Research ▪ Social Marketing ▪ Results

Residential Recycling Audience Research

Submitted to

Solid Waste Management Coordinating Board by:

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EXECUTIVE SUMMARY

The SWMCB member counties are continuously seeking ways to better engage residents, and raise awareness about the role they play in helping to meet recycling goals. State law requires the Twin Cities metropolitan area counties, including the six Solid Waste Management Coordinating Board members, to recycle 75 percent (up from 50 percent) of total solid waste generated by the year 2030.

Despite changes in policies and programs to improve the management of solid waste in the region, there has not been a region-wide evaluation of the residential population's understanding of the system and changes in residents' recycling behavior. As a result, the SWMCB initiated a region-wide survey to assess recycling knowledge and behavior. This research is intended to be the first step toward identifying effective strategies and tactics to influence behavior change in the residential population to increase recycling rates.

In October of 2015, a telephone survey was conducted with residents of Anoka, Carver, Dakota, Hennepin, Ramsey, and Washington counties. Overall, 1,202 surveys were conducted, approximately 200 surveys per county.

The survey was designed to assess participant attitudes, self-reported recycling behaviors, and experiences with their curbside recycling program. In addition, the survey examined attitudes toward, potential barriers to, and likelihood of participation in curbside food-scrap recycling.

This executive summary includes findings from the six-county region. Findings for each county are located in the main section of the report. The survey instrument can be found in Appendix B.

SAMPLE DESCRIPTION

- **Age:** The average respondent age was 55.7 years old, with ages ranging from 18 to 93. One-third of the respondents (32.9%) were under the age of 50.
- **Gender:** Respondents were 56% female and 44% male.
- **Education:** Nearly half of the respondents (46.7%) had college degrees, 19.6% had a high school education or less, and 33.7% had some college.
- **Employment:** Almost half of the respondents (47.9%) stated that they were employed full time. Nearly one-third (32.8%) reported that they were retired, 9.4% were employed part time, 3.3% were not currently employed, 3.1% were homemakers, 2.5% were full-time students, and 1% were part-time students who work part-time.
- **Household Size:** Household sizes ranged from 1 to 9, with the average household having 2.8 persons. Over half of the respondents (56.5%) lived in one- or two-person households.
- **Children:** Most respondents (71.3%) lived in households that did not have any children under 18 years of age. In households with children, almost one-third (31.8%) had at least one child under 5 years of age.

- **Residence:** The overwhelming majority of the respondents (83.6%) reported living in a single-family detached home. Nine percent reported living in a townhouse, 3.9% in a condominium, and 3.4% in a duplex/triplex/fourplex.
- **Ownership:** The majority of the respondents (88.5%) reported that they own their home.
- **Race:** The overwhelming majority (89.4%) reported their race to be White, 3.7% stated they were African-American, 2.5% reported Asian, 2.1% reported Hispanic or Latino, and 2.1% reported American Indian or some other race.
- **Language:** Very few households (9.2%) had a language other than English spoken in their home. Three percent of the respondents stated that they speak Spanish in their home. Other languages accounted for less than one percent of the respondents.

General Recycling: Attitudes

Respondents were asked to rate the *importance* of recycling on a *0* (not at all important) to *10* (extremely important) scale, and the *difficulty* of recycling on a *0* (not at all difficult) to *10* (extremely difficult) scale. Respondents were asked to provide the reasons why their household participated in recycling at home. They were not prompted in any way and their responses were recorded verbatim.

- Overall, the **importance** of recycling was very high and the **difficulty** of participating was low.
- Higher levels of the **importance** of participating in curbside recycling were related to home ownership and living in a single-family detached residence.
- Higher levels of the **difficulty** of participating in curbside recycling were related to employment other than full time, renting, and living in a dwelling other than a single-family detached residence.
- Respondents stated overwhelmingly that their recycling participation was related to **environmental concerns**.

General Recycling: Self-Reported Recycling Behaviors

Respondents were asked about whether they tossed a list of specific items into their recycling or garbage bin. The list included five recyclable items: brown paper bags, cartons used for milk or juice, cereal or cracker boxes, mail (including envelopes with windows and junk mail), and plastic beverage bottles. There was one garbage item: tissue and napkins.

- Almost half of the respondents (47.5%) reported that they **tossed all items into the correct bin** and 38.9% of the respondents reported **one wrong item**.
- For respondents who reported **higher numbers of wrong items tossed**, importance of recycling ratings were lower and difficulty ratings were higher.
- **Higher numbers of wrong items tossed** were related to children in the household, not being employed full time, high school education or less, renting, and living in attached homes.

General Recycling: Barriers

Respondents were read a series of statements and for each one, asked how big a reason it was for keeping their household from recycling everything they could.

- The biggest concern about recycling was placing personal information in the recycling bin.
- The second concern was dealing with greasy or oily containers.
- Overall, barriers to recycling were moderate to low. However, respondents who had high school education or less, rented their home, and lived in a single-family attached home gave higher barrier ratings than respondents who had college educations, owned their homes, and lived in single-family detached homes.

Organics Recycling

Respondents were asked to rate the *importance* of recycling food-scraps and food-soiled paper on a *0* (not at all important) to *10* (extremely important) scale, and the *difficulty* of recycling food-scraps and food-soiled paper on a *0* (not at all difficult) to *10* (extremely difficult) scale. Respondents were read a series of potential barriers to recycling food-scraps and food-soiled paper, and for each one, asked how big a reason it might for keeping them from participating in a program.

- Overall, education level was most common factor in the relationship between organics and recycling attitudes (importance and difficulty).
- Respondents with a high school education or less had more concerns about potential barriers to organics recycling than those with college degrees.
- Overall interest in participating in food-scrap recycling was moderate.
- Barriers common to all respondents were increased fees, attracting pests, and smells.
- There is a sizeable group of likely participants for whom barriers are not insurmountable.

Recommendations

General Recycling

People in the Twin-Cities Region have very favorable attitudes toward recycling.

- To improve the quality and quantity of recycled material collected across the region, there are two barriers worth addressing: (1) concern about personal information and (2) greasy and oily containers.

Most households within the region report doing the right thing – their attitudes are in alignment with their reported behaviors.

- This group needs ongoing, accurate, and up-to-date information in order to sustain their current behaviors.
- The municipalities and haulers in this region should use messages that promote the high level of importance placed on recycling by the overwhelming majority of people in the region.

- Highlight normative behaviors (i.e., large numbers of people are engaged in the desired behavior) to bring about change in tough-to-reach groups.

Generally, people in non-ownership, single-family attached homes reported struggling more with recycling and reported more tossing mistakes.

- We recommend working with landlords and building owners to ensure that these groups receive clear information on what to recycle, how recycling works in their residence, and that recycling is an important and valuable part of living there.

Residents who reported having a high school education or part-time employment (and, most likely, a lower household income), as well as households with children are also clear targets for a focused program.

- These groups would benefit from education and strategies to make the process of recycling more convenient and easier.

Organics Recycling

Overall, respondents were not negative about organics recycling. The general attitudes and perceptions of organics recycling could use some improvement, as people are not convinced it is an important action to take and may not know why it matters. The interest in participating in organics recycling overall was moderate. Three barriers were most influential to organics recycling: (1) *Not wanting to pay more fees*; (2) *Attracting pests;* and (3) *Smell*.

There is a sizable, willing group of people who can provide the foundation for successful curbside organics collection; however, *increased fees*, *pests*, and *smells* will still need to be addressed for this group.

- This group will need credible convincing messages about increased fees.
- This group will need education and practical strategies to help overcome pests and smells in their kitchens and curbside bins.
- Outreach methods can involve early adopters in order to create social diffusion.
- Social diffusion (i.e., small groups used to influence neighbors, friends, and relatives) is effective in driving behavior change before a behavior becomes normative (i.e., *everyone* is doing it).
- Start small in order to create something big. The goal for this program would be to *use social diffusion to create a social norm* for organics recycling throughout the region.

Next Steps

We recommend including research in the design of outreach materials, communication, and strategies. Focus groups or short intercept surveys with the target audience are essential to a successful program.

A very important next step will be to develop strategies and pilot test the strategies on a small scale in a few neighborhoods throughout the region. Piloting a variety of strategies using a control group will reveal which strategies achieved the program goals. Those strategies can then be promoted more broadly across similar neighborhoods and municipalities throughout the region.

INTRODUCTION

The Solid Waste Management Coordinating Board (SWMCB) was formed in 1990 to increase the efficiency and environmental effectiveness of the region's solid waste management system. The SWMCB launched its first education outreach campaign in 2003 to help citizens living in the six-county Twin Cities metro area (the Minnesota Counties of Anoka, Carver, Dakota, Hennepin, Ramsey and Washington) understand the need to make environmentally responsible purchasing, disposal, and recycling decisions in their daily lives. Responsible disposal of unwanted items is necessary for a healthy environment and helps protect public health.

The SWMCB member counties are continuously seeking ways to better engage residents, and raise awareness about the role they play in helping to meet recycling goals. State law requires the Twin Cities metropolitan area counties, including the six Solid Waste Management Coordinating Board members, to recycle 75 percent (up from 50 percent) of total solid waste generated by the year 2030.

Despite changes in policies and programs to improve the management of solid waste in the region, there has not been a region-wide evaluation of the residential population's understanding of the system and changes in residents' recycling behavior. As a result, the SWMCB initiated a region-wide survey to assess recycling knowledge and behavior. This research is intended to be the first step toward identifying effective strategies and tactics to influence behavior change in the residential population to increase recycling rates.

In October of 2015, a telephone survey was conducted with residents of Anoka, Carver, Dakota, Hennepin, Ramsey, and Washington counties. Overall, 1,202 surveys were conducted, approximately 200 surveys per county.

