CITY OF FORT COLLINS

Trash Districting Feasibility Analysis

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Prepared by:

HILTON FARNKOPF & HOBSON, LLC

CITY OF
FORT COLLINS

TRASH DISTRICTING FEASIBILITY ANALYSIS

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EXECUTIVE SUMMARY

In 1995, the City of Fort Collins (City) Council adopted a policy to reduce the average number of trash trucks per week on residential streets from six to two on at least 80% - 85% of the residential streets. The purpose of this policy is intended to respond to complaints from citizens about trash truck traffic and to reduce street maintenance expenses.

Subsequently, the City engaged a consulting firm to perform an initial Districting feasibility analysis and another firm to identify the costs associated with implementing Districting.

In February 1998, the City selected Hilton Farnkopf & Hobson, LLC (HF&H), through a competitive process, to perform a more detailed feasibility analysis of creating a districted trash collection system for residential customers. The purpose of this analysis is to provide a greater understanding of what will happen if the City were to award residential trash hauling contracts for specified geographic districts in the City (hereafter referred to as "Districting").

Our analysis found many benefits to the City and customers from Districting, including:

- Districting would result in a reduction to the number of trash and recycling trucks traveling on City streets. According to the City's model, this reduced number of trucks would reasonably be expected to also reduce traffic congestion, noise and air pollution and street maintenance costs. Assuming an average reduction in trash and recycling vehicles from six to two per week on a typical residential street, the associated annual street maintenance cost savings is roughly $322,000;

- According to our public opinion survey, a majority of the City's residents can be expected to support the City's interest in Districting;

- According to our economic analysis, a Districting system comprised of five or less districts would likely result in savings of as much as $500,000 annually from the current Open Competitive system's current residential rates. (Savings could be significantly greater if certain system changes were implemented such as automated collection.) This result is generally supported by our survey of comparable community rates from which we found that Open Competitive systems tend to have higher rates than either municipal or contracted systems.; and,

- Other benefits such as improved aesthetics, comparability of services and rates, and reduced City liability may accrue from Districting.

However, our analysis also identified certain disadvantages to the City, customers and collection companies:

- Districting will require increased attention by the City Council and staff both during the implementation stage and thereafter. (The associated costs are included in our economic analysis and we have assumed that the City would be reimbursed for the cost of these efforts through the residential rates).

- Customers will lose their ability to choose their collector, unless they are willing to additionally pay a second collector. (This did not appear to be a major drawback in the public opinion survey responses.)
- Districting will probably result in changes that will adversely affect customers such as transitioning to a different hauler, adjusting to new services and even, increased rates in some particular cases
- Finally, it is almost certain that some of the current collectors may be disadvantaged by Districting. It is unlikely that all will continue to provide residential service in the City and those remaining may be operating at lower levels of profitability. The degree to which a particular collector is disadvantaged is directly related to the proportion of their profits, which result from residential operations in the City.

We conclude from our analysis, that it is in the City's and customers' overall best interest to create up to five districts and contract exclusively with one collector for service in that district. Whether the non-economic disadvantages of Districting outweigh both the non-economic benefits and the significant economic benefits is a decision which the City Council must make.

CHAPTER 1
BACKGROUND

Primarily in response to concerns regarding excessive trash and recycling collection vehicle traffic on residential streets which results in ongoing street damage, the City of Fort Collins (City) engaged Hilton Farnkopf & Hobson, LLC (HF&H) to: analyze the cost and benefits of switching to a districted trash and recycling collection system from the current "open" system; and to analyze public opinion related to such a change. The purpose of the study is to determine if districting could meet the City's primary goals of reducing vehicle traffic in residential neighborhoods and reducing costs to residents. Other policy and programmatic implications that should be considered were also to be identified.

BACKGROUND

Overview of Current System

The City maintains an "open system" for trash and recycling collection. In an open system, the resident has the ability to select its collector from any company that maintains a City license to haul trash and recyclables within the City. Currently, there are six licensed collectors:

1) BFI Waste Systems;
2) Dick's Trash Hauling;
3) Gallegos Sanitation, Inc.;
4) Ram Waste Systems, Inc.;
5) S&S Sanitation; and,
6) Waste Management.

These collectors range in size from very small privately held companies, to the largest publicly traded solid waste management companies in the world. Typically, residents receive weekly trash collection using either customer-supplied containers or company supplied carts. The

collectors must offer recycling service. Typically, this service is provided using a company provided 18-20 gallon bin (tub).

Each rate shown below includes a service fee of $4.00-$5.00 and the remainder of the rate is volume based (e.g., $4.00 for the first 33 gallons and $4.00 for each additional 33-gallons), per City requirements. As Table 1-1 below describes: The rates for 2-33 gallon cans range from $12.60 to $13.70, a difference of 8.7% or only $13.20 a year. The prices for 90 gallon cart service range from $16.95 to $22.86, a difference of approximately 35%. The difference in cart service rates may result from the number of cart accounts each collector services (both inside and outside of the City), and the collectors' relative economies of scale related to purchasing the carts and collection efficiency.

Table 1-1
1997 Residential Rates

Category (Includes Service Fee)	BFI	Dick's	Gallegos	Ram	S&S	Waste Mgt.
1-33 gallon can	$8.33	$9.00	$8.35	$9.10	$8.40	$9.10
2-33 gallon can	$12.66	$13.00	$12.65	$13.70	$12.60	$13.70
3-33 gallon can	$16.99	$17.00	$16.95	$18.30	$16.80	$18.30
1-65 gallon cart	N/A	$17.50	$12.65	$13.70	N/A	$13.70
1-90 gallon cart	$17.00	$20.00	$16.95	$18.30	$22.86	$18.30

What a Districted System Means for Residents

Under a districted trash collection system, the City would be divided into one or more geographic areas, and only one company would be designated to collect trash and recyclables in each district[1]. Therefore, a resident and their immediate neighbors would all use the same collector. Benefits of a districted system from a resident's perspective often include:

- The opportunity for reduced trash bills due to the trash collectors' reduced costs which result from increased operational efficiencies;

[1] The actual number of districts would depend on collection efficiencies, the number of different collectors/recyclers desired by the City and the savings related to fewer districts for residents and the City.

- An opportunity to increase residential service levels, such as adding separate yard waste collections, or increasing the types of recyclable materials collected;
- Less damage to roadways, since fewer large trucks would travel on individual neighborhood streets;
- Less air pollution and traffic congestion and improved traffic safety, since fewer big trucks would be on residential streets;
- Improved community appearance, since neighbors would all set out trash containers on the same day of the week; and,
- Less noise, since trash would be picked up only one day each week in each neighborhood.

Disadvantages of districting from a resident's perspective might be that:

- Residents would not be able to choose which trash collector to use without paying higher rates [2];
- Residents may end up with a different trash collector, since the City would select one company for the entire district;
- Trash collection schedules may change for residents, since the single collector would establish new collection days and times;
- Some residents may experience increased rates, if higher than current service levels are required;
- Some residents may experience short-term disruptions in service, such as missed pickups, since a new trash collector would need to learn the new routes and special services on those routes; and,
- Some residents may need to use different trash and recycling containers, depending on the service offered by the new collector.

PRIMARY ENGAGEMENT OBJECTIVES

HF&H was hired by the City of Fort Collins to complete three key study objectives:

- Evaluate the impact of reduced vehicle traffic on residential streets as a result of districting;
- Survey public opinion regarding districting; and,
- Analyze the cost/benefits of a districted system.

[2] Under a districted system, residents would be obligated to pay for service provided by the City's designated hauler, although they may be able to continue with their current collector for an additional fee.

In order to accomplish these objectives, HF&H in consultation with the City developed the following scope of work.

SCOPE OF WORK

The scope of work was comprised of six tasks:

Evaluate Traffic Impacts

HF&H reviewed the City Engineering Department's original Truck Impact Analysis for reasonableness, mathematical accuracy and logical consistency. We found the original methodology to be reasonable. We did, however, revise a number of the assumptions used in the analysis, and updated certain data based on information provided by the City and the collectors. The result of the updated analysis was an estimated street maintenance cost savings resulting from districting. Our findings are described in Chapter 2.

Evaluate Public Opinion

As requested, HF&H developed a residential customer survey in order to help gauge public opinion regarding the current level of trash and recycling services and predict residents' reactions to the implementation of districted service. The City's direct mail contractor mailed the survey to approximately 3,000 residences, based on the likelihood of receiving at least 384 responses, a statistically valid response. 813 responses were received, although not all respondents answered every question. Our interpretation of the results is described in detail in Chapter 3.

Determine Rate Impacts of Districting

As described in Chapter 4, we projected rate impacts from different districting scenarios. In order to accomplish this, we have spoken with a number of the current collectors. We also relied on industry data and our extensive files from trash and recycling procurements and financial reviews. As discussed in our limitations section, while we are confident in the justification of our method and data, it is impossible to predict the behavior of collectors in a competitive environment. In spite of our best efforts to identify likely outcomes, actual results could be different and those differences could be significant.

Gather Comparable Rates

In order to evaluate the current residential rates and services, HF&H was asked to survey at least 10 other jurisdictions' trash systems. In response, we surveyed over 20 jurisdictions as described in Chapter 5. Based on our experience, we would recommend that the reader use caution when comparing rates among jurisdictions. Rarely are rates comparable among jurisdictions because they seldom reflect similar services, geography, pricing strategies, demographics or competitive environments.

Identify Other Benefits of Districting

In addition to a reduction in vehicle traffic and a possible reduction in overall rates, there are a number of other significant benefits that can be obtained by the City and its residents through districting. Some of these impacts include, but are not limited to:

- Improved street aesthetics (e.g., same day collection and similar containers);
- Higher levels of collector insurance which helps protect customers from collector accidents and damage to private property;
- Hazardous waste and other indemnifications to the City and its rate payers to protect against future litigation and CERCLA claims, which could lead to higher rates;
- Long-term, fully-permitted disposal capacity;
- Increased recycling services (including yard waste collection);
- Reduced vehicle emissions due to decreased truck traffic; and,
- Reduced vehicle traffic in residential neighborhoods since collection would only be one day per week for each district.

These benefits are discussed in detail in Chapter 6.

Estimate the City's Districting Start-Up Costs

Should the City elect to implement districted trash service, a number of activities need to take place in order to successfully transition from the current open system to districts. In Chapter 7, we describe each of these activities in detail and provide a range of cost estimates for each of these activities.

LIMITATIONS

Although we have followed the scope of work as proposed, there are a number of limitations inherent in our analysis:

- HF&H's updating of the City's 1994 Vehicle Impact Analysis did not address the reasonableness of the City's underlying assumptions related to current residential street mileage, the life of a typical residential street, the average maintenance cost per mile, the daily vehicle loadings on those streets, or changes in street maintenance costs over time;
- Our role in the public opinion survey was limited to creating the questions and format and analyzing the results. We did not verify the compilation of the results or the randomness of the survey;
- Where current rates are discussed, we relied on the City's survey of the collectors and the public opinion survey;

- Since the City receives no financial information from the current collectors, we were not able to base our analysis on the actual cost to provide residential service in the City and therefore had to base our analysis on data from other jurisdictions.

