	86.4	25.2	7.2	13.01%	15.21%
PAPER TOTALS	913.5	222.9	76.1	18.6	39.25%	39.27%
Clear	74.6	6.1	6.2	0.5	3.21%	1.07%
Brown	32.1	2.8	2.7	0.2	1.38%	0.49%
Green	16.4	1.8	1.4	0.2	0.70%	0.32%
Other	10.3	1.5	0.9	0.1	0.44%	0.26%
GLASS TOTALS	133.4	12.2	11.1	1.0	5.73%	2.14%
Alum. Cans	42.9	20.9	3.6	1.7	1.84%	3.68%
Other Alum	19.0	8.6	1.6	0.7	0.82%	1.52%
Non ferrous	3.0	0.2	0.3	0.0	0.13%	0.04%
Food Cans	59.1	12.8	4.9	1.1	2.54%	2.26%
Ferrous	25.1	3.2	2.1	0.3	1.08%	0.56%
Oil Filters	4.0	0.3	0.3	0.0	0.17%	0.05%
METAL TOTALS	153.1	46.0	12.8	3.8	6.58%	8.11%
PET # 1	41.1	22.2	3.4	1.9	1.77%	3.91%
HDPE # 2	46.2	29.1	3.9	2.4	1.99%	5.12%
Film	70.5	48.8	5.9	4.1	3.03%	8.60%
Other Plastic	162.3	77.6	13.5	6.5	6.97%	13.67%
PLASTIC TOTALS	320.1	177.7	26.7	14.8	13.75%	31.30%
Food Waste	363.2	37.2	30.3	3.1	15.61%	6.55%
Wood Waste	24.7	4.3	2.1	0.4	1.06%	0.76%
Textiles	122.5	23.8	10.2	2.0	5.26%	4.19%
Diapers	79.7	10.0	6.6	0.8	3.42%	1.76%
Other Organics	88.3	15.4	7.4	1.3	3.79%	2.71%
ORGANIC TOTALS	678.4	90.7	56.5	7.6	29.15%	15.98%
Fines	83.1	14.1	6.9	1.2	3.57%	2.48%
Other Inorganics	37.5	3.1	3.1	0.3	1.61%	0.55%
INORGANIC TOTALS	120.6	17.2	10.1	1.4	5.18%	3.03%
OTHER WASTE	8.2	1.0	0.7	0.1	0.35%	0.18%
GRAND TOTAL	2327.3	567.5	193.9	47.3	100.00%	100.00%

SORT SUMMARY

Seasonal variations

- Paper totals (especially newsprint and cardboard) were higher for this site. This is caused by the high industry in the area and the St. Louis Dispatch (newspaper).
- Food waste was also a high category Foristell is surrounded by towns containing fast food and restaurant by Highway I-70.
- A larger amount of clothing (textiles) was discarded at this site. No particular cause was identified.

Sort results

- Chart 23-1 graphically compares the three seasonal sort results and shows the average waste composition, by major category, for Foristell.
- The sample data for all Foristell waste sorts are listed on Table 23-7.
- The sort results for Foristell are listed on Table 23-8.
- The summary of statistical relevance for the Foristell sorts is located on page 372.
- The total for all “other wastes” found during the Foristell sorts is on page 372.

All weights are in pounds and volumes are listed in cubic feet.

Comparisons of the Foristell’s waste stream to previous studies and other communities can be found in Chapter 24.