The survey was designed to assess participant attitudes, self-reported recycling behaviors, and experiences with their curbside recycling program. In addition, the survey examined attitudes toward, potential barriers to, and likelihood of participation in curbside food-scrap recycling. Survey items were constructed based on literature review and our experience with other recycling programs. The survey included the following topic areas:

- Perceived importance and difficulty of recycling;
- Disposal habits for a selection of household items;
- Barriers specific to recycling;
- Understanding of the term *organics*;
- Perceived importance and difficulty of food-scrap recycling;
- Barriers specific to curbside food-scrap recycling; and
- Demographics.

This report describes the results of the telephone survey and presents recommendations for outreach to improve curbside recycling programs by county and as well as region-wide.

How to Use This Report

This report is divided into four sections:

- *Methods* which includes a description of the study population and how the study county samples were weighted for regional-level analyses;
- *Regional Sample Characteristics and Results* which includes the outcomes from the weighted sample;
- *County Sample Characteristics and Results* which includes outcomes separately for each county; and
- *Recommendations* which includes outreach strategies and social science tools selected based on study outcomes.

There are two appendices at the end of this report:

- Appendix A contains the open-ended responses to the survey question, "Why does your household recycle?"; and
- Appendix B contains the survey instrument.

METHODS

Residents of Anoka, Carver, Dakota, Hennepin, Ramsey, and Washington counties were contacted by telephone using a dual frame random sampling method. Both landline and wireless telephone numbers were included in order to obtain a representative sample of residents within each county living in single-family dwellings. As of December 2014, 45% of households across the United States were wireless telephone only households[1]. Wireless-only households are typically younger, lower income, and of Hispanic origin. As a result of the sampling of single-family dwellings for this research, the percentage of wireless-only households will be lower than might be expected for the population as a whole.

TABLE 1. LANDLINE AND WIRELESS TELEPHONE PROPORTIONS BY COUNTY

County	Landline	Wireless	Landline/Wireless
Anoka	139	62	69% / 31%
Carver	136	64	68% / 32%
Dakota	136	64	68% / 32%
Hennepin	138	62	69% / 31%
Ramsey	135	66	67% / 33%
Washington	142	58	71% / 29%

Interviews were conducted in English between October 1 and October 29, 2015. Participants were required to be 18 years or older, a resident of one of the six counties, and live in a single-family detached or attached dwelling of no more than four units. A total of 1,202 residents were surveyed, consisting of approximately 200 residents from each county. The sample size of 200 in each county provides stable county-level estimates of the measures included in the survey (margin of error is +/-6.9% at 95% CI). The margin of error for the region-wide sample is +/-2.75% at 95% CI. Outcomes are reported for each county separately. However, in order to conduct multivariate statistics to explain relationships that exist between attitudinal, behavioral, and demographic variables at the regional level, these data were *weighted*. The *weights* were utilized to adjust each county sample to the proportion of the single-family residence (units < 4) population and gender split that exists across the whole region. For example, the 876,480 people who live in single-family homes in Hennepin County account for 40% of the population living in single-family homes across the six-county region. Therefore, the 200 surveys collected for Hennepin County were weighted to account for 40% of the surveys for the regional-level analyses. Without applying weights to the surveys within each county, some counties would over-represent and some would under-represent survey responses at the regional level.

[1] Blumberg SJ, Luke JV. Wireless substitution: Early release of estimates from the National Health Interview Survey, July–December 2014. National Center for Health Statistics. June 2015. Available from: http://www.cdc.gov/nchs/nhis.htm.

TABLE 2. POPULATION PROPORTIONS BY COUNTY USED FOR REGIONAL WEIGHTING

County	Total Sample Size (M/F)	Population in < 4 Units	Proportion within Region
Anoka	201 (46%/54%)	296,785	13.6%
Carver	200 (48%/52%)	83,126	3.8%
Dakota	200 (41%/59%)	335,055	15.3%
Hennepin	201 (48%/52%)	876,480	40.1%
Ramsey	200 (46%/54%)	371,486	17%
Washington	200 (36%/64%)	223,576	10.2%
Totals	1,202	2,186,508	100%

ANALYSES

The main objective of the survey was to identify barriers to general recycling and organics recycling behaviors. Analysis of variance (ANOVA) was used to look for differences between grouped demographic variables for the scaled attitude and barrier variables (0 to 10). Correlations were used to look for relationships between scaled attitude and barrier variables, and self-reported behavior variables. Cross-tabulations were used to identify relationships between categorical barrier and grouped demographic variables. In order to conduct some analyses, scaled barrier and attitude variables were recoded to create categorical variables.

County-level analyses were conducted using weighted samples in order to create representation by gender. The regional-level analyses were conducted using weights for county populations and gender. All analyses were conducted using the weighted samples unless otherwise noted. Percentages only are presented for weighted analyses.

THE TWIN-CITIES REGION

SAMPLE CHARACTERISTICS

- **Age:** The average respondent age was 55.7 years old, with ages ranging from 18 to 93. One-third of the respondents (32.9%) were under the age of 50.
- **Gender:** Respondents were 56% female and 44% male.
- **Education:** Nearly half of the respondents (46.7%) had college degrees, 19.6% had a high school education or less, and 33.7% had some college.
- **Employment:** Almost half of the respondents (47.9%) stated that they were employed full time. Nearly one-third (32.8%) reported that they were retired, 9.4% were employed part time, 3.3% were not currently employed, 3.1% were homemakers, 2.5% were full-time students, and 1% were part-time students who work part-time.
- **Household Size:** Household sizes ranged from 1 to 9, with the average household having 2.8 persons. Over half of the respondents (56.5%) lived in one- or two-person households.
- **Children:** Most respondents (71.3%) lived in households that did not have any children under 18 years of age. In households with children, almost one-third (31.8%) had at least one child under 5 years of age.
- **Residence:** The overwhelming majority of the respondents (83.6%) reported living in a single-family detached home. Nine percent reported living in a townhouse, 3.9% in a condominium, and 3.4% in a duplex/triplex/fourplex.
- **Ownership:** The majority of the respondents (88.5%) reported that they own their home.
- **Race:** The overwhelming majority (89.4%) reported their race to be White, 3.7% stated they were African-American, 2.5% reported Asian, 2.1% reported Hispanic or Latino, and 2.1% reported American Indian or some other race.
- **Language:** Very few households (9.2%) had a language other than English spoken in their home. Three percent of the respondents stated that they speak Spanish in their home. Other languages accounted for less than one percent of the respondents.

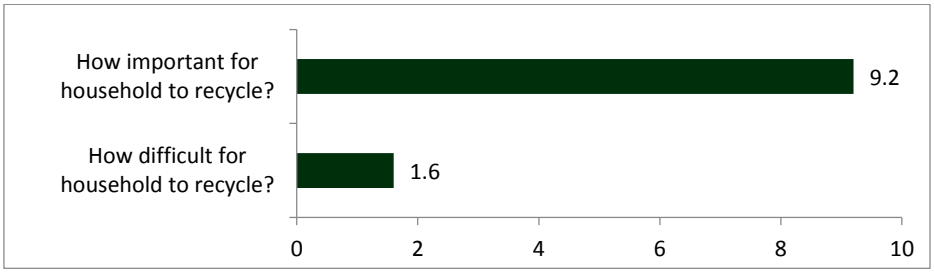
RESULTS

GENERAL RECYCLING ATTITUDES

In order to assess attitudes about recycling, respondents were asked about *how important* and *how difficult* it was for their family to participate in curbside recycling. Respondents were asked to rate the *importance* of recycling on a *0* (not at all important) to *10* (extremely important) scale. They were also asked to rate the *difficulty* of recycling on a *0* (not at all difficult) to *10* (extremely difficult) scale.

Overall, respondents rated the importance very high and the difficulty very low.

FIGURE 1. MEAN SCORES OF PERCEIVED IMPORTANCE AND DIFFICULTY OF RECYCLING



- Respondents rated the **importance** of participating in curbside recycling very high (*M*=9.19, SD=1.75). Well over half of the respondents (70.6%) rated importance as a *10*. Only 5% of the respondents gave importance a rating of *0* to *5*.
- Respondents rated the **difficulty** of participating in curbside recycling as quite low (*M*=1.61, SD=2.75). Over half of the respondents (58.7%) rated difficulty as a *0*. Eleven percent rated difficulty as moderate to very difficult (*5* to *10*).

There were statistically significant relationships between the **importance** and **difficulty** of recycling, and some key variables of interest.

IMPORTANCE

Respondents who **owned their homes** rated the *importance* of recycling higher than those who reported renting their homes (*M*=9.24 vs. 8.82 *p*=.00).

Respondents who lived in **single-family detached homes** rated the *importance* of recycling higher than those who lived in attached homes (condominiums, duplexes, townhomes) (*M*=9.26 vs. 8.80 *p*=.00).

DIFFICULTY

Respondents who were **not employed full time** rated the *difficulty* of recycling higher than those who are employed full time (*M*=1.79 vs. 1.39, *p*=.01).