- We have used financial and operational data from companies providing similar services and data from competitive procurements (much of which is proprietary and therefore confidential); and,

- Our analysis of the impact of districting on current rates is based on industry standards, other competitive districting procurements with which we are familiar and information provided by the City and the collectors. However, it is impossible to precisely predict in advance the outcome of a competitive procurement due to market conditions and competitive pressures on the collectors. Therefore, we have been conservative in our analysis, however, the actual impact could be more or less than estimated, and that difference could be significant;

CHAPTER 2
TRUCK IMPACTS

One of the real benefits of districted residential trash collection is a reduction in the number of trash and recycling vehicles traveling on the City's residential streets. As trash and recycling vehicle traffic decreases, associated traffic congestion, vehicle noise and air pollution would also be expected to decrease. In addition, the City may be able to realize significant savings in its annual residential street maintenance costs.

A benefit from districted residential trash collection is a reduction in the number of trash and recycling vehicles traveling on individual residential streets in the City. As trash and recycling vehicle traffic decreases, associated traffic congestion, vehicle noise and air pollution would also decrease. In addition, the City may be able to realize significant savings in its annual residential street maintenance costs. As part of this engagement, HF&H assisted the City with the estimation of the annual residential street maintenance cost savings, which may result from a reduction in the average number of trash and recycling vehicles as a result of districting.

Background

The City's Engineering Department prepared an analysis in 1994 of the impact of trash and recycling vehicles on the average annual maintenance cost for a typical residential street in the City. That analysis included the following general assumptions:

- The average life of a typical residential street is 20 years (at current levels of residential trash and recycling vehicle traffic);
- An average of 250 vehicles travel on a typical residential street each day over its lifetime, with four (4) percent of those vehicles being trucks;
- The average street maintenance cost over the 20 year life of a typical residential street was $280,000 per mile in 1994 (that cost is currently estimated to be roughly $315,000 in 1998 dollars, assuming a 3.5% annual cost increase);
- There were a total of 200 miles of residential streets in 1994 (that figure is currently 250 miles (1998)) as a result of growth and annexations;
- Typical trash and recycling vehicles operating on the City's residential streets are half-full;

- Trash and recycling vehicle traffic on a typical residential street are equal (i.e., if a trash vehicle for a given company serves a residential street, a recycling vehicle for that company also serves that street and travels the same distance); and,
- The impact of individual trash and recycling vehicles on those streets that are traveled will be the same under a districting scenario as it is with Open Competition. The only difference is the number of miles which each vehicle impacts (i.e., districted vehicles will impact fewer street miles).

The impact of vehicle traffic on a residential street depends on both the number and weight of those vehicles. For purposes of projecting the impact of trash and recycling vehicles, two additional major assumptions were required: (1) the average weight of typical residential trash and recycling vehicles, and (2) the associated average axle weight of those vehicles (i.e., the weight borne by each axle of the vehicle) which dictates the impact of those vehicles on the City's streets.

Using the general assumptions noted above, and associated axle weights of "typical" residential trash and recycling vehicles, the impact of reducing the average number of those vehicles on the City's residential streets was estimated. That reduced impact was reflected as additional life in the typical residential street beyond the 20-year baseline estimate, and as an associated saving in annual street maintenance costs. Central to the analysis was the assumption that the lifetime maintenance cost of a typical residential street does not change, regardless of life span, and accordingly, the average annual street maintenance cost decreases as street life increases. This occurs since that cost is spread across a longer period of time.

Methodology

HF&H reviewed the City Engineering Department's original analysis for reasonableness, mathematical accuracy and logical consistency. Our review found that the approach used by the City, as described above, was generally reasonable, logically consistent and mathematically accurate. We did, however, revise the assumed gross weight and associated axle weight of the "typical" trash and recycling vehicles used in the analysis, based on updated information provided by the collectors. Using this updated vehicle weight information and updated street maintenance costs and mileage, we revised the City's analysis following the original approach. The results of that analysis are summarized in Table 2-1, with the projected savings resulting from districting presented as both a percent increase in street life, and an associated monthly savings in annual street maintenance cost per residential trash account. A summary of the Traffic Impact Analysis is included as Appendix A.

Findings

As shown in Table 2-1**,** the projected savings are dependent upon the average number of trash and recycling vehicles currently assumed to be traveling on a typical residential street, and the number of those vehicles which would remain after districting. For purposes of this analysis, we have assumed that districting would result in an average of two vehicles per typical residential street per week (one trash and one recycling vehicle).

Table 2-1
Vehicle Impact Summary

Assumed Number of Weekly Trash and Recycling Vehicles			Projected Monthly Savings per Residential Account		Total Annual Citywide Savings	
Current System	Districted System	Associated Percent Increase in Street Life	Old Street Construction Standards	New Street Construction Standards	Old Street Construction Standards	New Street Construction Standards
10	2	17.4	$2.21	$1.99	$700,000	$630,000
8	2	12.5	$1.59	$1.43	$503,000	$453,000
6	2	8.0	$1.02	$0.91	$322,000	$290,000
4	2	3.9	$0.49	$0.44	$155,000	$139,000

The City could further reduce the number of trash and recycling vehicles per street, per week to one, using co-collection vehicles that can collect both trash and recyclables in a single vehicle. Additionally, should the City elect to implement a separate yard waste program, a co-collection vehicle could be used to limit the number of vehicles to two per street (one for refuse and yard waste and one for recycling), per week.

It should be noted that there is currently some geographic consolidation of accounts with specific haulers which may reduce the average number of haulers serving streets in those areas. In addition, even with districting there may be multiple haulers serving certain residential streets due to the presence of multi-family units. These multi-family units are considered commercial accounts and their service provider would not be impacted by districting.

If districting is pursued and street maintenance cost savings are realized, those savings would not be expected to be realized in full until correction of "current system damage" has been completed. As such, current residential street maintenance costs per mile would not be expected to decrease significantly in the short-term.

Finally, the City recently developed and implemented new construction specifications for residential streets. This action was taken largely to minimize large vehicle impacts associated with construction of new residential developments. The new specifications require 3.5 inches of asphalt on 6 inches of base compared with the old standard of 3 inches of asphalt on 4 inches of base. The City's Engineering Department projects that these new standards will reduce maintenance costs by roughly 10 percent each year. Accordingly, the trash and recycling vehicle impacts which have been projected based on the former construction standards would be reduced by approximately 10 percent, for those residential streets constructed according to the new standards as shown in Table 2-1. This reduced maintenance cost will be realized gradually over time. New residential street construction is projected to increase at roughly 3.5% per year, while roughly 5 percent of existing residential streets will be upgraded each year (based on an average 20 year life). Therefore, the entire benefits of these upgraded construction specifications will take roughly 20 years to realize.

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CHAPTER 3
PUBLIC OPINION SURVEY

Based on the results of the public opinion survey, a majority of Fort Collins' residents favor trying a districted trash and recycling collection system. A significantly lesser number are opposed to changing their current collector. Most residents report that they participate in recycling, but do not wish to pay more to recycle more types of materials. Residents want to pay their trash collection bills either directly to the collector, or optionally through the City's utility bill, preferably four times per year.

PUBLIC OPINION SURVEY

In order to gauge residents' feelings regarding their current trash and recycling services, as well as their opinions regarding a districted waste collection system, the City and HF&H conducted a public opinion survey of the City's residents.

Approach

As requested, HF&H developed a draft survey instrument designed to solicit residents' opinions regarding the provision of both current and future trash and recycling collection. Subsequent to City review and comment on this draft, HF&H revised the survey in order to meet all of the City's needs with the survey instrument. Among the goals of the survey were the following:

- Educate the public on what districting might mean to them.
- Determine the public's level of support for various aspects of districting.
- Elicit the public's descriptions of their current services and their thoughts about those services.
- Ask the public about their preferred method of trash and recycling collection billing.
- Provide the public an opportunity to share related comments.

Based on these goals, the survey contained an introductory section that reviewed the concepts associated with districted trash collection, followed by four sections eliciting residents' responses to:

1) Districted Trash and Recycling Collection Alternatives.
2) Description of Current Trash and Recycling Collection Services.
3) Bill Payment Method Preferences.
4) Freeform Comments.

A separate City contractor, First Class Direct, Inc., generated a random survey pool of 3,000 residents, and mailed the survey to them. A postage-paid return envelope was included with each survey. They were returned to First Class Direct's offices, where responses were tallied and entered into a database.

To get as much of an overall sampling as possible, four zip codes in Fort Collins were selected - 80521, 80524, 80525, and 80526. The list of addresses was then selected for 1,500 homeowners and 1,500 renters throughout these zip codes. Then further selected for 750 of each group with children, and 750 without children. Then a random selection was made from each zip code using the above criteria. A total of 813 respondents submitted their completed surveys to First Class Direct for tabulation. First Class Direct submitted those results to HF&H for analysis. A summary of findings for each of the four survey sections is presented below. A copy of the survey is attached as Appendix B and the summary of the responses is included as Appendix C.

Districted vs. Open Trash & Recycling Collection

Questions 1–4 of the survey solicited residents' thoughts regarding districted trash collection. Question 1 asked respondents to identify the importance of seven criteria related to districted trash and recycling collection. Question 2 asked residents to determine the importance of five criteria related to retaining an open system of collection. Questions 3 and 4 asked the residents to provide their overall opinion as to whether they supported districted or open collection systems, respectively.

Based on the results of Question 1 ("*the following benefits of districting are important to me*"), a clear majority of Fort Collins' residents would appreciate the benefits of districted trash collection. For all identified benefits, 62.7–73.8 percent of the residents rated those benefits as either important or very important. Only 14.4–21.3 percent strongly or very strongly disagreed with the importance of the identified benefits. Chart 3-1, below, graphically summarizes residents' responses to each potential benefit. The purpose of Charts 3-1 and 3-2 is to illustrate a weighted average for each question in order to factor in the strength of feelings that often surrounds trash issues. The weighting is also intended to take into account those respondents that had no opinion on a particular question. See the footnote below Chart 3-1 for a further explanation.

Chart 3-1
Importance of Districted Collection Benefits*

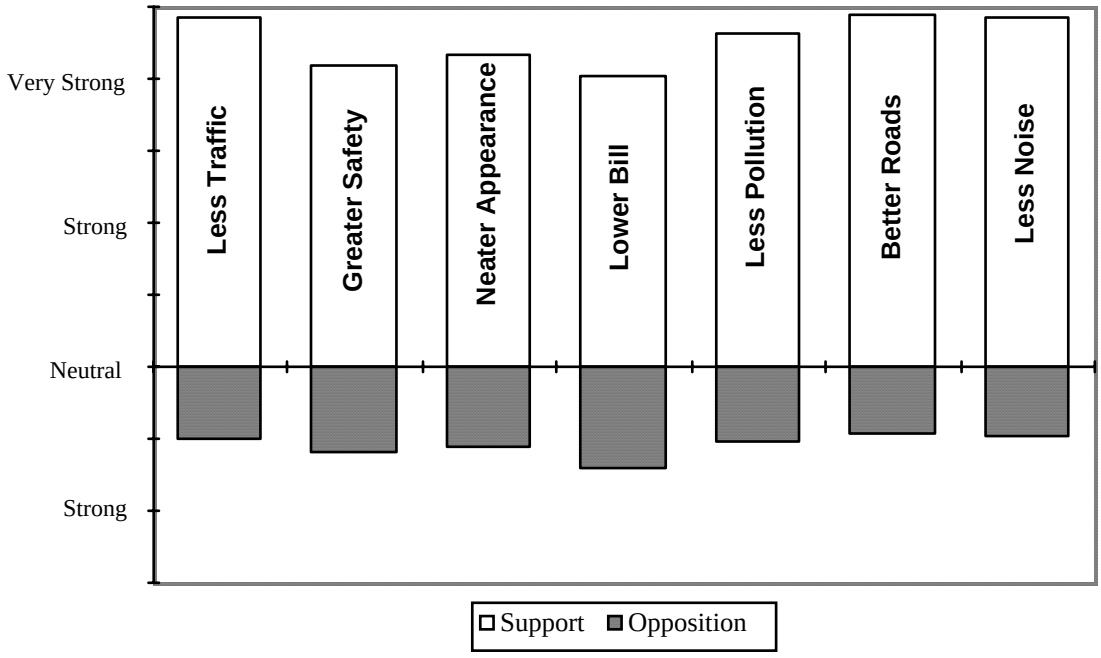

*__Chart 3-1__ was derived numerically by weighting all "Strongly Agree/Disagree" responses with double the value of "Agree/Disagree" responses. All "Neither" responses were assigned a zero value. Thus, in **Chart 3-1**, and in succeeding charts of similar design, a large number of "Neither" responses is indicated by a shorter bar, top-to-bottom, for that particular question. There were few "Neither" responses throughout the survey, so a taller bar generally indicates a greater number of responses. The white portion of the bar above the "Neutral" axis is reflective of weighted values in the same manner as the gray bars below the "Neutral" axis. All axes of all charts of this design use the same scale from Very Strong Support down to Neutral, down to Strong Opposition.