FORISTELL RESULTS BY WEIGHT

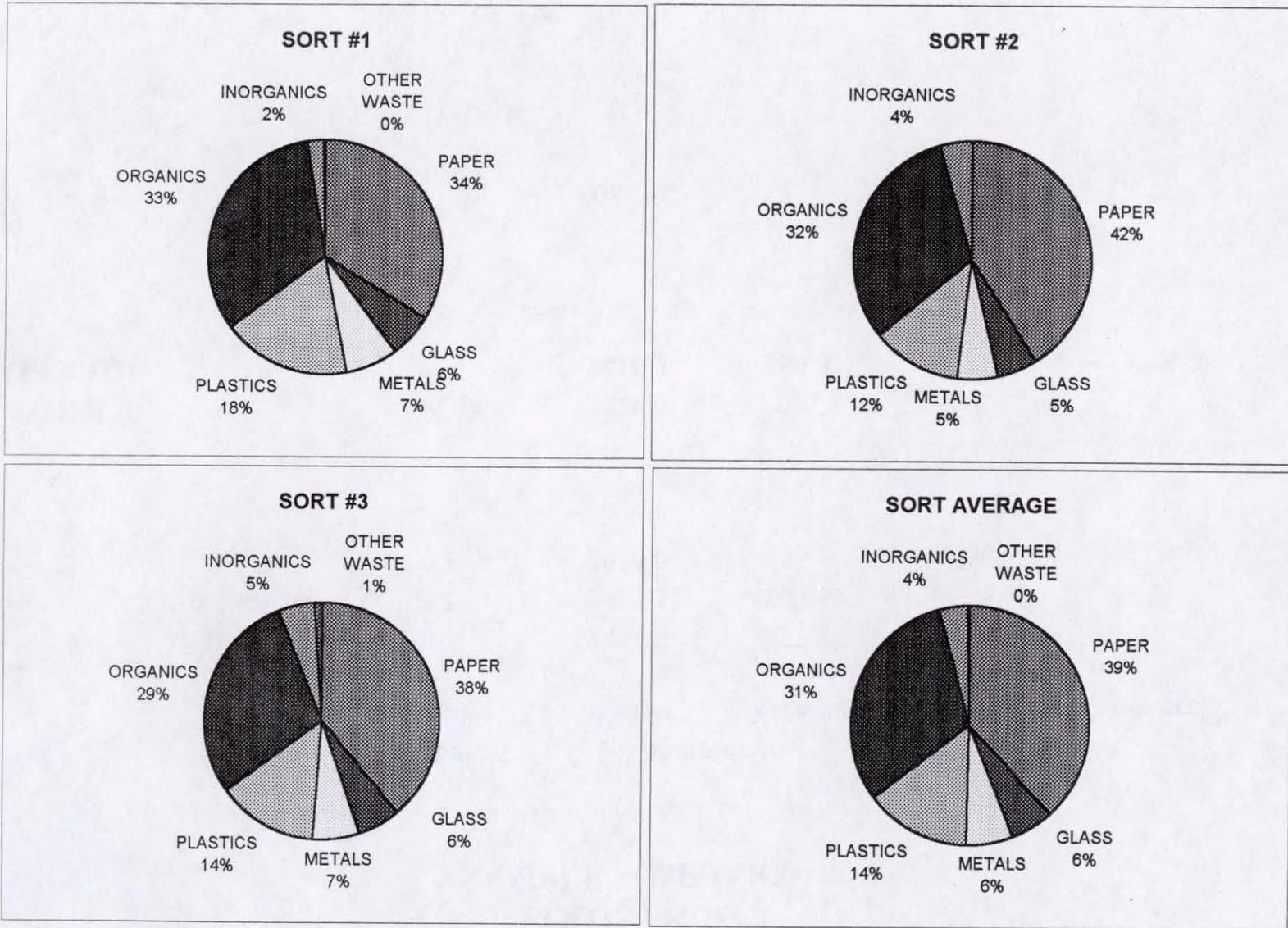


CHART 22-1

**FORISTELL
SAMPLE SUMMARY**

Sort #	Dates	Number of Samples	Sample Size		Composition	
			Weight	Volume	Residential	Commercial
1	3/31-4/1	12	2444.9	557.2	97%	3%
2	6/23-6/24	12	2327.5	567.5	93%	7%
3	9/2-9/4	12	3076.6	635.6	53%	47%
TOTALS		36.0	7849.0	1760.3		
AVERAGE		12.0	2616.3	586.8	81%	19%