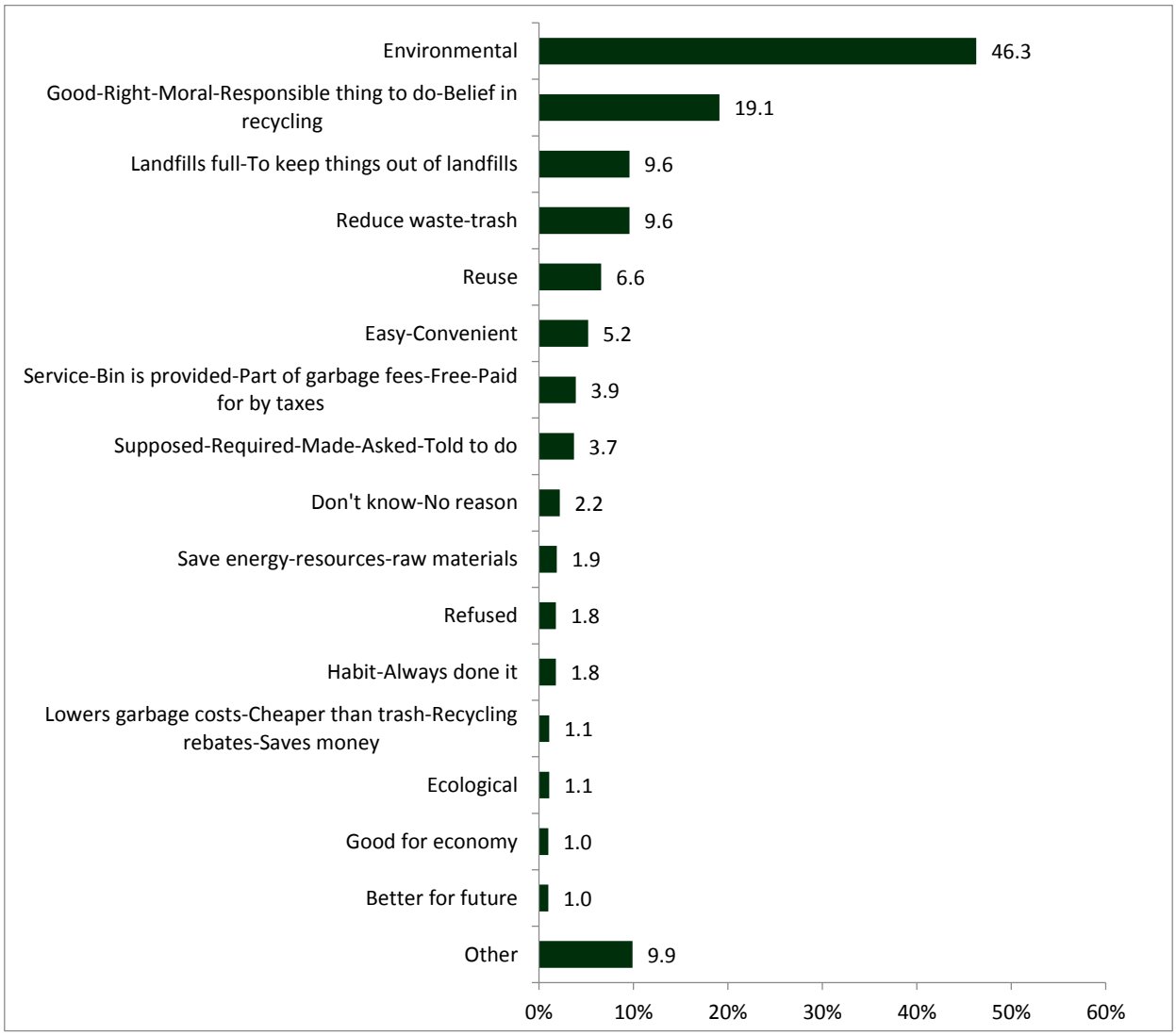
Respondents who **rented their homes** rated the *difficulty* of recycling higher than those who reported owning their homes (*M*=2.35 vs. 1.47 *p*=.00).

Respondents who lived in **attached homes** (condominiums, duplexes, townhomes) rated the *difficulty* of recycling higher than those who lived in single-family detached homes (*M*=2.16 vs. 1.51 *p*=.00).

Motivation for Recycling

Respondents were asked to provide the reasons why their household participated in recycling at home. They were not prompted in any way and their responses were recorded verbatim. Those responses were then categorized and coded. The reasons were overwhelmingly related to protecting the environment. The most frequently given reasons are presented below. Respondents could provide more than one answer, therefore, the responses will sum to greater than 100%.

FIGURE 2. THE MOST FREQUENTLY GIVEN REASONS FOR PARTICIPATING IN RECYCLING AT HOME



The most common reason given for recycling was to *protect the environment* (46.3%), followed by *it's the right thing to do* (19.1%), *keeping things out of the landfill* (9.6%), and *reducing waste* (9.6%).

Key Findings:

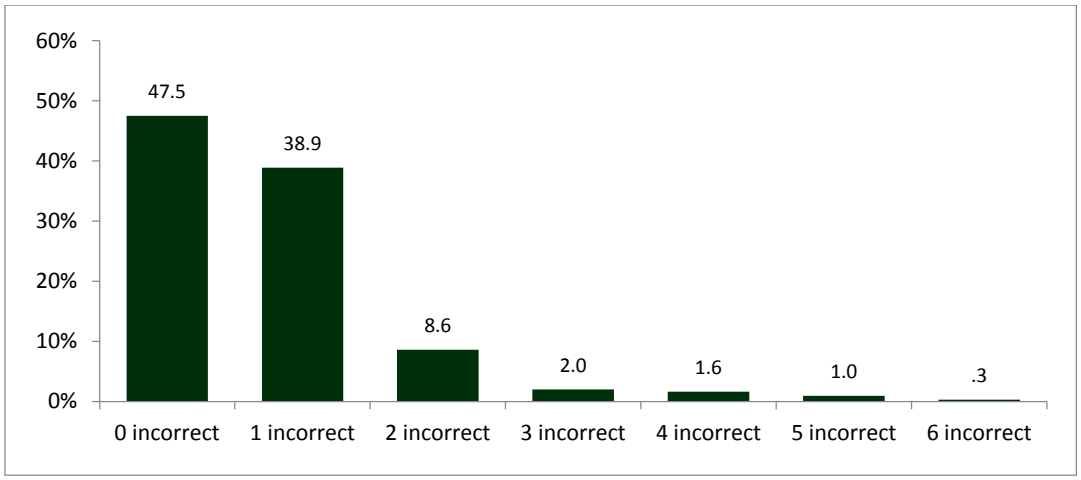
- Overall, the importance of recycling was very high and the difficulty of participating was low.
- Higher levels of the importance of participating in curbside recycling were related to home ownership and living in a single-family detached residence.
- Higher levels of the difficulty of participating in curbside recycling were related to employment other than full time, renting, and living in a dwelling other than a single-family detached residence.
- Respondents stated overwhelmingly that their recycling participation was related to environmental concerns.

Self-Reported Recycling Behaviors

Wrong-Items Score

Respondents were asked about whether they tossed a list of specific items into their recycling or garbage bin. The list included five recyclable items: brown paper bags, cartons used for milk or juice, cereal or cracker boxes, mail (including envelopes with windows and junk mail), and plastic beverage bottles. There was one garbage item: tissue and napkins. Respondent answers were summed to create a self-reported *wrong-items score*. The range of scores are displayed below:

FIGURE 3. SELF-REPORTED WRONG-ITEMS SCORE



Almost half of the respondents (47.5%) reported that they tossed all items into the correct bin and 38.9% of the respondents reported one wrong item. However, there were significant relationships between the number of wrong items tossed and a number of key variables of interest.

- There was an inverse relationship between the number of wrong items tossed and the **importance** of participating in curbside recycling (r=-.37, p=.00). As the number of wrong items increased the reported importance of participation decreased.
- There was a relationship between the number of wrong items tossed and **difficulty** of participating in curbside recycling (r=.25, p=.00). As the number of wrong items increased the reported difficulty of participation increased.
- Respondents with **children in the household** had a higher average number of wrong items tossed than those without children in the household (M=.79 vs. .66, p=.05).
- Respondents who were **not employed full time** had a higher average number of wrong items tossed than those who were employed full time (M=.84 vs. .62, p=.00).
- Respondents who had a **high school education** reported a higher average number of wrong items tossed than those who had some college or were college graduates (M=.87 vs. .73 vs. .67 p=.04).

- Respondents who **rented their homes** reported a higher average number of wrong items tossed than those who owned their homes (*M*=1 vs. .69 *p*=.00).
- Respondents who **lived in attached homes** (condominiums, duplexes, townhomes) reported a higher average number of wrong items tossed than those who lived in single-family detached homes (*M*=1 vs. .70 *p*=.00).

Key Findings:

➲ Almost half of the respondents (47.5%) reported that they tossed all items into the correct bin and 38.9% of the respondents reported one wrong item.

➲ For respondents who reported higher numbers of wrong items tossed, importance of recycling ratings were lower and difficulty ratings were higher.

➲ Higher numbers of wrong items tossed were related to children in the household, not employed full time, high school education, renting, and living in attached homes.