Chart 3-1 reflects the strong support for, and relatively little opposition to the perceived benefits of districted trash collections. Specific results for each of the attributes surveyed in Question 1 are shown in Table 3-1 below.

Table 3-1
Support for Districted Collection

Question	Agree/ Strongly Agree	Neutral	Disagree/ Strongly Disagree	Number of Responses
There would be less truck traffic	72.9%	11.5%	15.6%	776
Traffic safety would improve	65.2	15.8	19.0	774
The community would look better	66.4	16.1	17.5	777
Trash bill might be reduced	62.7	15.9	21.3	759
There would be less air pollution	71.0	13.2	15.9	772
Fewer trucks to damage roads	73.8	11.7	14.4	777
Less truck collection noise	71.7	13.9	14.4	777

While the survey responses are very positive regarding perceived benefits, it should be noted that 21.3 percent of the respondents do not place importance on the possibility that trash bills would be reduced as a result of Districted Collection. This response could be interpreted to mean that residents either do not believe that trash bills would be reduced, or that they are price insensitive to lower trash bills, compared to the other benefits.

Question 2 ("*the following benefits of keeping trash collection as it is are important to me*"), solicited respondents' opinions about the benefits of retaining the current open collection system. While respondents ascribed importance to some of the benefits of an open system, the level of support for those benefits was much weaker than that of the districting system (as shown by the shorter length of the bars). Of significant importance, there was a greater percentage of respondents who indicated disagreement or strong disagreement with the importance of open selection benefits, as compared with Districted Collection. Chart 3-2, below, graphically presents the support for and opposition to the importance of benefits with an open system.

Chart 3-2
Importance of Open System Benefits

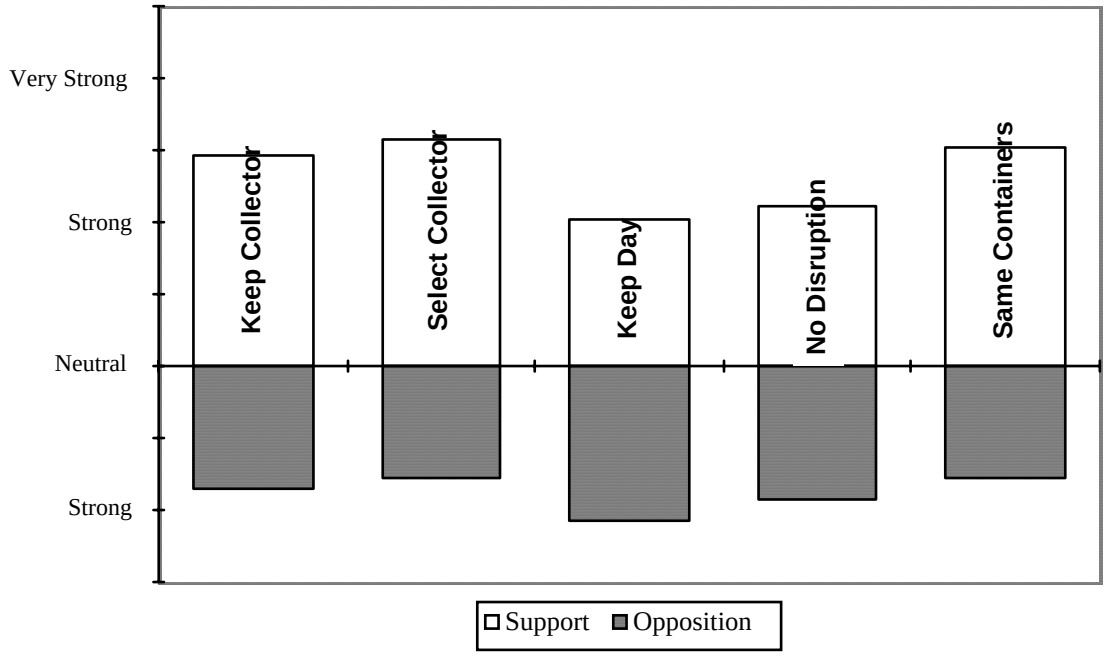

Chart 3-2 indicates that respondents agreed most strongly with the benefits of retaining the option of selecting their trash collector. The second highest response was for being able to use the same trash containers as they have in the past, followed closely by being able to keep the same trash collector. The weakest support, and strongest disagreement was for keeping the same day and time for trash collection. Table 3-2 provides numeric responses to each of the five identified benefits.

Table 3-2
Support for Open System

Question	Agree/ Strongly Agree	Neutral	Disagree/ Strongly Disagree	Number of Responses
Keeping current trash collector	45.8%	26.7%	27.6%	754
Selecting my trash collector	50.0	24.8	25.1	745
Keeping same collection day & time	31.5	34.5	34.0	750
No transitional disruption	36.5	33.4	30.1	746
Continue to use same containers	46.8	28.3	24.8	755

The amount of neutral responses for the open system is about twice as high as that of districting, suggesting that significantly more respondents do not care either way about an open system. Finally, respondents indicated disagreement with the benefits of an open system about twice as often as they did for districting. These results are supported by the responses to Questions 3 and 4 of the survey, which solicited overall support for districted and open selection, respectively, all things considered. Chart 3-3, below, graphically depicts the results of this comparison.

Chart 3-3
Overall Support for Districted vs. Open System

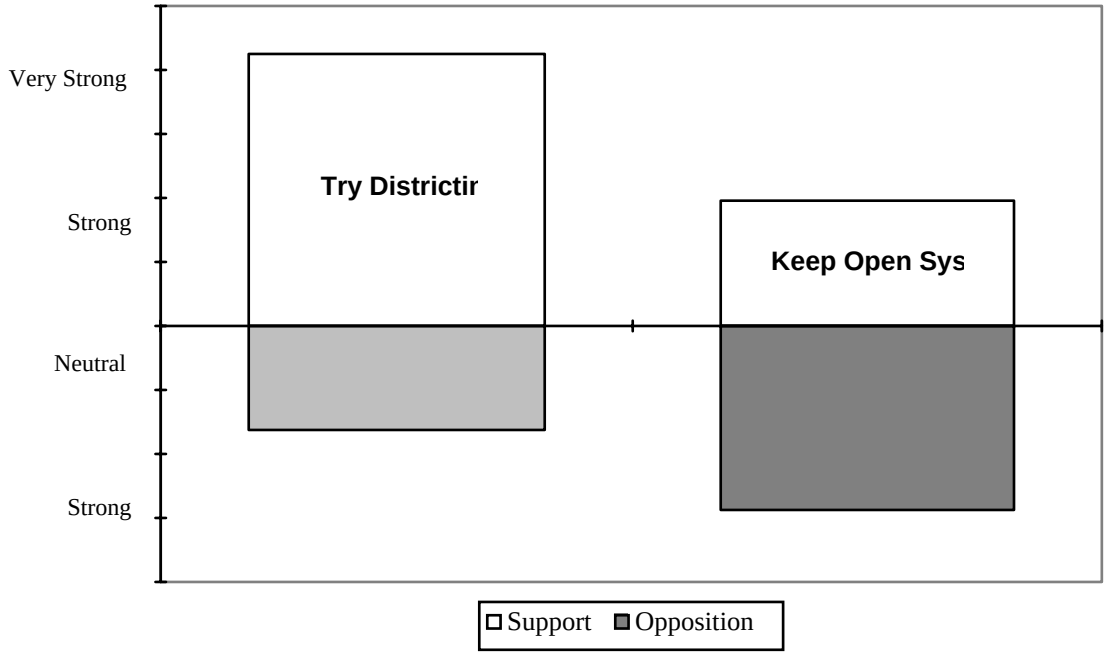

Chart 3-3 indicates very strong support, overall, for a desire to try districted trash collection. There was some opposition to districted trash collection, but that opposition was not as strong as that shown for keeping the open system method. Further, the support for retaining the open system method was only about half that of residents' desires to try Districted Collection. Table 3-4, below, presents the numeric responses to these two questions.

Table 3-4
Districted vs. Open System

Question	Agree/ Strongly Agree	Neutral	Disagree/ Strongly Disagree	Number of Responses
Try Districted Collection	65.8%	10.8%	23.4%	766
Keep open system	30.7	22.0	47.3	719

Table 3-4 indicates that support for districted trash collection is twice as strong as staying with the current open system. Further, the number of "fence sitters," those who do not have opinions one way or another, is twice as high under the open system. Finally, and perhaps most importantly, over twice as many respondents indicated that they do not want to keep the current system, compared with trying Districted Collection. This response is particularly significant, since those who do not want to keep the current system represented almost half of the number of responses.

Current Trash & Recycling Collection

Questions 5–16 of the survey solicited information about current trash and recycling services. Among the information requested was information about annual bill amounts, number of containers put out each week, the length of time with the current hauler, and participation in recycling programs. The primary findings for these indicative questions are presented below.

Current Bill Amounts

Respondents were asked to estimate their annual trash and recycling collection bills. There was a very wide range of responses, from $3–$720, but approximately half of the responses clustered around the ten most common amounts. The average annual bill paid by survey respondents was $152, which amounts to $12.64 per month. There may have been some misunderstanding of this question regarding the time period to estimate bills, which might explain the response of $3 annual collection bills. Other responses included $10, $12, $18, and $20, which may or may not be valid answers to the question. To that extent, the average might be skewed downward. On the other hand, there were 15 responses of annual bills totaling $400–720. If any of those responses are invalid, then the average would be lower.

Self-Haul

According to the survey results, 17.6% of the respondents self-haul their trash at least once per year, while 82.4% do not. Of those who self-haul their trash, most do so only 2–6 times per year—approximately 78.9% of the respondents reported making 2–6 trips per year. Only three respondents reported making 50, 52, and 90 trips, respectively, during the course of one year. This means that almost every resident subscribes to trash collection service.

Container Numbers

Residents reported using cans, bags, dumpsters, carts, bins, boxes, barrels, tubs, etc. The most common responses were for one can, one bag, or one cart. Of those three responses, the most common number of containers was one can (240), one cart (164), and one bag (156). The responses for the most common containers are summarized in Table 3-5**,** below:

Table 3-5
Common Container Types

Cans	Number	Bags	Number	Carts	Number
0.5	2	0.5	5	1	164
1	240	1	156	2	4
2	92	2	62		
3	25	3	21		
4	3	4	6		

Given the wide range of types and quantities of containers in use, any attempt to change service levels would require consideration of the variety and type of residents' containers. While respondents did not indicate strong opposition, there may be some strong sentiment against changing containers, if those respondents assumed that they would be able to continue to use containers substantially the same as they now use.