TABLE 23-7

CATEGORY	FORISTELL						SUMMARY	
	SORT # 1		SORT # 2		SORT # 3		AVERAGE	
	WT.	VOL.	WT.	VOL.	WT.	VOL.	WT.	VOL.
Cardboard	6.4%	9.2%	7.4%	13.0%	7.4%	11.6%	7.1%	11.3%
Newsprint	6.9%	5.4%	12.2%	7.3%	10.4%	6.3%	10.0%	6.4%
Magazines	3.5%	1.9%	4.0%	1.6%	4.7%	2.4%	4.0%	1.9%
High Grade	2.9%	2.9%	4.4%	3.8%	3.8%	3.8%	3.8%	3.5%
Mixed	14.0%	16.8%	12.7%	15.6%	13.0%	15.2%	13.2%	15.9%
PAPER TOTALS	33.7%	36.2%	40.7%	41.3%	39.3%	39.3%	38.1%	39.0%
Clear	2.5%	1.2%	3.2%	1.3%	3.2%	1.1%	3.0%	1.2%
Brown	1.6%	0.8%	1.2%	1.0%	1.4%	0.5%	1.4%	0.8%
Green	1.1%	0.4%	0.5%	0.2%	0.7%	0.3%	0.8%	0.3%
Other	0.7%	0.4%	0.5%	0.2%	0.4%	0.3%	0.5%	0.3%
GLASS TOTALS	5.9%	2.7%	5.4%	2.7%	5.7%	2.1%	5.7%	2.5%
Alum. Cans	1.7%	2.2%	1.4%	3.1%	1.8%	3.7%	1.6%	3.0%
Other Alum	1.0%	1.0%	0.7%	1.1%	0.8%	1.5%	0.8%	1.2%
Non ferrous	0.2%	0.1%	0.1%	0.1%	0.1%	0.0%	0.2%	0.1%
Food Cans	3.2%	2.7%	2.0%	2.0%	2.5%	2.3%	2.5%	2.3%
Ferrous	1.1%	0.6%	0.9%	0.5%	1.1%	0.6%	1.0%	0.6%
Oil Filters	0.1%	0.1%	0.3%	0.1%	0.2%	0.1%	0.2%	0.1%
METAL TOTALS	7.3%	6.8%	5.4%	6.8%	6.6%	8.1%	6.4%	7.2%
PET # 1	2.1%	3.1%	1.4%	3.3%	1.8%	3.9%	1.7%	3.4%
HDPE # 2	2.1%	4.1%	1.9%	5.2%	2.0%	5.1%	2.0%	4.8%
Film	4.0%	10.0%	3.3%	8.0%	3.0%	8.6%	3.5%	8.8%
Other Plastic	9.4%	16.5%	5.8%	12.8%	7.0%	13.7%	7.3%	14.3%
PLASTIC TOTALS	17.7%	33.8%	12.3%	29.4%	13.8%	31.3%	14.4%	31.4%
Food Waste	20.7%	9.0%	17.1%	7.4%	15.6%	6.6%	17.8%	7.7%
Wood Waste	0.5%	0.4%	0.4%	0.3%	1.1%	0.8%	0.6%	0.5%
Textiles	5.1%	5.1%	7.5%	5.6%	5.3%	4.2%	6.1%	5.0%
Diapers	3.6%	2.0%	4.8%	2.5%	3.4%	1.8%	4.0%	2.1%
Other Organics	3.0%	2.4%	1.4%	1.2%	3.8%	2.7%	2.6%	2.1%
ORGANIC TOTALS	32.8%	18.8%	31.3%	16.9%	29.1%	16.0%	31.1%	17.2%
Fines	1.8%	1.3%	2.2%	1.6%	3.6%	2.5%	2.5%	1.8%
Other Inorganics	0.4%	0.2%	2.1%	1.1%	1.6%	0.5%	1.4%	0.6%
INORGANIC TOTALS	2.2%	1.5%	4.3%	2.7%	5.2%	3.0%	3.9%	2.4%
OTHER WASTE	0.4%	0.2%	0.5%	0.2%	1.1%	0.5%	0.4%	0.2%
SORT TOTALS	100%	100%	100%	100%	100%	100%	100%	100%

TABLE 23-8

Foristell Statistical Summary	
Estimated MSW (lbs) Collected by Site During Sampling Period	3,054,277
Total Sample Weight (lbs)	7848.8
Significance Test Results	.000
Number of Samples Collected	36
Mean Sample (lbs) and Confidence Interval (95%)	217.09 (+/-) 13.41

Foristell "Other Waste" Summary			
Over-the-counter Medication (OTC)	7	Beauty/Hygiene Aerosol Products	5
Prescription Medication (Rx)	19	Household Cleaning Aerosol Products	0
Beauty/Hygiene Products	17	Gardening/Yard Care Products	3
Household Cleaning Products	3	Pet Groom Products	1
Sharps/Blades	0	Disposable Razors	18
Syringes	31	Alkaline Batteries	42
Hardware/Shop Products	15	Automobile Maintenance/Cleaning Products	0
Aerosol Cans	4		
Miscellaneous items: 1 container of fluorescent glue, 11 containers of acrylic paints, 1 container of motor oil, 1 package of ice gel, 2 butane lighters.			
Total Weight (lb): 33.6 Total Volume (cubic ft.): 3.0			