General Recycling Experience

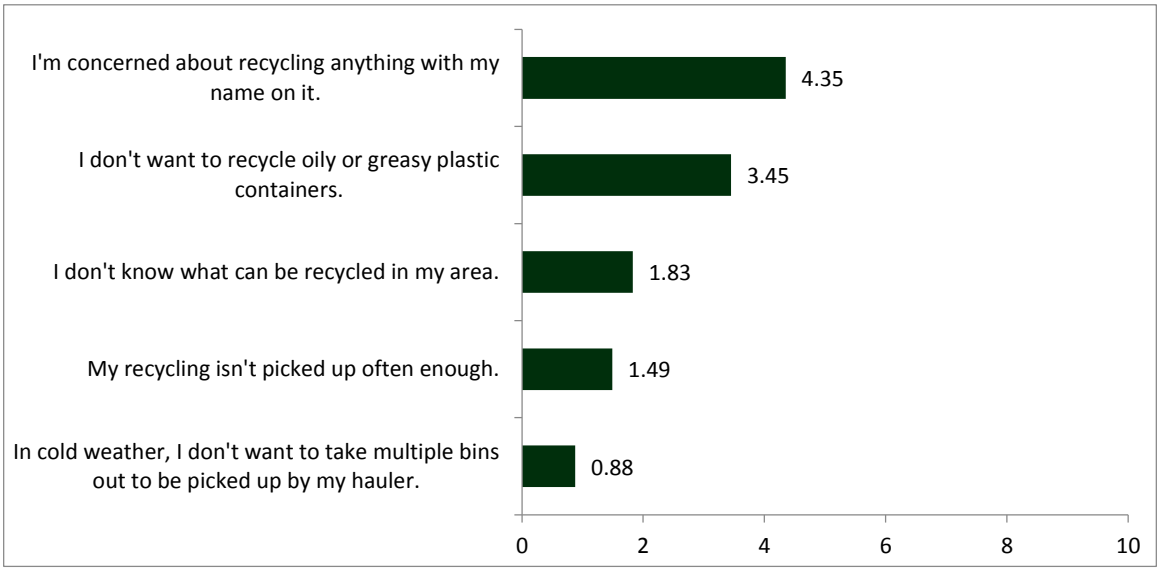
Respondents were asked how often recycling was picked up by their waste hauler, and how many times out of the last four collection opportunities they put out their bin for collection. Respondents who answered anything less than four were then asked to give a reason why they did not put out their recycling bin every time. Respondents were also asked what they did with their recyclables when their bin was full.

- Most of the respondents (68.7%) reported that their recycling was picked up every other week, while 30.5% of the respondents reported that their recycling was picked up weekly.
- The majority of the respondents (81.9%) stated that they put out their recycling each of the last four times they had the opportunity.
- The most frequently mentioned reason given by those who did not put out their bin all four times was that the *bin was not full* (37.3%), followed by *forgetting* (20.1%) and *not being home* (10.9%).
- Over one-third of the respondents (40.6%) reported that they have *never experienced their recycling bin being too full*, while about one-third of the respondents (35%) simply *save the overflow for the next pickup*.

Barriers to General Recycling

Respondents were read a series of statements and for each one, asked how big a reason it was for keeping their household from recycling everything they could. They were asked to use a *0* (not at all a reason) to *10* (a big reason) scale. The mean score for each barrier is displayed below.

FIGURE 4. MEAN SCORES OF REASONS THAT MAY KEEP HOUSEHOLD FROM RECYCLING ALL RECYCLABLE ITEMS



The barrier with the highest mean rating was *concern about personal information* (*M*=4.35, SD=4.28), followed by *not wanting to recycle oily or greasy plastic* (*M*=3.45, SD=4.03), *not knowing what can be recycled* (*M*=1.83, SD=2.85), *recycling not being picked up often enough* (*M*=1.49, SD=3.02), and *moving multiple bins in cold weather* (*M*=.88, SD=2.32).

Personal Information Concerns

Respondents who had a **high school education** rated *concern about personal information* higher than those who had some college or were college graduates (*M*=5.33 vs. 4.95 vs. 3.49 *p*=.00).

Don't Know What Can Be Recycled

Respondents who had a **high school education** rated *not knowing what can be recycled* higher than those who had some college or were college graduates (*M*=2.31 vs.1.73 vs. 1.78 *p*=.04).

Respondents who were **not employed full time** rated *not knowing what can be recycled* higher than those who were employed full time (*M*=2.06 vs. 1.69 *p*=.03).

Respondents who have **children in the household** rated *not knowing what can be recycled* higher than those who do not have children in the household (*M*=2.16 vs. 1.71 *p*=.03).

Recycling Not Picked Up Often Enough

Respondents who **lived in attached homes** (condominiums, duplexes, townhomes) rated *recycling not picked up often enough* higher than those who lived in single-family detached homes (*M*=2.06 vs. 1.38, *p*=.00).

Respondents who have **children in the household** rated *recycling not picked up often enough* higher than those who do not have children in the household (*M*=2.19 vs. 1.19, *p*=.00).

Moving Multiple Bins in Cold Weather

Respondents who **lived in attached homes** (condominiums, duplexes, townhomes) rated *moving multiple bins in cold weather* higher than those who lived in single-family detached homes (*M*=1.56 vs. .75, *p*=.00).

Respondents who **rent their homes** rated *moving multiple bins in cold weather* higher than those who owned their homes (*M*=1.75 vs. .75, *p*=.00).

Respondents who were **not employed full time** rated *moving multiple bins in cold weather* higher than those who were employed full time (*M*=1.07 vs. .69 *p*=.03).

Key Findings:

- The biggest concern about recycling was placing personal information in the recycling bin.
- The second concern was dealing with greasy or oily containers.
- Overall, barriers to recycling were moderate to low. However, there were some distinctive findings related to education, full-time employment, and dwelling type.

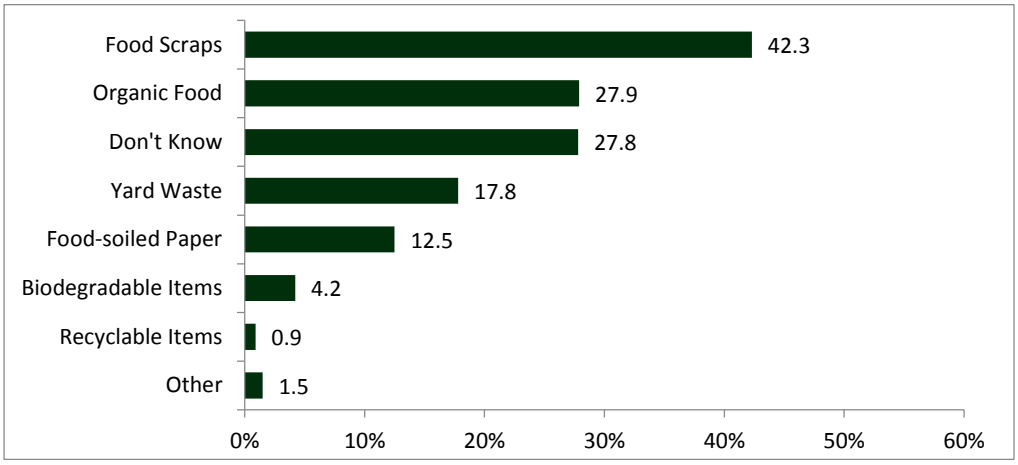
Organics Recycling Knowledge and Attitudes

The Meaning of *Organics*

In order to gauge public perception about food-scrap recycling, respondents were asked what they would place in a bin labeled, *Organics Recycling*. Respondents were not prompted with response categories and their responses were recorded verbatim. Respondents could provide more than one answer, therefore, the responses sum to greater than 100%.

The term *organics recycling* was most often associated with *food waste*.

FIGURE 5. PERCENTAGE OF THE RESPONDENTS STATING ITEM BELONGED IN ORGANICS RECYCLING BIN

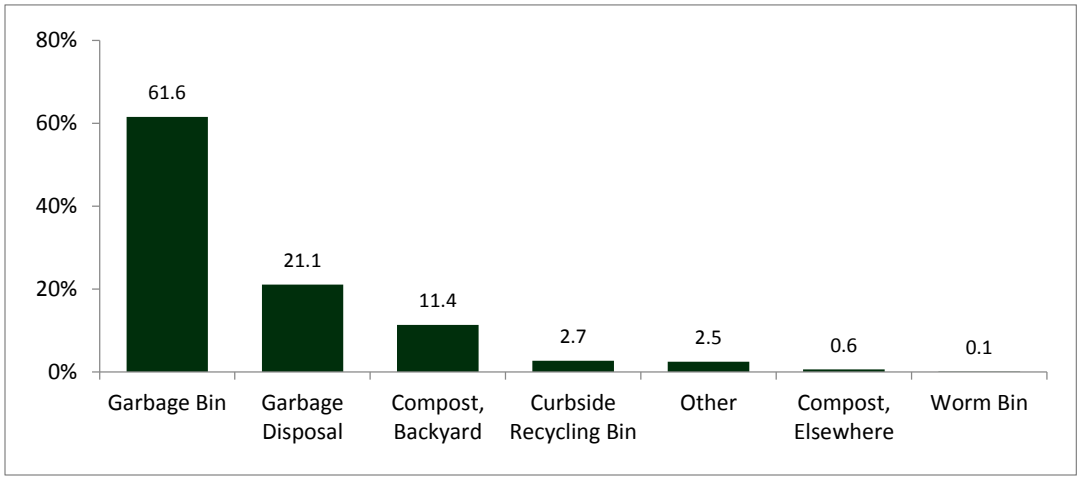


Responses to this question were quite varied. Respondents were most likely to think *food scraps* would go into an organics recycling bin (42.3%) and least likely to think *food-soiled paper* would go in (12.5%). Over one-fourth of the respondents (27.8%) stated that they *did not know* what would go into an organics recycling bin.

KNOWLEDGE: SELF-REPORTED FOOD SCRAP DISPOSAL BEHAVIOR

Respondents were asked where they place most of their household food scraps. Those who reported that they placed food scraps in the garbage bin, garbage disposal, or compost pile (theirs or someone else's) were asked follow-up questions about attitudes, likelihood of participating in a curbside program, and potential barriers to participating in a curbside food-scrap recycling program. Respondents who stated they currently place their food scraps in a recycling bin for curbside pickup from their waste hauler were not included in these analyses. The responses to food-scrap placement are displayed below.

FIGURE 6. CURRENT DISPOSAL METHODS OF FOOD SCRAPS



Well over half of the respondents stated that they place food scraps in the garbage bin (61.6%). Twenty-one percent stated that they place them in the garbage disposal and 11.4% stated they place them in a backyard compost pile.