Trash Collector

Respondents reported a wide range of periods that they have used their current trash collector, from 1 month to 36 years. The average weighted period that respondents have used the same collector was 4 years, 6 months, although the single most common response was 12 months.

Respondents reported that the last time they considered changing their trash collector also varied widely, from 1 month to 36 years. The average weighted time that respondents indicated they last considered changing their trash collector was 2 years, 5 months, although the single most common response was 12 months.

A majority of the respondents indicated that their hauler was not the same one used by their neighbors. Of those that responded, 36.4% indicated that they used the same collector, while 63.6% said they used a different one.

These responses indicate that a majority of the respondents are either satisfied with their current collector and do not often consider changing, or simply do not care about changing haulers, given current conditions. This result is surprising because the strongest perceived benefit of an open system is the freedom to switch haulers (which seems to occur infrequently for those surveyed).

Efforts to Recycle

Questions 11–15 were designed to gauge respondents' current recycling efforts, as well as their demand for more recycling services. In general, respondents are satisfied with their recycling

service, and believe that they make every effort to recycle their materials. Further, a very large majority, 78.5 percent, indicated that they wanted to recycle more types of materials.

However, when questioned about whether residents wanted to use separate yard waste containers, only a simple majority (52.8%) indicated support. It is also clear that most residents would not want to pay more to increase the type of materials recycled. Table 3-6, below provides numeric indicators of respondents' support for recycling.

Table 3-6
Support for Recycling

Question	Agree/ Strongly Agree	Neutral	Disagree/ Strongly Disagree	Number of Responses
Satisfied with current recycling service	77.4%	13.8%	8.8%	774
Currently recycle as much as possible	86.7	8.2	5.1	790
Want to recycle more types of materials	78.5	13.2	8.3	756
Want a separate yard waste container	52.8	24.0	23.3	742
Will pay more to recycle more	33.3	17.4	49.3	765

As another measure of support for recycling, respondents were asked how many times per month they set out recyclable materials for collection. Out of 617 respondents, 14.4 percent indicated once per month, 17.2 percent indicated twice per month, 10.9 percent indicated three times per month, and 57.5 percent indicated four times per month. Thus, a majority of the respondents indicated weekly participation in recycling programs.

It is also important to note that 25 (4%) of respondents wrote in zero times per month, although it was not one of the pre-defined answers for this question. This write-in answer may indicate either a desire not to recycle, or a lack of understanding about their opportunities to do so with their current collector. Given the quantity of write-in responses, there may be additional residents who would have chosen zero times per month, if given the option of selecting zero.

Bill Payment Methods

The third question of the survey solicited respondents' opinions regarding bill payment methods. Specifically, respondents were asked whether they would like to combine their trash bill with the City's utility bill, pay the trash collector directly, or pay through automatic bank transaction. The results of these questions are presented in Table 3-7, below:

Table 3-7
Preferred Bill Payment Method

Question	Agree/ Strongly Agree	Neutral	Disagree/ Strongly Disagree	Number of Responses
Combined with City utility bill	48.0%	12.8%	39.2%	725
Mail directly to trash collector	60.0	24.2	15.7	703
Automatic bank transaction	14.8	14.1	71.0	686

The respondents were clear on their preferred method of bill payment: they want to mail their bills directly to their collector, although a significant number would consider combining the trash bill with the City utility bill.

In terms of billing frequency, the average for the 722 respondents was 5.6 times per year, reflecting a desire for bi-monthly billing. The range of responses was 1–32 times per year (ignoring the one response of zero times per year). The most common response (57.9%) was four times per year, followed by twelve times per year (20.2%).

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CHAPTER 4
DISTRICTING MODEL FINANCIAL ANALYSIS

In order to estimate the financial impacts of a districted system, HF&H created a financial model to estimate future residential rates. Should the City implement districted collection, we believe that overall residential rates could be reduced by as much as 13% or $500,000 per year city-wide. However, because 1) the data we used to develop our model was taken in part from other jurisdictions and 2) it is impossible to predict collector behavior in a competitive procurement, the actual results of districting could differ.

DISTRICTING MODEL

The districting model was designed to estimate the financial impact of switching from the current open system to between one and six districts and assumes that only one collector will provide residential trash and recycling services in each district.

Approach

In order to develop our model, we relied on a number of sources of information. These sources include:

- Financial and operational information from a number of the City's current collectors;
- Periodic operational reports to the City by the collectors;
- Financial and operational data from our work papers and from other engagements, using a sample of companies of different sizes and corporate structures (e.g., public vs. private); and,
- Results from competitive and negotiated procurements of similar services.

Limitations

While we are confident in the reasonableness of our assumptions, we cannot predict the actual behavior of the potential proposers in a competitive environment. For example, we assume that proposers may be able to offer the City further reduced rates if they are awarded a larger

district(s). To illustrate this point, we have included Table 4-1, below, which summarizes the results of a recent competitive procurement where bidders were given the opportunity to propose on more than one district (zone) consisting of a total of 57,000 residential accounts:

Table 4-1
Sample Districting Outcomes
($000's)

	Recycling				Green Waste				Both			
Proposal	Zone 1	Zone 2	Both	% Savings	Zone 1	Zone 2	Both	% Savings	Zone 1	Zone 2	Both	% Savings
1	2,267	1,711	3,602	(9.4)	5,945	3,960	9,688	(2.2)	8,212	5,671	13,290	(4.3)
2	2,538	1,009	3,434	(3.2)	5,259	2,687	7,863	(1.0)	7,797	3,696	11,297	(1.7)
3	5,285	3,609	6,405	(28.0)	6,499	5,237	9,678	(17.5)	11,785	8,846	16,083	(22.0)
4	2,495	1,590	3,660	(10.4)	5,547	4,710	8,739	(14.8)	8,042	6,300	12,399	(13.5)

As Table 4-1 shows, each of the four proposals included proposals for Zone 1, Zone 2 or both zones. As shown above, in each case (recycling, green waste, or both), the proposed cost of providing service to both zones was less than the sum of providing similar services to each zone separately. As shown above, this results in savings ranging from 1% to 28%, simply by rewarding the proposer with a larger service area. These economies are not always related to changes in how the services will be performed, but likely include pricing decisions made by each company related to the additional value (profit) of providing more service to more customers. A company desiring control of the waste stream for its own landfill may be more aggressive in its collection proposal. In this procurement, two collectors were very large publicly traded companies and two were locally owned private companies. Further, this analysis shows how large a variance typically exists between companies proposing to provide similar services, as could be expected in Fort Collins. These pricing decisions are the primary reason why it is difficult to predict the actual behavior of those companies that elect to submit proposals to provide districted service to the City.

Another limitation is that, although some of the City's collectors were very cooperative and provided us useful data, not all of the data required for our analysis was provided by the City's collectors. Additionally, since the City requires no financial information from the collectors, we were not able to obtain financial information from the City. Therefore, where local data is not available our analysis is based in part on data from other comparable jurisdictions. Information specific to the City of Fort Collins for a number of the key model variables, including the number of accounts, waste volumes and average hourly labor costs was, however, provided by either the City, County, or collectors, and is reflected in the model.

Assumptions

In order to generate the model, we made the following assumptions:

- Each districted collector is only providing residential trash and recyclables collection in the City. The impact of commercial collection or other services in the City, or in non-City areas, is not considered.
- The sizes of the districts are proportionate to each other (i.e., each district is the same size). However, when the actual districts are created, the sizes may vary based on the City's geography or other factors in order to optimize collection efficiency;
- A one-person semi-automated side loader will be used for trash collection and a one-person manual two compartment side loader for residential recycling, with direct costs of roughly $50 per route per hour.
- The average length of the standard work day will not exceed ten hours;
- A route driver is paid for a minimum of 8 hours per day regardless of how many hours he/she actually works;
- The average number of stops per trash route per 8-hour day is 517;
- The average number of stops per recycling route per 8-hour day is 473, based on a 70% set out rate of at least one bin;
- Operations and maintenance costs are based on projected route operating hours for one district. This cost is then escalated in proportion to total direct labor hours for each of the multiple district scenarios to account for decreasing economies of scale;
- General and administrative costs are estimated to be roughly 32 percent of direct costs for one district. That percentage is then escalated in proportion to the direct costs for each of the multiple district scenarios. As an example, in the case of six districts, this expense is 32% of the six district direct route costs multiplied by 1.24 (the ratio of the overall direct costs for six district to the direct cost of one district).
- The average current monthly residential rate is estimated to be $12.46 based on information provided by the haulers and responses received through the customer survey.
- Each resident would receive one recycling bin and roughly 25 percent would receive a solid waste cart (note: The customer survey results indicate that roughly 21 percent of residents currently have cart service);
- All trash would be disposed of at the County facility, although, this may eventually not be the case because certain collectors may opt to use their own landfills; and,
- No tip fee or revenue is assumed for recyclables.

Should the City request proposals for Districted Collection, key model variables, such as collector productivity, average hourly operating costs and the assumed economies of scale will likely be different than those assumed in our model and these differences can significantly impact the model results. For example, more aggressive productivity would result in lower operating costs and therefore lower rates, while decreases would result in higher rates.

In order to determine the total costs related to providing trash and recycling services to each district, we developed projections for the following cost components:

- **Direct Route Costs**. This category includes driver and supervisor wages and benefits, vehicle operating and maintenance costs, vehicle depreciation and any other expenses directly related to running the routes;
- **General and Administrative Costs**. These costs are primarily administrative related expenses and are unrelated to the direct provision of collection services (i.e., rent, officers salaries, utilities, billing);
- **Container Costs**. These costs account for the purchase of both trash and recycling containers;
- **Landfill Disposal Costs**. Disposal costs are based on the current tip fees at the Larimer County Landfill;
- **City Costs/Fees**. These costs include any additional incremental cost to the City for annual administration of the agreements and future rate setting or operational reviews and was set at $50,000.

Findings

Table 4-2 describes our estimates of the potential impact of districted service on the average current rate paid by residents:

As shown in Table 4-2, we have estimated that the current estimated cost per month for service is $12.46. Should the City move to districted service, we believe that the impacts on the average monthly rate would range from a $1.58 decrease to a $1.16 increase, depending on the number of districts selected. A number of the current collectors agreed that these numbers do not appear to be unreasonable.

The projected savings are also consistent with the 10 to 20% savings estimated by Environmental Financial Group in its letter report to the City dated September 4, 1996. Table 4-2 illustrates that the cost savings of moving to districting decrease as the number of districts increase. This is due primarily from economies of scale related to increased efficiencies that develop as the number of accounts serviced increases. For example with a larger service area, a collector generally has more opportunity to use overtime in lieu of adding additional routes. A collector serving a smaller area has less opportunity to do so, since he has fewer routes which he can operate overtime. As a result, he may be forced to add an additional route, and incur associated costs, sooner than a hauler with a larger service area. Additionally, a hauler with five routes may be able to maintain a single backup vehicle, while a hauler with fewer routes would also require a similar level of backup capacity.

Further, we have assumed that certain indirect expenses would also increase as the number of districts increase. For example, under a single district, there would likely be only one operations facility, but under a six district system there could be as many as six facilities, although the average size of each facility would be less. This would also be true for certain necessary personnel required for each district regardless of its size. Finally, smaller districts have less of a rate base in which to spread fixed costs.

Finally, we have assumed that the current collection system (i.e., mix of carts and cans) remains the same. However, should the City implement automated cart collection, the savings could be significantly greater than those shown above.

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Table 4-2
Districting Model

		Number of Districts					
		1	2	3	4	5	6
Number of Homes/District		26,435	13,218	8,812	6,609	5,287	4,406
Direct Route Costs							
Labor		$ 692,000	$ 689,000	$ 704,000	$ 708,000	$ 733,000	$ 820,000
Operations and Maintenance		$ 864,000	$ 865,000	$ 881,000	$ 897,000	$ 925,000	$ 1,044,000
Vehicle Depreciation		$ 506,000	$ 540,000	$ 548,000	$ 619,000	$ 609,000	$ 731,000
Container Costs		$ 76,000	$ 76,000	$ 76,000	$ 76,000	$ 76,000	$ 76,000
General and Administrative Costs		$ 665,000	$ 685,000	$ 701,000	$ 751,000	$ 762,000	$ 913,000
Subtotal		$ 2,803,000	$ 2,855,000	$ 2,910,000	$ 3,051,000	$ 3,105,000	$ 3,584,000
Profit (@90% Operating Ratio)		$ 311,000	$ 317,000	$ 323,000	$ 339,000	$ 345,000	$ 398,000
Landfill Disposal Cost		$ 290,000	$ 290,000	$ 290,000	$ 290,000	$ 290,000	$ 290,000
MRF Tip Fee		$ -	$ -	$ -	$ -	$ -	$ -
City Contract Oversight		$ 50,000	$ 50,000	$ 50,000	$ 50,000	$ 50,000	$ 50,000
TOTAL		$ 3,454,000	$ 3,512,000	$ 3,573,000	$ 3,730,000	$ 3,790,000	$ 4,322,000
Projected Cost/Account/Month		$ 10.89	$ 11.07	$ 11.26	$ 11.76	$ 11.95	$ 13.62
Current Cost/Account/Month	(1)	$ 12.46	$ 12.46	$ 12.46	$ 12.46	$ 12.46	$ 12.46
Net Cost(Savings)/Account/Month		($1.58)	($1.39)	($1.20)	($0.71)	($0.52)	$1.16
Total Annual Citywide (Savings)		(500,000)	(442,000)	(381,000)	(224,000)	(164,000)	368,000
Percent Increase/Decrease		-13%	-11%	-10%	-6%	-4%	9%
Vehicle Impact (Savings)/Account/Month	(2)	($1.02)	($1.02)	($1.02)	($1.02)	($1.02)	($1.02)
Total Annual Citywide (Savings)		(322,000)	($322,000)	($322,000)	($322,000)	($322,000)	($322,000)

(1) Based on average of hauler information ($12.29/month) and survey results ($12.64/month)

(2) Assumes average reduction from 6 to 2 vehicles per mile per week.

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CHAPTER 5
COMPARABLE RATES

In order to gauge how the City's trash and recycling rates compare with other jurisdictions, HF&H conducted a residential trash collection rate survey of communities within Colorado as well as a number of communities of similar size outside the state. Rate and service information was obtained for a total of 26 jurisdictions. The survey looked at open systems, municipal collection and private service.

COMPARABLE RATES

As part of this project, HF&H conducted a residential trash collection rate survey of communities within Colorado as well as a number of communities of similar size outside the state. Rate and service information was obtained for a total of 26 jurisdictions.

Survey Overview

The communities surveyed have arranged for trash collection service using one of the three following structures:

1) Private Open Competition

Jurisdictions in which residential trash collection is provided in a manner where private companies compete with little, if any, municipal regulation. Rate information was obtained for a total of seven jurisdictions with private, Open Competition, five in Colorado and two in Missouri.

2) Municipal Collection

Jurisdictions which provide municipal residential trash collection with a municipal work force. The majority of those jurisdictions surveyed indicated that the residential collection operation functioned as an enterprise fund, and that the rates were intended to reflect the actual cost of collection. Rate information was obtained for a total of eight municipal collection operations, five in Colorado and three in Wyoming.

3) Private Contracted Service

Jurisdictions which contract directly with the private sector for residential trash collection. Rate information was obtained for a total of 11 jurisdictions with Contracted Service. Nine of these jurisdictions are in Colorado, including seven small jurisdictions in the Fort Collins area, as well as Commerce City and Greenwood Village in the Denver Metropolitan Area, and two in Kansas (Kansas City, and a small homeowners association (Windom Hill) in Overland Park). In all cases, a single collector was contracted for residential service, as opposed to multiple collectors serving within defined districts.

In the case of those jurisdictions with Contracted Services, it is our understanding that those contracts were all awarded through a competitive bid process. In the case of those jurisdictions in Colorado with Contracted Service, it is also our understanding that most, if not all, of these contracts are "non-exclusive." That is to say, residents are free to contract with, and pay a third party for service. Residents are, however, still billed for the Contracted Service whether they chose to use it or not. This has led to basically one hauler servicing the entire jurisdiction. This is a similar approach that could be used by the City. Billing is typically handled by the jurisdiction through its utility billings, with the jurisdiction reimbursing the contracted collector. To our knowledge, none of those jurisdictions with Contracted Service employed "districting" of services among multiple collectors.

Findings

As described in Table 5-1 on the following page, the majority of respondents' (with similar types of trash and recycling services to those of Fort Collins) rates are higher in the jurisdictions with Open Competition than those with municipal collection. Rates are generally less for Contracted Service than those jurisdictions with either Open Competition or municipal collection (although the contract rates typically do not include recycling service which typically ranges between $1.00 and $3.00 per month per account for weekly service). In the case of both Greenwood Village and Kansas City, Kansas, City representatives stated their Contracted Service rates were significantly less than those of neighboring Open Competition jurisdictions for similar or greater levels of service.

A comparison of Fort Collins' rates to that of other Open Competition communities which were surveyed indicates that, in general, the City's rates are lower for one-can service, ($8.74 as compared to an average of $11.05 for Boulder and Colorado Springs), roughly average for two-can service ($13.06 as compared to an average of $12.88 in Boulder and Colorado Springs), and higher for three-can service ($17.50 as compared to an average of $11.83 for Colorado Springs, Greeley and Pueblo) and 90 gallon carts ($19.60 as compared to an average of $14.08 in Colorado Springs, Greeley and Pueblo). This relationship in prices and container sizes should be expected as a result of the City's implementation of volume-based rates.

As with the other Open Competition jurisdictions, the rates in Fort Collins are generally higher than those of municipal collection operations (with the exception of bag service which is slightly lower than Loveland), and in all cases significantly more than those jurisdictions with Contracted Service ($19.60 for a 90 gallon cart as compared to an average of $7.06 for unlimited non-cart service). However, those Contracted Service rates, in all but one case, do not include recycling service, and the residents are not billed directly by the contractor. Typically the

contractor sends a single bill to the jurisdiction which charges the residents through its utility billing system. It should also be noted that the above comparison is based on a fairly limited survey and sample base.

Table 5-1
Residential Rate Survey Summary

PRIVATE OPEN COMPETITION

	Fort Collins	Aurora	Boulder	Colorado Springs	Greeley	Pueblo	Independence Missouri	Springfield Missouri
Population	**106,000**	**252,000**	**90,000**	**345,000**	**68,000**	**99,000**	**110,000**	**143,000**
Service Level:								
bag	$4.17 + $1.18/bag							
unlimited		$ 12.75	$ 17.55				$ 12.00	
1x32 can	8.74		$ 12.60	$ 9.50				
2x32 can	13.06		$ 14.75	$ 11.00				
3x32 can	17.40			$ 12.00	$ 13.00	$ 10.50		
60/65 toter	14.25							
90/96 toter	19.60			$ 15.00	$ 15.00	$ 12.25	$ 13.00	$ 11.65
Curbside Recycling	WEEKLY	BI-WEEKLY	WEEKLY	WEEKLY	WEEKLY	BI-WEEKLY	NO	BI-WEEKLY

MUNICIPAL COLLECTION

	Denver	Grand Junction	Longmont	Loveland	Thorton	Cheyenne Wyoming	Casper Wyoming	Laramie Wyoming
Population	**497,000**	**40,000**	**58,000**	**45,000**	**67,000**	**53,000**	**48,000**	**26,000**
Service Level:				Bags only				
bag				$4.60 + $1/bag				
unlimited	$ 10.50					$ 12.00	$ 7.50	
1x32 can								
2x32 can								$ 8.56
3x32 can								
60/65 toter		$ 8.96						
90/96 toter		$ 10.96	$ 13.21		$ 11.50			
Curbside Recycling	BI-WEEKLY	MONTHLY	WEEKLY	WEEKLY	WEEKLY	NO	NO	NO

2x/wk servic

PRIVATE CONTRACTED SERV

	Commerce City	Evans	Eaton	Greenwood Village	Grover	Johnstown	Kersey	Milliken
Population	17,000	6,000	2,000	12,000	(135 accts.)	2,000	1,000	2,000
Service Level:								
unlimited	$ 5.76	$ 6.00	$ 7.80	$ 9.35	$ 11.00	$ 7.00	$ 7.00	$ 7.00
Curbside Recycling	NO	NO	NO	WEEKLY	NO	NO	NO	NO

	Pierce	Kansas City Kansas	Windom Hill Kansas
Population	1,000	142,000	(390 accts.)
Service Level:			
unlimited	$ 5.65	$ 5.40	$ 5.75
Curbside Recycling	NO	NO	NO

Limitations of Rate Surveys

When considering the findings of a rate survey of this type, comparing rates is valuable as a "reality check," but there are often significant differences among operations (e.g., municipal versus private cost allocations, subsidies between residential and commercial services, tip fees, wage rates) which can have a material effect on the rates and the findings of subsequent comparisons. Additionally, the method of procurement of services (sole source or competitive bid), current competitive pressures and pricing decisions (e.g., rate subsidies and volume-based rates) also impact rates. With that said, however, it does appear that contracting of residential trash collection in those jurisdictions surveyed has resulted in lower rates.

CHAPTER 6
OTHER DISTRICTING IMPACTS

In addition to reduced truck traffic and a potential decrease in rates, there are a number of other advantages and disadvantages that should also be considered including improved aesthetics, comparability in services and rates, decreased liability, improved reporting and record keeping and rate stability. There are also disadvantages that should be understood. Finally, elements of successful districting projects have been identified.

OTHER BENEFITS OF DISTRICTING

In addition to the benefits described elsewhere, there are a number of less tangible but equally important benefits of districting. These include:

Improved Aesthetics

Currently, many adjacent residents place their containers out for service on different days and times. This can detract from the appearance of a neighborhood because there may be trash containers placed at the curbside for collection throughout the week. Additionally, containers currently come in all shapes and sizes and differing colors. Under a districted system, typically, all containers are placed for collection at the same time and on the same day, so, streets are free of trash and recycling containers, six days out of the week. Additionally, containers can be standardized and if carts are used, no detached lids are needed. These changes generally result in improved overall neighborhood aesthetics.

Comparable Services

Under the current open system, residents may be receiving different levels of service. These differences may include bigger or smaller recycling containers, more materials recycled, and different trash can/cart sizes. Further, companies may only offer particular levels of service and may provide different levels of customer service and responsiveness. In a districted system, all of the services throughout the City would be comparable, unless the City elected to offer differing services among the districts. Even if that were the case, adjacent residents would have similar services. Additionally, districting could help the City create incentives to improve overall landfill diversion levels by increasing recycling.

Comparable Rates

Theoretically, the primary advantage of the open system is that residents have the ability to shop around for the best rates available. However, based on the response to the survey, residents rarely change collectors. Only 121 of the nearly 800 respondents changed their hauler in the last 12 months. Also, based on our rate survey of comparable jurisdictions, Open Competition systems do not appear to result in the lowest rates.