A small number of the respondents in the regional sample (2.7%) stated that they dispose of their food scraps in a curbside food-scrap collection bin. Frequency distributions of the responses are reported in a later section. The number of respondents was not large enough to conduct multivariate statistical analyses; therefore, the responses were excluded from the county-level reports.

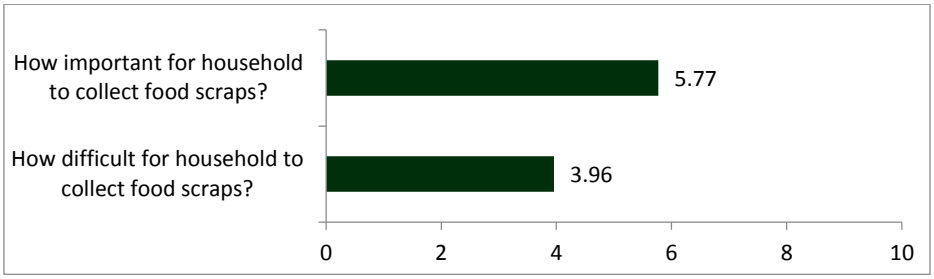
RESPONDENTS WITH NO CURRENT FOOD-SCRAP PROGRAM

ATTITUDES

Respondents were asked about *how important* and *how difficult* it would be for their family to participate in a curbside food-scrap and food-soiled paper recycling program. Respondents were asked to rate the *importance* of recycling food scraps and food-soiled paper on a *0* (not at all important) to *10* (extremely important) scale. They were also asked to rate the *difficulty* of recycling these items on a *0* (not at all difficult) to *10* (extremely difficult) scale.

Food-scrap collection was not seen either as very important or very difficult. Mean scores for importance and difficulty are shown below.

FIGURE 7. MEAN SCORES OF PERCEIVED IMPORTANCE AND DIFFICULTY OF COLLECTING FOOD SCRAPS

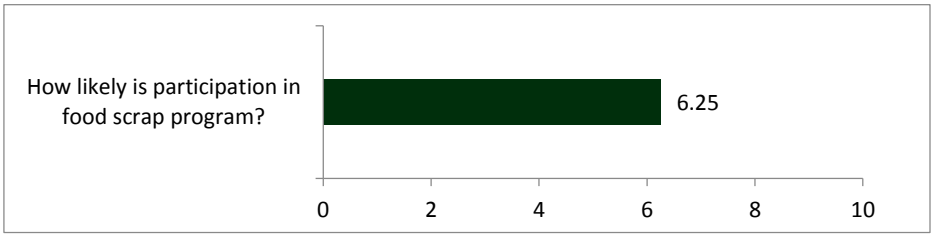


Although almost half of the respondents (47%) rated the **importance** of collecting food scraps from *7* to *10*, overall, collecting food scraps was not seen as very important (*M*=5.77, SD=3.6).

Almost half of the respondents (47.9%) rated the **difficulty** of collecting food scraps from *0* to *3*. However, over one-fourth of the respondents (26.7%) rated the difficulty of collecting food scraps from *7* to *10* (*M*=3.96, SD=3.46).

Respondents were asked to rate the **likelihood** of their household's participation in a food-scrap collection program using a *0* (not at all likely) to *10* (extremely likely) scale. The mean score is shown below.

FIGURE 8. MEAN SCORE OF LIKELIHOOD OF HOUSEHOLD'S PARTICIPATION IN FOOD-SCRAP COLLECTION PROGRAM

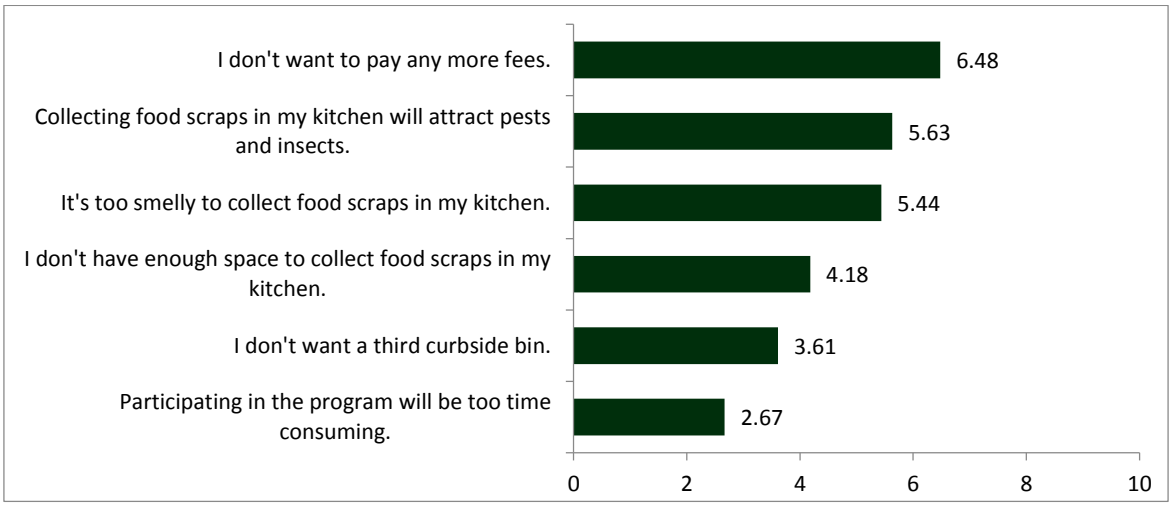


Overall, respondents reported a moderate **likelihood of participating** in food-scrap collection (*M*=6.25, SD=3.75). Over half of the respondents (54.6%) gave fairly high likelihood of participating ratings (*7* to *10)*. However, over one-fourth of the respondents (26%) gave very low likelihood of participating ratings (*0* to *3)*.

Barriers to Organics Recycling

Respondents were read a series of statements and for each one, asked *how big a reason* it would be in keeping their household from participating in a food-scrap collection program. They were asked to use a *0* (not at all a reason) to *10* (a big reason) scale. Mean scores for each are shown below.

FIGURE 9. MEAN SCORES OF REASONS THAT MAY KEEP HOUSEHOLD FROM PARTICIPATING IN FOOD-SCRAP COLLECTION PROGRAM



Increased Fees

The mean rating for how much not wanting increased fees was a reason for not participating in food-scrap and food-soiled paper recycling was in the high midrange (*M*=6.48, SD=3.8). Three-fourths of the respondents (74.1%) gave a rating of *5* to *10* with 40% of those giving a rating of *10*.

Attracting Pests

The mean rating for how much attracting pests was a reason for not participating in food-scrap and food-soiled paper recycling was in the midrange (*M*=5.63, SD=3.95). Half of the respondents (50.3%) gave a rating of *7* to *10*.

Too Smelly

The mean rating for how much too smelly was a reason for not participating in food-scrap and food-soiled paper recycling was in the midrange (*M*=5.44, SD=3.97). Half of the respondents (49.3%) gave a rating of *7* to *10*.

Not Enough Space

The mean rating for how much not enough space to collect food scraps in my kitchen was a reason for not participating in food-scrap and food-soiled paper recycling was in the low midrange (*M*=4.18, SD=3.91). Half of the respondents (48%) gave a rating of 5 to 10, and 17.8% gave a rating of 10.

Don't Want a Third Bin

The mean rating for how much not wanting a third bin was a reason for not participating in food-scrap and food-soiled paper recycling was fairly low (*M*=3.61, SD=4). Less than half of the respondents (39.2%) gave a rating of 5 to 10, and 18.3% gave a rating of 10.

Too Time Consuming

The mean rating for how much too time consuming was a reason for not participating in food-scrap and food-soiled paper recycling was low (*M*=2.67, SD=3.33). Nearly half of all the respondents (46.3%) gave a rating of 0. Only 18% gave a rating of 5 to 10.

Characteristics of Respondents Who Gave Low Barrier Ratings

In order to assist in the identification of potential participants in food-scrap recycling programs respondents who rated barriers as *low* were examined. Each food-scrap barrier variable was recoded into three discreet groups. Respondents who rated each specific barrier variable (QOR7A to QOR7F) from *0* to *3* comprised the **Small Reason** group, those who rated the barriers from *4* to *6* comprised the **Moderate Reason** group, and those who rated the barriers from *7* to *10* comprised the **Big Reason** group. Cross-tabulations were conducted in order to identify key characteristics of the **Small Reason** group, meaning the people who felt the barrier was a small reason not to participate in organics recycling. The table below shows the percentage of respondents in the **Small Reason** group that display specific demographic characteristics. The only percentages displayed are those that were found to be statistically significant ($p<.05$) within specific demographic characteristic groups (e.g., college degree versus no college degree, children in the household versus no children in the household). Groups that had no significant result have "*NS*" in the corresponding box.

TABLE 3. PERCENTAGE OF RESPONDENTS FOR WHOM BARRIERS ARE A SMALL REASON BY DEMOGRAPHIC CHARACTERISTICS

	Barriers for Small Reason Group				
Characteristic	**Increased Fees**	**Too Smelly**	**No 3rd Bin**	**No Space**	**Too Time Consuming**
College Degree	**29.2%**	**39.1%**	**63%**	*NS*	**73.4%**
Children in Household	*NS*	*NS*	**62.8%**	*NS*	**73.6%**
Full-Time Employment	*NS*	*NS*	*NS*	*NS*	**73.2%**
Single-Family Detached	*NS*	*NS*	*NS*	**50.7%**	*NS*

Note: NS = Relationship was not significant.

Most notably, sizeable percentages of respondents with **college degrees** and **children in the household** report low barriers.