Decreased Liability through Collector Indemnifications

Assuming that the City would enter into collection agreements with each selected collector, the agreements provide the City the opportunity to gain certain indemnifications from the collectors. It is common for collectors to provide jurisdictions general indemnification for negligent behavior; hazardous waste indemnifications related to CERCLA for the hazardous waste collected by each collector and pass-through indemnifications from the landfill owner/operator. These indemnifications provide jurisdictions with greater future rate stability due to protections from unforeseen events; typically lawsuits.

Improved Reporting and Record Keeping

Based on our experience, collection agreements can require additional reporting and record keeping from the collectors. This reporting usually relates to tonnage collected by type (trash and recyclables), missed pick-ups, complaints, financial information, accounts, account mix (i.e., container sizes used), vehicles and new customers. Additionally, detailed record keeping will allow the City to adjust rates on an ongoing basis, should the City elect to set rates. This could help the City on future issues related to the actual levels of waste diversion and in determining the City's fair share of closure/post-closure costs, or hazardous waste at the County landfill.

Rate Stability

Under an open system, the City has no control over current and future residential rates. In a competitive districting system, rates would be set and adjusted periodically based on a pre-determined method. This approach ensures the lowest possible initial rate and reasonable future rates.

DISADVANTAGES OF DISTRICTING

The biggest disadvantage to moving to a districted system from the customers perspective is that they will no longer have the option to choose their own collector (without having to pay twice for that privilege). Although the City would select one collector to provide service in each district and require each residential customer to pay for service offered by that designated collector, a resident could opt to use a different service provider, yet not be relieved of paying the rates charged by the City's designated collector.

Additionally, it is possible that certain residents will have a rate increase because the level of service under the districted system may be greater than that which they currently receive. For

example, if cart service is implemented, residents currently using bags will likely incur increased rates.

For most residents, their current collector may change, as might their current collection day. This would result in some inconveniences during the start-up phase of districting. Additionally, any transition to a new collector results in some service disruptions as drivers are learning their routes. This could be limited by the winner being required to hire former route drivers. Difficulties can be minimized, however, if the collectors submit thoughtful transition plans and implement them as proposed.

Finally, in a districted system, there may be an increased amount of City administrative time necessary to manage multiple districts, however, this could be offset by additional functions currently performed by the City being performed by the collector (such as public education).

KEY POLICY CONSIDERATIONS

In order to move to a districted system, a number of key policy issues should also be considered.

Legal Restrictions

Colorado law authorizes local governments to arrange for local residential trash hauling services through a competitive process. In addition, local governments are authorized to charge residential households a fee for those trash hauling services. Our analysis is based on the assumption that the City will institute such a fee. As a result, it is reasonable to assume, and we have assumed for the purposes of our analysis, that the designated trash collector for any particular district will provide trash hauling services to substantially all of the residential households in that district.

Billing

In prior consultant reports performed for the City, there was an assumption that under a districted system, the City would have to become the billing agent for the residential customers and incur the cost to do so. This assumption results in considerable expense to the City in order to revise its utility billing system to provide these services. Further, if the City performed the billing, the rate revenues collected would result in a revenue increase to the City budget which may force the need for an Enterprise Fund and/or be prohibited by annual City revenue increase limits. However, it is very common for collectors to perform the billing function. In addition, larger collectors have performed the billing function for smaller ones. Finally, collectors are currently providing this function and are compensated for this service through the rates charged for service. Therefore, in a districted system, we have assumed and recommend that the billing function be performed by one or more of the collectors.

Impact on Collectors

Under a districted system, it is possible that the number of collectors providing residential service will decrease from the current six. The actual decrease will depend on the number of

districts selected and whether or not a collector could be awarded more than one district. However, it is not clear what impact districting will have on the current number of service providers since their number of current residential accounts serviced by each collector is unknown. Because collectors typically provide commercial and industrial service as well as service to other jurisdictions, including the County, it is difficult to predict if the loss of the Fort Collins residential base will result in any collector going out of business. Alternatively, it is possible through the districting process to encourage teaming and subcontracting relationships to ensure the maximum number of current service providers remain or give preference to a local service provider in at least one district, should that be desirable to the City. Finally, in a districted arrangement, the City has some control over the sale or assignment of the collection agreements which would allow them to ensure competition and/or local companies this ability does not exist. Under the current open system, this is not the case.

Rates/Services between Districts

In our experience, jurisdictions typically want all of their residents to receive comparable services and pay the same rate for those services. Through districting, the City will gain the ability to ensure that services and, if desired, rates are consistent for all residents. Conversely, the City could allow rates to be set at their proposed or negotiated levels and allow for service differences for comparison purposes, if conformity is not necessary.

Urban Growth Area

It is our understanding that there is a significant urban growth area surrounding the City that is actually in the County. It is likely that the City's current collectors are also providing services in this area which impacts the rates charged in Fort Collins. One option for the City, if legal, and assuming County support, may be to include the urban growth area in the districting process. This is a common practice in California in order to maximize collection efficiencies and minimize administrative costs. Additionally, if not done, it is possible that adjacent city and county residents on opposite sides of the street could receive different services, at different rates, which may cause some customer complaints.

KEY COMPONENTS OF SUCCESSFUL DISTRICTING PROJECTS

Based on our experience there are certain activities which if performed correctly, will help ensure a successful and smooth transition to the districted system. These components include:

Public Support. In order for any major trash service transition to be successful, it is essential that the public and advisory groups be supportive and understand the need for the transition or at a minimum, not be outwardly opposed. To that end, the City and HF&H conducted the public opinion survey to better understand the attitudes of the City's residents regarding their current trash and recycling services, and the possible change to a districted system.

Should the City Council determine that a districted system is their desired alternative, the public should be kept informed of the procurement process and the selection of collectors for each district. This information allows the public to have input into the process and protects the City from assertions that decisions were made without adequate public information.

City Council and Staff Support. In addition to public support, it is important that the City Council and appropriate staff be involved in all phases of the project. This reduces the likelihood of "surprises" and helps keep the project on schedule. Often, a subcommittee of the City Council is formed to work with City staff and their consultant in order to educate the City Council on what are very complex issues.

Collector "Participation". It is also important that the collectors understand the objectives of the City and the possible outcomes of the system change. This can be done through periodic meetings with the collectors, allowing them the opportunity to review draft documents, and providing them an opportunity to comment on the documents. If collector comments are incorporated, collectors will feel like they have participated in the process, rather than having it imposed on them by the City. Collector participation should begin early in the process and continue through the awarding of the districts. Based on our experience, there are usually collectors that support the process (usually the ones that win a contract) and others who are very opposed (the ones that fail to win a contract).

Customer Benefits. As one would expect, significant system changes are typically better received by residents, if those changes are accompanied by benefits such as rate reductions, increased service, reduced traffic, less noise and pollution, etc. In regard to service changes, increased service in the City's case could include separate yard waste collection or an expanded recycling program.

A major benefit of successful districting projects is a reduction in the number of vehicles on residential streets. These reductions most commonly result from limiting the number of collectors on any given street to one for each service (trash, recycling, and yard waste). Recently, vehicle innovations have helped reduce the number of vehicles on City streets even further by co-collecting in one vehicle, multiple materials (e.g. recyclables and trash) in separate compartments.

Community Benefits. In a districted system, a more unified approach could be instituted to ensure that containers are all similar and trash and recycling collections would always occur on one day only for all residents of a particular street. This could improve the visual appearance of a neighborhood. Additionally, it is common in districted systems for the City to enter into an agreement with each service provider, which clarifies the terms, and conditions related to the provision of services in the City. These agreements could allow the City to clearly define the service standards, gain certain indemnifications from the collectors, ensure long-term disposal capacity, reduce liability, define necessary insurance provisions and other items discussed earlier in this Chapter.

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CHAPTER 7
IMPLEMENTING DISTRICTS

In order to implement a districted system, certain tasks must be undertaken by the City. These include conducting public/Council workshops, document preparation, negotiations and rate setting. Based on our experience with other jurisdictions, the start-up costs are likely to range between $71,000 and $91,000, for technical assistance provided to the City. Other necessary activities will be performed by the haulers or funded out of the residential rate base as is currently the case.

START-UP COSTS

Should the City decide to implement districted trash and recycling services, a number of tasks will need to be completed in order to ensure a smooth transition for the City's residents. The entire process typically takes between one and two years, depending on the number of workshops, and other factors. Particular tasks to be performed by the City include:

- City Council/public/advisory group/collector workshops or meetings (60 days);
- Drafting of request for proposals (60 days);
- Drafting of agreements (included);
- Evaluation of proposals (90 days);
- Negotiation of new agreements (60 days); and,
- Developing and approving a revised residential rate structure (45 days);

The schedule includes six months to one year for development of proposals, implementation of the new program, and unforeseen slippage in the schedule, including delays in the delivery of equipment (e.g., carts and trucks). We describe each of the above tasks in greater detail below:

City Council/Public/Collector Workshops and Notification Requirements

As discussed earlier, it is important that the City Council, the public and the current service providers be involved throughout the districting process. Typically, we recommend that the City's objectives be determined in advance in order to guide the procurement process. This is often done through the use of surveys and/or workshops. By establishing the objectives of the

City in advance, it makes the selection process much more straightforward by evaluating proposals against these pre-determined objectives.

We would assume that City Council Workshops/Meetings on districting should be held up to twice prior to the release of any RFP and at least once after the receipt of proposals. At least two meetings should be held in advance of the RFP with the collectors in order to solicit their opinions and allow them the opportunity to review and comment on draft procurement documents. We anticipate that all of these meetings would be public meetings where the residents of the City would be encouraged to participate. This type of approach protects the City from accusations by residents or prospective proposers that they were unaware of what was happening or did not understand how the changes might impact them.

Drafting the Request for Proposals

In order to solicit proposals from the current and other collectors, the City will need to develop a Request for Proposals (RFP). The purpose of the RFP is to solicit proposals from interested parties to provide service in one or more of the districts. The RFP should be developed in a manner that ensures an "apples to apples" comparison between the proposals and allows the City the opportunity to review the proposals for reasonableness. The RFP should also require information which allows the City to evaluate the proposers ability to perform the requested services in a manner that will provide the City reasonable assurances that the collector has the necessary ability both financially and operationally to provide the proposed services.

Drafting of Collection Agreements

In a districted system, the City would enter into agreements with their collectors. Typically, when we prepare RFP's for our clients, we recommend that the draft agreement be included in the RFP package, so potential proposers can review in advance of the submission of their proposal, the desired terms and conditions of the City. In their proposal, companies are instructed to identify any exceptions they take to the proposed terms and conditions included in the agreement. This approach provides for a much shorter negotiation process than one that provides the selected collector(s) with the draft agreement after selection. It is common for collectors in a competitive environment to take minimal or no exceptions to the agreement in order to help position themselves during the selection process.

Evaluation of Proposals

Presumably, there will be multiple proposals submitted by interested parties for each district. Therefore, it will be necessary to evaluate each proposal and award the districts in a manner that best meets the objectives of the City and meets the evaluation criteria determined prior to the submission of proposals. Typical evaluation criteria include, but are not limited to, proposed rates, financial stability, demonstrated history of providing similar services, and exceptions to the proposed agreement.

Negotiation of New Agreements

Once companies are selected for each district, collection agreements will need to be finalized with each collector. As stated above, by including draft agreements with the RFP and asking proposers to identify their exceptions, the City is limiting the negotiations to only those items

taken exception to by each proposer. This eliminates the need for protracted negotiations, which results in a more ambitious schedule and reduced overall expenses.

Develop Revised Residential Rate Structure

Although the RFP would require bidders to identify their proposed rates, it may be desirable for the City to develop a Citywide rate structure. Although, it is most common for all residents to pay the same rate for each service, it is possible for the City to allow differing rates for similar services. In some instances, jurisdictions set different rates for senior citizens, low income residents and residents that are harder to service due to hilly terrain or private driveways. However, since proposers would "bid" rates, and changes to those rates would be a policy decision of the City.

Estimated Start-Up Costs

In Table 7-1 below, we have estimated the potential start-up costs related to the implementation of a districted system, assuming the City contracts for the provision of these services. Because a number of these costs are contingent on the number of districts suggested, we have provided a range of expenses based on between one and six districts, with all other potential start-up costs falling within that range.

Table 7-1
Estimated Start-Up Costs[3]

	One District	Six Districts
Workshops	$13,000	$13,000
Drafting of request for proposals	$16,000	$18,000
Drafting of collection agreements	$12,000	$12,000
Evaluation of proposals	$19,000	$23,000
Negotiation of new agreements	$5,000	$14,000
Develop revised residential rate structure	$6,000	$11,000
Total	**$71,000**	**$91,000**

[3] There are a number of other expense items described in a prior City report which we have not included in this estimate. These include establishing an enterprise fund, a residential generation survey, a rate study, utility billing programming and public education. Based on our experience and understanding of collector billing capabilities, and since the collectors are currently billing for these services, we have assumed that at least one collector could act as the billing agent for the City and possibly other collectors. This would eliminate the need for the City to revise its billing system or create an enterprise fund since revenues would not flow through the City finances. Only 16% of the survey respondents were opposed to mailing their bills directly to the collector.

Based on our experience, we believe that a residential generation study would provide only limited value, and data collected would be mostly for informational purposes and have little impact on the districting process. There has been substantial analysis on residential waste streams conducted by public agencies and private collectors. We believe that the combination of available information and collector experience will be adequate. In regard to the rate study, we performed that study as part of this analysis, and as discussed elsewhere in this report, believe that information is interesting but provides little value to the City's districting approach. The companies as part of their proposals to the City can provide the public education component. The City could supplement this effort with their own efforts.

We have also included in our districting model, $50,000 annually to cover unknown staff or consulting costs for administering the system and for future rate setting and adjustments. This amount is included in the rates and would be used to reimburse the City; therefore the City would not have to generate this amount from its general fund.

APPENDIX A

Traffic Impact Analysis Summary

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APPENDIX B

Public Opinion Survey

	Strongly Disagree 1	2	Neither 3	4	Strongly Agree 5	Total	Mean	St. Dev.
QUESTION #1—The following benefits districted collection are important to me:								
Less traffic from big trucks	82	39	89	159	407	776	3.99	1.34
	10.6%	5.0%	11.5%	20.5%	52.4%	95.4%		
Better safety from fewer trucks	92	55	122	172	333	774	3.77	1.38
	11.9%	7.1%	15.8%	22.2%	43.0%	95.2%		
Better community appearance	85	51	125	165	351	777	3.83	1.35
	10.9%	6.6%	16.1%	21.2%	45.2%	95.6%		
Trash collection bill might be reduced	117	45	121	144	332	759	3.70	1.46
	15.4%	5.9%	15.9%	19.0%	43.7%	93.4%		
Less pollution from trucks	83	39	102	171	377	772	3.93	1.34
	10.8%	5.1%	13.2%	22.2%	48.8%	95.0%		
Less road damage from trucks	76	36	91	172	402	777	4.01	1.30
	9.8%	4.6%	11.7%	22.1%	51.7%	95.6%		
Less noise from once per week collections	80	32	108	147	410	777	4.00	1.33
	10.3%	4.1%	13.9%	18.9%	52.8%	95.6%		
QUESTION #2—The following benefits of open collection are important to me:								
Keep current collector	135	73	201	103	242	754	3.32	3.43
	17.9%	9.7%	26.7%	13.7%	32.1%	92.7%		
Select own collector	122	65	185	119	254	745	3.43	1.44
	16.4%	8.7%	24.8%	16.0%	34.1%	91.6%		
Retain same collection day & time	173	82	259	63	173	750	2.97	1.43
	23.1%	10.9%	34.5%	8.4%	23.1%	92.3%		
No disruption in service	148	77	249	97	175	746	3.10	1.40
	19.8%	10.3%	33.4%	13.0%	23.5%	91.8%		
Use the same containers	126	61	214	103	251	755	3.39	1.44
	16.7%	8.1%	28.3%	13.6%	33.2%	92.9%		
QUESTION #3—I would like to try districted trash collection								
	143	36	83	155	349	766	3.69	1.53
	18.7%	4.7%	10.8%	20.2%	45.6%	94.2%		
QUESTION #4—I would rather keep things as they are								
	231	109	158	49	172	719	2.75	1.55
	32.1%	15.2%	22.0%	6.8%	23.9%	88.4%		

QUESTION #5—What is the annual estimated trash bill?

Total responses:	664
% of responses:	81.7%
High:	720
Low:	3
Mean:	151.66
Standard Deviation:	80.42

Actual Responses:

Count	Amount	Count	Amount	Count	Amount
65	120.00	3	192.00	1	124.00
60	100.00	3	270.00	1	135.00
40	200.00	3	280.00	1	142.00
38	150.00	3	500.00	1	145.80
23	110.00	2	15.00	1	151.80
21	160.00	2	42.00	1	152.40
18	130.00	2	62.00	1	155.00
17	108.00	2	94.00	1	163.00
17	220.00	2	97.00	1	164.00
16	180.00	2	115.00	1	164.70
14	80.00	2	126.00	1	171.00
12	240.00	2	128.00	1	178.00
11	250.00	2	132.00	1	185.00
11	300.00	2	138.00	1	188.00
10	75.00	2	148.00	1	190.00
10	140.00	2	151.00	1	202.00
10	165.00	2	153.00	1	204.00
9	90.00	2	156.00	1	206.00
9	125.00	2	174.00	1	207.40
9	144.00	2	175.00	1	215.00
7	36.00	2	195.00	1	215.40
7	70.00	2	219.00	1	219.60
7	96.00	2	222.00	1	224.00
7	168.00	1	3.00	1	226.00
6	114.00	1	10.00	1	230.00
6	152.00	1	12.00	1	232.00
6	170.00	1	18.00	1	235.00
6	210.00	1	20.00	1	256.00
6	225.00	1	25.00	1	260.00
4	50.00	1	28.00	1	261.00
4	60.00	1	30.00	1	268.00
4	65.00	1	55.00	1	288.00
4	85.00	1	56.00	1	296.00
4	88.00	1	66.00	1	302.00
4	109.00	1	67.00	1	315.00
4	112.00	1	75.60	1	326.00
4	162.00	1	78.00	1	360.00
4	208.00	1	78.75	1	378.00
4	216.00	1	92.00	1	396.00
4	400.00	1	93.00	1	408.00
3	40.00	1	98.00	1	420.00
3	48.00	1	100.80	1	450.00
3	72.00	1	101.30	1	480.00
3	104.00	1	109.20	1	516.00
3	105.00	1	113.76	1	600.00
3	136.00	1	116.00	1	650.00
3	176.00	1	121.00	1	720.00

QUESTION #6a—Do you haul your own trash?

Yes	No	Total
138	646	784
17.6%	82.4%	96.4%

QUESTION #6b—Average number of self-haul trips per year

Total responses:	142
% of responses:	17.5%
High:	90
Low:	1
Mean:	5.49
Standard Deviation:	9.66

Count	Trips
41	2
30	4
27	3
10	6
8	1
4	15
4	12
4	10
4	5
3	8
3	7
1	90
1	52
1	50
1	24

QUESTION #7—The number of containers set out each week:

	Count	Number
Cans:	240	1
	92	2
	25	3
	3	4
	2	0.5
	1	1+
	1	20
	1	5
Carts:	164	1
	4	2
Bags:	156	1
	62	2
	21	3
	6	4
	5	0.5
	2	6
	1	7
	1	5

Other:	
1	18
1 Recycle Bin	18
Recycling Bin	10
1 Recycling Bin	7
Recycle Bin	6
Dumpster	5
1 Dumpster	3
Toter	2
.5 Dumpster	1
.5 Recycle Box	1
1 Barrel	1
1 Bin	1
1 Recycle	1
1 Recycle Cart	1
1 Recycle Container	1
1 Recycle Tub	1
2/Yr	1
3 Yard Boxes	1
Box	1
Lg Boxes, etc.	1
Newspapers	1
Papers	1
Recycling Bins	1
Trash Bin	1
Tub	1
Yard Waste	1

QUESTION #8—How long with current collector?

Total responses:	748
% of responses:	92.0%
High:	432
Low:	1
Mean:	57.24
Standard Deviation:	63.53

Count	Months	Count	Months	Count	Months
121	12	4	192	1	44
85	24	3	21	1	46
79	36	3	122	1	50
71	60	3	156	1	52
43	48	2	5	1	53
40	120	2	13	1	61
30	72	2	14	1	62
23	6	2	19	1	65
20	96	2	20	1	67
17	240	2	27	1	68
15	1	2	38	1	69
14	84	2	42	1	75
14	180	2	51	1	110
12	8	2	55	1	111
11	18	2	66	1	115
8	144	2	78	1	118
7	9	2	102	1	134
7	132	2	204	1	159
5	4	2	216	1	162
5	11	2	300	1	222
5	30	2	360	1	252
5	108	1	16	1	260
4	2	1	17	1	276
4	3	1	22	1	324
4	7	1	28	1	336
4	10	1	31	1	408
4	15	1	39	1	420
4	29	1	40	1	432
4	54	1	43		

QUESTION #9—When did you last consider changing collectors?

Total responses:	423
% of responses:	52.0%
High:	432
Low:	1
Mean:	31.15
Standard Deviation:	42.16

Count	Months	Count	Months	Count	Months
101	12	4	144	1	14
59	24	4	240	1	17
46	1	3	9	1	19
38	36	3	21	1	25
26	6	2	11	1	38
26	60	2	15	1	39
18	48	2	16	1	54
11	2	2	20	1	55
11	72	2	30	1	61
10	96	2	84	1	69
9	3	2	132	1	85
8	120	2	180	1	122
5	4	1	7	1	432
5	8	1	10		
4	18	1	13		

QUESTION #10—Do you and your neighbors use the same collector?

Yes	No	Total
253	442	695
36.4%	63.6%	85.5%

	1	2	3	4	5	Total	Mean	St. Dev.
QUESTION #11—I am satisfied with current service quality								
	28	40	107	209	390	774	4.15	1.07
	3.6%	5.2%	13.8%	27.0%	50.4%	95.2%		
QUESTION #12—I do everything I can to recycle								
	19	21	65	208	477	790	4.40	0.92
	2.4%	2.7%	8.2%	26.3%	60.4%	97.2%		
QUESTION #13—I would like to recycle more types of materials								
	32	31	100	123	470	756	4.28	1.11
	4.2%	4.1%	13.2%	16.3%	62.2%	93.0%		
QUESTION #14—I would like to use a separate yard waste container								
	119	54	178	127	264	742	3.49	1.44
	16.0%	7.3%	24.0%	17.1%	35.6%	91.3%		
QUESTION #15—I am willing to pay more for increased recycling								
	269	108	133	150	105	765	2.63	1.47
	35.2%	14.1%	17.4%	19.6%	13.7%	94.1%		
QUESTION #16—I currently set out recyclables for collection this many times per month								
	89	106	67	355		617	3.12	1.15
	14.4%	17.2%	10.9%	57.5%		75.9%		
QUESTION #17—I support the following bill payment methods								
Combine with City utility bill	239	45	93	172	176	725	3.00	1.61
	33.0%	6.2%	12.8%	23.7%	24.3%	89.2%		
Mail payment directly to collector	65	46	170	138	284	703	3.75	1.30
	9.2%	6.5%	24.2%	19.6%	40.4%	86.5%		
Automatic bill payment through account	434	53	97	51	51	686	1.88	1.31
	63.3%	7.7%	14.1%	7.4%	7.4%	84.4%		

QUESTION #18—How may times per year do you want to pay your bill?