College Degree

Nearly one-third of the respondents with college degrees (29.2%) rated *increased fees* and 39.1% rated *too smelly* as a small reason for not participating in food-scrap recycling.

Nearly two-thirds of the respondents with college degrees (63%) rated *not having a third bin* and 73.4% rated *too time consuming* as a small reason for not participating in food-scrap recycling.

Children in the Household

Nearly two-thirds of the respondents with children in the household (62.8%) rated *not having a third bin* and 73.6% rated *too time consuming* as a small reason for not participating in food-scrap recycling.

Full-Time Employment

Nearly three-fourths of the respondents who are employed full time (73.2%) rated *too time consuming* as a small reason for not participating in food-scrap recycling.

Single-Family Detached Homes

Half of the respondents who live in single-family detached homes (50.7%) rated *not enough space* as a small reason for not participating in food-scrap recycling.

Barriers and Likelihood of Participation

In order to gain an understanding of the impact of perceived barriers on the likelihood of participating in a food-scrap recycling program, *likelihood of participation* groups were created. In addition, these analyses will further assist in the identification of target audiences for the food-scrap recycling program.

The likelihood of participation variable (QOR6) was recoded to create two discreet categories. Respondents who rated their likelihood of participation as *zero* (*will not participate*) were grouped to create the **No Participation** category. Participants who rated their likelihood of participation from *6* to *10* were grouped to create the **Likely Participation** category. Respondents who rated their likelihood of participation from *1* to *5* were grouped to create the **Less Likely Participation** category. Analysis of variance was used to identify differences between the groups across each food-scrap recycling barrier. Possible mean rating scores ranged from zero to ten. The differences between the **No Participation** and **Likely Participation** groups for each barrier were statistically significant. Means for each group are displayed below.

TABLE 4. MEAN BARRIER RATINGS FOR FOOD-SCRAP PROGRAM PARTICIPATION GROUPS

	Barriers					
Audience	**Increased Fees**	**Too Smelly**	**Attracting Pests**	**No 3rd Bin**	**No Space**	**Too Time Consuming**
No Participation	7.8	7.3	7	6.6	5.5	4.9
Less Likely Participation	7.6	6.9	7	5	5.3	3.6
Likely Participation	5.6	4.3	4.7	2.2	3.3	1.7

Note: No Participation ~ 16%, Less Likely Participation ~ 25%, Likely Participation ~ 59% of the sample.

Sixteen percent of the respondents rated their likelihood of participation as *zero* and were placed in the **No Participation** category. Over half of the respondents (58.7%) rated their likelihood of participation as *6* to *10* and were placed in the **Likely Participation** category.

The most meaningful barriers for the **No Participation** group were *increased fees*, *too smelly*, *attracting pests*, and *no third bin*. However, *not enough space* and *too time consuming* received moderate mean rating scores.

Frequency distributions were used to look at the demographic characteristics of the **No Participation** group. This group has the following characteristics:

- Less education, 64.5% have some college or less;
- No children, 81.3% live in households with no children;
- Employed less than full time, 63.5% are employed part time, not employed, or retired;
- Live in single-family detached homes (82.3%); and
- Own their homes (92.1%).

The most meaningful barriers for the **Likely Participation** group were *increased fees*, *attracting pests*, and *too smelly*.

Frequency distributions were used to look at the demographic characteristics of the **Likely Participation** group. This group has the following characteristics:

- College educated (50%);
- No children (67.7%);
- Employed full time (50%);
- Live in single-family detached homes (84.1%); and
- Own their homes (87.2%).

Key Findings:

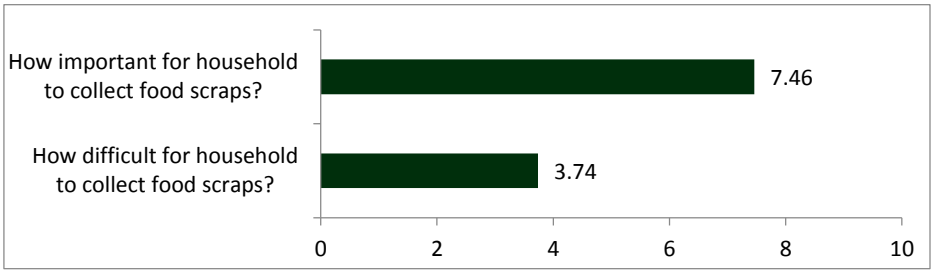
- ➲ Overall, education level was most common factor in the relationship between organics and recycling attitudes (importance and difficulty).
- ➲ Respondents with a high school education or less had more concerns about potential barriers to organics recycling than those with college degrees.
- ➲ General interest in participating in food-scrap recycling was moderate.
- ➲ Barriers common to all respondents were increased fees, attracting pests, and smells.
- ➲ There is a sizeable group of likely participants for whom barriers are not insurmountable.

Currently Participate in a Curbside Program

A small number of the respondents stated that they currently place their food scraps and food-soiled paper in a recycling bin for curbside pickup by their waste hauler. These respondents were asked about *how important* and *how difficult* it was for their household to participate in the curbside food-scrap and food-soiled paper recycling program. Respondents were asked to rate the *importance* of recycling food scraps and food-soiled paper on a *0* (not at all important) to *10* (extremely important) scale. They were also asked to rate the *difficulty* of recycling these items on a *0* (not at all difficult) to *10* (extremely difficult) scale.

Food-scrap collection was seen as moderately important and not very difficult. Mean scores for importance and difficulty are shown below.

FIGURE 10. MEAN SCORES OF PERCEIVED IMPORTANCE AND DIFFICULTY OF COLLECTING FOOD SCRAPS



Over three-fourths of the respondents (78.5%) rated the **importance** of collecting food scraps from *7* to *10*, with almost half (47.5%) rating the importance as a 10 (*M*=7.46, SD=3.76).

Over half of the respondents (55.6%) rated the **difficulty** of collecting food scraps from *0* to *3*. However, a significant number of the respondents (19.2%) rated the difficulty of collecting food scraps from *7* to *10* (*M*=3.74, SD=3.72).

Perceived Barriers

Respondents were read a series of statements and for each one, asked *how big a reason* it was to explain why their household may not place all of their food scraps and food-soiled paper in their curbside organic recycling bin. They were asked to use a *0* (not at all a reason) to *10* (a big reason) scale.

Attracting Pests

The mean rating for how much attracting pests was a reason for not placing all food scraps and food-soiled paper in the curbside organic recycling was low (*M*=3.53, SD=3.92).

Too Smelly

The mean rating for how much too smelly was a reason for not placing all food scraps and food-soiled paper in the curbside organic recycling was low (*M*=3.36, SD=3.15).

Not Enough Space

The mean rating for how much not enough space was a reason for not placing all food scraps and food-soiled paper in the curbside organic recycling was low (*M*=1.92, SD=2.75).

Too Time Consuming

The mean rating for how much too time consuming was a reason for not placing all food scraps and food-soiled paper in the curbside organic recycling was very low (*M*=.87, SD=2.02).

County-by-County Results

Anoka County

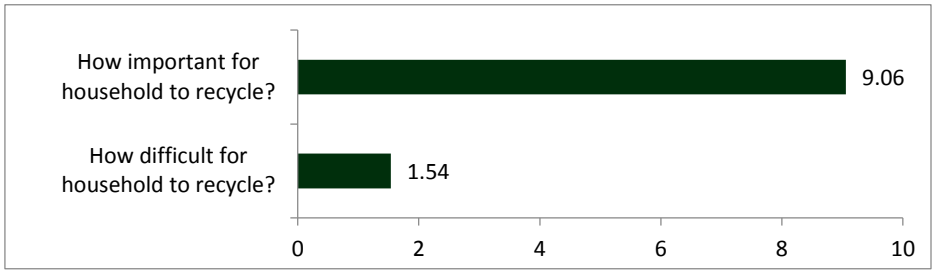
Sample Characteristics

- **Age:** The average respondent age was 57.5 years old, with ages ranging from 19 to 92. Almost one-third of the respondents (31.3%) were under the age of 50.
- **Gender:** Respondents were 54.2% female and 45.8% male.
- **Education:** One third of the respondents (33.1%) had college degrees, 25.5% had a high school education or less, and 41.4% had some college.
- **Employment:** The majority of the respondents were employed full time (46.8%), retired (35.1%), or employed part time (10.4%).
- **Household Size:** Household sizes ranged from 1 to 8, with the average household having 2.8 persons.
- **Children:** Most of the respondents (76%) lived in households that did not have any children under 18 years of age. In households with children, almost one-third (31.2%) had at least one child under 5 years of age.
- **Residence:** Almost all of the respondents (90.2%) lived in single-family detached homes, followed by townhouses (6.3%), duplex/triplex/fourplexes (2.1%), and condominiums (1.4%).
- **Ownership:** The majority of the respondents (91.3%) reported that they own their home.
- **Race:** Most of the respondents (94.2%) identified themselves as White, with Asian as the next most prevalent race identity (2.3%). Two percent stated they were Black or African American, and one percent was American Indian or Alaskan Native.
- **Language:** Very few households (7.6%) had a language other than English spoken in their home, with only a few languages occurring more than once (Spanish, German, and Russian).

General Recycling Attitudes

Respondents were asked to rate the *importance* of recycling on a *0* (not at all important) to *10* (extremely important) scale. They were also asked to rate the *difficulty* of recycling on a *0* (not at all difficult) to *10* (extremely difficult) scale. Mean scores are shown below.

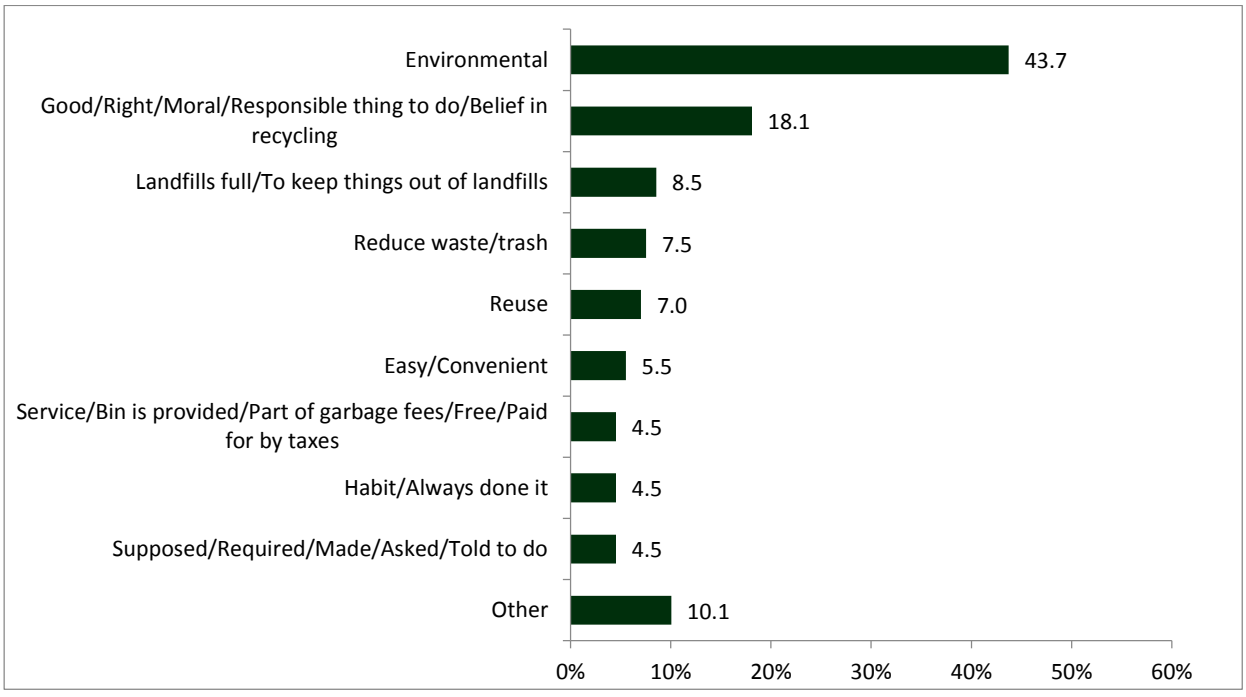
FIGURE 11. MEAN SCORES OF PERCEIVED IMPORTANCE AND DIFFICULTY OF RECYCLING



Respondents generally considered recycling very important (*M*=9.06, SD=1.87), with 92% of the respondents rating it from *7* to *10*, and not very difficult (*M*=1.54, SD=2.78), with 84.6% of the respondents rating it from *0* to *3*. While almost none of the respondents rated recycling as unimportant, there was a sizeable group of the respondents (10.8%) that rated recycling from *7* to *10* for difficulty.

Respondents were asked to provide the reasons why their household participated in recycling at home. They were not prompted in any way, and their responses were recorded verbatim. Those responses were then categorized and coded. The most frequently given reasons are presented below. Respondents could provide more than one answer, therefore, the responses will sum to greater than 100%.

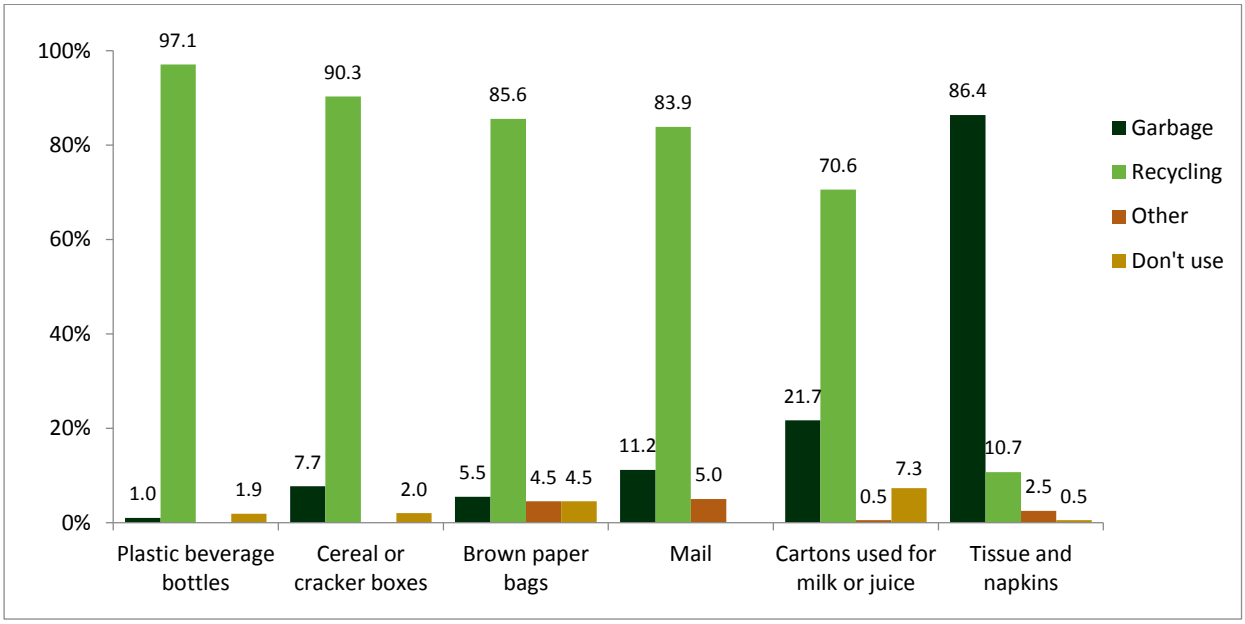
FIGURE 12. THE MOST FREQUENTLY GIVEN REASONS FOR PARTICIPATING IN RECYCLING AT HOME



Self-Reported Recycling Behaviors

Respondents were asked how they most often disposed of several common household items: plastic beverage bottles, brown paper bags, cartons used for milk or juice, mail (including envelopes with windows and junk mail), tissue and napkins, and cereal or cracker boxes. Responses were: garbage bin, recycling bin, and other (for those that did something else with the item). Respondents could also answer that they did not use the item. Percentages for each disposal method are shown below.

FIGURE 13. MOST COMMON DISPOSAL METHODS OF COMMON HOUSEHOLD ITEMS

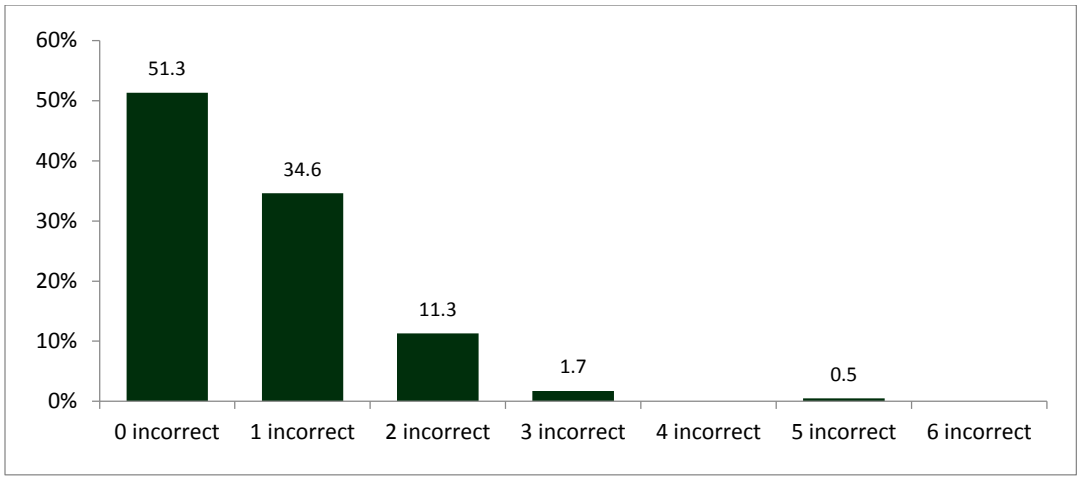


Nearly all of the respondents correctly disposed of *plastic beverage bottles* (97.1%) and *cereal or cracker boxes* (90.3%) in the recycling. Most of the respondents correctly disposed of *brown paper bags* (85.6%) and *mail* (83.9%), also in the recycling. The recyclable item that the respondents were least likely to recycle was the *milk and juice carton* (70.6%). Most of the respondents (86.4%) understood that *tissues and napkins* were not recyclable and disposed of them in the garbage.

Wrong-Items Score

Respondent answers were summed to create a self-reported *wrong-items score*. The range of scores are displayed below:

FIGURE 14. SELF-REPORTED WRONG-ITEMS SCORE



Over half of the respondents (51.3%) reported that they tossed all items into the correct bin and 34.6% of the respondents reported one wrong item.

General Recycling Experience

Next, respondents were asked how often recycling was picked up by their waste hauler, and how many times out of the last four recycling pick-up days did they put out their recycling bin for collection. Respondents who answered anything less than four were then asked to give a reason why they did not put out their recycling bin every time. All of the respondents were also asked what they did with their recyclables when their recycling bin was full.

Most of the respondents (89.1%) reported that their recycling was picked up every other week, while 9.5% of the respondents reported that their recycling was picked up weekly.