Total responses:	722
% of responses:	88.8%
High:	32
Low:	1
Mean:	5.57
Standard Deviation:	3.58

Count	Times
418	4
146	12
76	3
36	6
30	2
10	1
2	5
1	7
1	9
1	24
1	32

APPENDIX C

Summary of Responses

	Strongly Disagree 1	2	Neither 3	4	Strongly Agree 5	Total	Mean	St. Dev.
QUESTION #1—The following benefits districted collection are important to me:								
Less traffic from big trucks	82	39	89	159	407	776	3.99	1.34
	10.6%	5.0%	11.5%	20.5%	52.4%	95.4%		
Better safety from fewer trucks	92	55	122	172	333	774	3.77	1.38
	11.9%	7.1%	15.8%	22.2%	43.0%	95.2%		
Better community appearance	85	51	125	165	351	777	3.83	1.35
	10.9%	6.6%	16.1%	21.2%	45.2%	95.6%		
Trash collection bill might be reduced	117	45	121	144	332	759	3.70	1.46
	15.4%	5.9%	15.9%	19.0%	43.7%	93.4%		
Less pollution from trucks	83	39	102	171	377	772	3.93	1.34
	10.8%	5.1%	13.2%	22.2%	48.8%	95.0%		
Less road damage from trucks	76	36	91	172	402	777	4.01	1.30
	9.8%	4.6%	11.7%	22.1%	51.7%	95.6%		
Less noise from once per week collections	80	32	108	147	410	777	4.00	1.33
	10.3%	4.1%	13.9%	18.9%	52.8%	95.6%		
QUESTION #2—The following benefits of open collection are important to me:								
Keep current collector	135	73	201	103	242	754	3.32	3.43
	17.9%	9.7%	26.7%	13.7%	32.1%	92.7%		
Select own collector	122	65	185	119	254	745	3.43	1.44
	16.4%	8.7%	24.8%	16.0%	34.1%	91.6%		
Retain same collection day & time	173	82	259	63	173	750	2.97	1.43
	23.1%	10.9%	34.5%	8.4%	23.1%	92.3%		
No disruption in service	148	77	249	97	175	746	3.10	1.40
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Use the same containers	126	61	214	103	251	755	3.39	1.44
	16.7%	8.1%	28.3%	13.6%	33.2%	92.9%		
QUESTION #3—I would like to try districted trash collection								
	143	36	83	155	349	766	3.69	1.53
	18.7%	4.7%	10.8%	20.2%	45.6%	94.2%		
QUESTION #4—I would rather keep things as they are								
	231	109	158	49	172	719	2.75	1.55
	32.1%	15.2%	22.0%	6.8%	23.9%	88.4%		

	Strongly Disagree		Neither		Strongly Agree			
	1	2	3	4	5	Total	Mean	St. Dev.

QUESTION #5—What is the annual estimated trash bill?

Total responses:	664
% of responses:	81.7%
High:	720
Low:	3
Mean:	151.66
Standard Deviation:	80.42

Actual Responses:	Count	Amount	Count	Amount	Count	Amount
	65	120.00	3	192.00	1	124.00
	60	100.00	3	270.00	1	135.00
	40	200.00	3	280.00	1	142.00
	38	150.00	3	500.00	1	145.80
	23	110.00	2	15.00	1	151.80
	21	160.00	2	42.00	1	152.40
	18	130.00	2	62.00	1	155.00
	17	108.00	2	94.00	1	163.00
	17	220.00	2	97.00	1	164.00
	16	180.00	2	115.00	1	164.70
	14	80.00	2	126.00	1	171.00
	12	240.00	2	128.00	1	178.00
	11	250.00	2	132.00	1	185.00
	11	300.00	2	138.00	1	188.00
	10	75.00	2	148.00	1	190.00
	10	140.00	2	151.00	1	202.00
	10	165.00	2	153.00	1	204.00
	9	90.00	2	156.00	1	206.00
	9	125.00	2	174.00	1	207.40
	9	144.00	2	175.00	1	215.00
	7	36.00	2	195.00	1	215.40
	7	70.00	2	219.00	1	219.60
	7	96.00	2	222.00	1	224.00
	7	168.00	1	3.00	1	226.00
	6	114.00	1	10.00	1	230.00
	6	152.00	1	12.00	1	232.00
	6	170.00	1	18.00	1	235.00
	6	210.00	1	20.00	1	256.00
	6	225.00	1	25.00	1	260.00
	4	50.00	1	28.00	1	261.00
	4	60.00	1	30.00	1	268.00
	4	65.00	1	55.00	1	288.00
	4	85.00	1	56.00	1	296.00
	4	88.00	1	66.00	1	302.00
	4	109.00	1	67.00	1	315.00
	4	112.00	1	75.60	1	326.00
	4	162.00	1	78.00	1	360.00
	4	208.00	1	78.75	1	378.00
	4	216.00	1	92.00	1	396.00
	4	400.00	1	93.00	1	408.00
	3	40.00	1	98.00	1	420.00
	3	48.00	1	100.80	1	450.00
	3	72.00	1	101.30	1	480.00
	3	104.00	1	109.20	1	516.00
	3	105.00	1	113.76	1	600.00
	3	136.00	1	116.00	1	650.00
	3	176.00	1	121.00	1	720.00

	Strongly Disagree 1	2	Neither 3	4	Strongly Agree 5	Total	Mean	St. Dev.

QUESTION #6a—Do you haul your own trash?

Yes	No	Total
138	646	784
17.6%	82.4%	96.4%

QUESTION #6b—Average number of self-haul trips per year

Total responses:	142
% of responses:	17.5%
High:	90
Low:	1
Mean:	5.49
Standard Deviation:	9.66

Count	Trips
41	2
30	4
27	3
10	6
8	1
4	15
4	12
4	10
4	5
3	8
3	7
1	90
1	52
1	50
1	24

QUESTION #7—The number of containers set out each week:

	Count	Number
Cans:	240	1
	92	2
	25	3
	3	4
	2	0.5
	1	1+
	1	20
	1	5
Carts:	164	1
	4	2
Bags:	156	1
	62	2
	21	3
	6	4
	5	0.5
	2	6
	1	7
	1	5

Other:	
1	18
1 Recycle Bin	18
Recycling Bin	10
1 Recycling Bin	7
Recycle Bin	6
Dumpster	5
1 Dumpster	3
Toter	2
.5 Dumpster	1
.5 Recycle Box	1
1 Barrel	1
1 Bin	1
1 Recycle	1
1 Recycle Cart	1
1 Recycle Container	1
1 Recycle Tub	1
2/Yr	1
3 Yard Boxes	1
Box	1
"Lg Boxes, etc."	1
Newspapers	1
Papers	1
Recycling Bins	1
Trash Bin	1
Tub	1
Yard Waste	1

QUESTION #8—How long with current collector?

Total responses:	748
% of responses:	92.0%
High:	432
Low:	1
Mean:	57.24
Standard Deviation:	63.53

Count	Months	Count	Months	Count	Months
121	12	4	192	1	44
85	24	3	21	1	46
79	36	3	122	1	50
71	60	3	156	1	52
43	48	2	5	1	53
40	120	2	13	1	61
30	72	2	14	1	62
23	6	2	19	1	65
20	96	2	20	1	67
17	240	2	27	1	68
15	1	2	38	1	69
14	84	2	42	1	75
14	180	2	51	1	110
12	8	2	55	1	111
11	18	2	66	1	115
8	144	2	78	1	118
7	9	2	102	1	134
7	132	2	204	1	159
5	4	2	216	1	162
5	11	2	300	1	222
5	30	2	360	1	252
5	108	1	16	1	260
4	2	1	17	1	276
4	3	1	22	1	324
4	7	1	28	1	336
4	10	1	31	1	408
4	15	1	39	1	420
4	29	1	40	1	432
4	54	1	43		

QUESTION #9—When did you last consider changing collectors?

Total responses:	423
% of responses:	52.0%
High:	432
Low:	1
Mean:	31.15
Standard Deviation:	42.16

Count	Months	Count	Months	Count	Months
101	12	4	144	1	14
59	24	4	240	1	17
46	1	3	9	1	19
38	36	3	21	1	25
26	6	2	11	1	38
26	60	2	15	1	39
18	48	2	16	1	54
11	2	2	20	1	55
11	72	2	30	1	61
10	96	2	84	1	69
9	3	2	132	1	85
8	120	2	180	1	122
5	4	1	7	1	432
5	8	1	10		
4	18	1	13		

QUESTION #10—Do you and your neighbors use the same collector?

Yes	No	Total
253	442	695
36.4%	63.6%	85.5%

	Strongly Disagree 1	2	Neither 3	4	Strongly Agree 5	Total	Mean	St. Dev.
QUESTION #11—I am satisfied with current service quality								
	28	40	107	209	390	774	4.15	1.07
	3.6%	5.2%	13.8%	27.0%	50.4%	95.2%		
QUESTION #12—I do everything I can to recycle								
	19	21	65	208	477	790	4.40	0.92
	2.4%	2.7%	8.2%	26.3%	60.4%	97.2%		
QUESTION #13—I would like to recycle more types of materials								
	32	31	100	123	470	756	4.28	1.11
	4.2%	4.1%	13.2%	16.3%	62.2%	93.0%		
QUESTION #14—I would like to use a separate yard waste container								
	119	54	178	127	264	742	3.49	1.44

	16.0%	7.3%	24.0%	17.1%	35.6%	91.3%		

	Strongly Disagree 1	2	Neither 3	4	Strongly Agree 5	Total	Mean	St. Dev.
QUESTION #15—I am willing to pay more for increased recycling								
	269	108	133	150	105	765	2.63	1.47
	35.2%	14.1%	17.4%	19.6%	13.7%	94.1%		
QUESTION #16—I currently set out recyclables for collection this many times per month								
	89	106	67	355		617	3.12	1.15
	14.4%	17.2%	10.9%	57.5%		75.9%		
QUESTION #17—I support the following bill payment methods								
Combine with City utility bill	239	45	93	172	176	725	3.00	1.61
	33.0%	6.2%	12.8%	23.7%	24.3%	89.2%		
Mail payment directly to collector	65	46	170	138	284	703	3.75	1.30
	9.2%	6.5%	24.2%	19.6%	40.4%	86.5%		
Automatic bill payment through account	434	53	97	51	51	686	1.88	1.31
	63.3%	7.7%	14.1%	7.4%	7.4%	84.4%		

QUESTION #18—How may times per year do you want to pay your bill?

Total responses:	722
% of responses:	88.8%
High:	32
Low:	1
Mean:	5.57
Standard Deviation:	3.58

Count	Times
418	4
146	12
76	3
36	6
30	2
10	1
2	5
1	7
1	9
1	24
1	32