The majority of the respondents (84.3%) put out their recycling each of the last four times they had the opportunity.

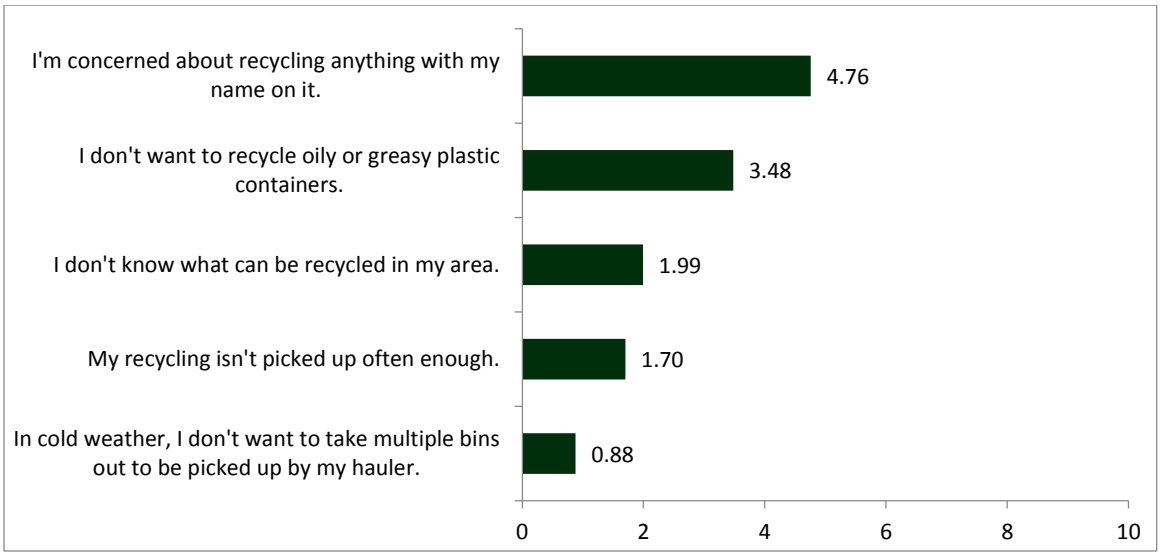
The most frequently mentioned reason given by those who did not put out their recycling bin all four times was that the *bin was not full* (15.6%), followed by *forgetting* (21.1%) and *not being home* (14.8).

Almost half of the respondents (42.4%) reported that they have never experienced their recycling bin being too full, while about one-third of the respondents (38%) simply save the overflow for the next pickup.

Barriers to General Recycling

Respondents were read a series of statements and for each one, asked how big a reason it was for keeping their household from recycling everything they could. They were asked to use a *0* (not at all a reason) to *10* (a big reason) scale. Mean scores for each barrier are shown below.

FIGURE 15. MEAN SCORES OF REASONS THAT MAY KEEP HOUSEHOLD FROM RECYCLING ALL RECYCLABLE ITEMS

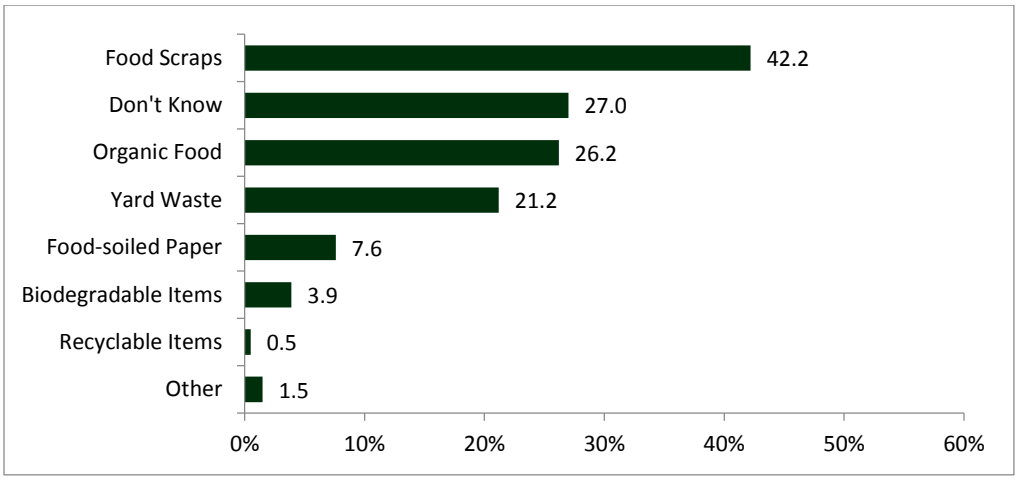


Respondents reported no significant barriers to recycling. The most influential barriers were *concern about personal information* (*M*=4.76, SD=4.42) and *not wanting to recycle oily or greasy plastic* (*M*=3.48, SD=4.22). Moreover, almost half of the respondents (42.7%) rated *concern about personal information* between a *7* and *10* for keeping them from recycling. Over one fourth of the respondents (29.2%) rated *not wanting to recycle oily or greasy plastic* between a *7* and *10* for keeping them from recycling. While most people don't find these issues to be very important barriers, the people who struggle with them are very significantly impacted.

ORGANICS TERMINOLOGY

Respondents were asked what they thought could go in an organics recycling bin. Their responses were then placed in categories. Responses that fell into the *other* category were looked at for similarities. As a result, *biodegradable Items* and *recyclable Items* were added to the existing list of items that could go into an organics recycling bin. The categories, along with the percentage of the respondents that gave answers that fit into each one, are shown below. Respondents could provide more than one answer, therefore, the responses will sum to greater than 100%.

FIGURE 16. PERCENTAGE OF THE RESPONDENTS STATING ITEM BELONGED IN ORGANICS RECYCLING BIN



Responses to this question were quite varied. Respondents were most likely to think *food scraps* would go into an organics recycling bin (42.2%) and least likely to think *food-soiled paper* would go in (7.6%). Over one-fourth of the respondents (27%) stated that they did not know what would go into an organics recycling bin.

Organics Recycling Knowledge and Attitudes

Respondents were asked how they currently disposed of their food scraps. Answer choices were: curbside organics collection bin, in the garbage disposal, garbage bin, compost pile in back yard, compost pile located somewhere else, worm bin, or other. Those who said a *curbside organics collection bin* were asked a different set of questions since the implication was that they were already participating in a food-scrap program. All others were asked questions about a hypothetical food-scrap collection program.

Nearly two-thirds of the respondents (64.3%) stated they currently dispose of their food scraps in the *garbage bin*, while 17% use their *garbage disposal* and 11.7% dispose of food scraps via *backyard composting*.

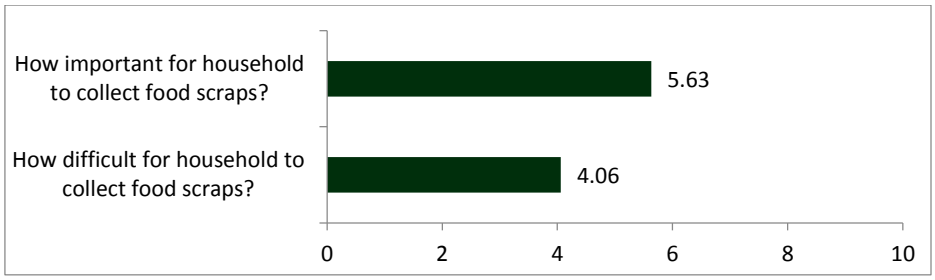
A small number of the respondents (3.4%) stated that they dispose of their food scraps in a curbside food-scrap collection bin. The number of the respondents was not large enough for statistical analysis on this group alone, and since they were asked different questions based on having actual program experience rather than theoretical experience, they are excluded from the county-level analyses below.

No Current Program

Respondents were asked to rate the *importance* of collecting food scraps on a *0* (not at all important) to *10* (extremely important) scale. They were also asked to rate the *difficulty* of collecting food scraps on a *0* (not at all difficult) to *10* (extremely difficult) scale.

Food-scrap collection was not seen either as very important or very difficult. Mean scores for importance and difficulty are shown below.

FIGURE 17. MEAN SCORES OF PERCEIVED IMPORTANCE AND DIFFICULTY OF COLLECTING FOOD SCRAPS



Although well over one-third of the respondents (42.6%) rated the importance of collecting food scraps from *7* to *10*, overall, collecting food scraps was not seen as very important (*M*=5.63, SD=3.59).

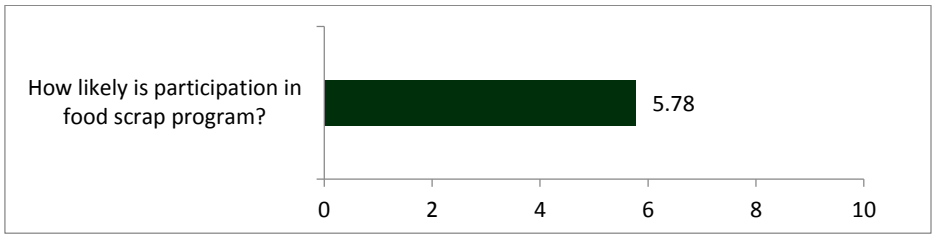
Just about the same number of the respondents (43.2%) rated the difficulty of collecting food scraps from *0* to *3*. However, over one-fourth of the respondents (27.4%) rated the difficulty of collecting food scraps from *7* to *10* (*M*=4.06, SD=3.47).

BARRIERS TO ORGANICS RECYCLING

NO CURRENT PROGRAM

Respondents were asked to rate the *likelihood* of their household's participation in a food-scrap collection program using a *0* (not at all likely) to *10* (extremely likely) scale. The mean score is shown below.

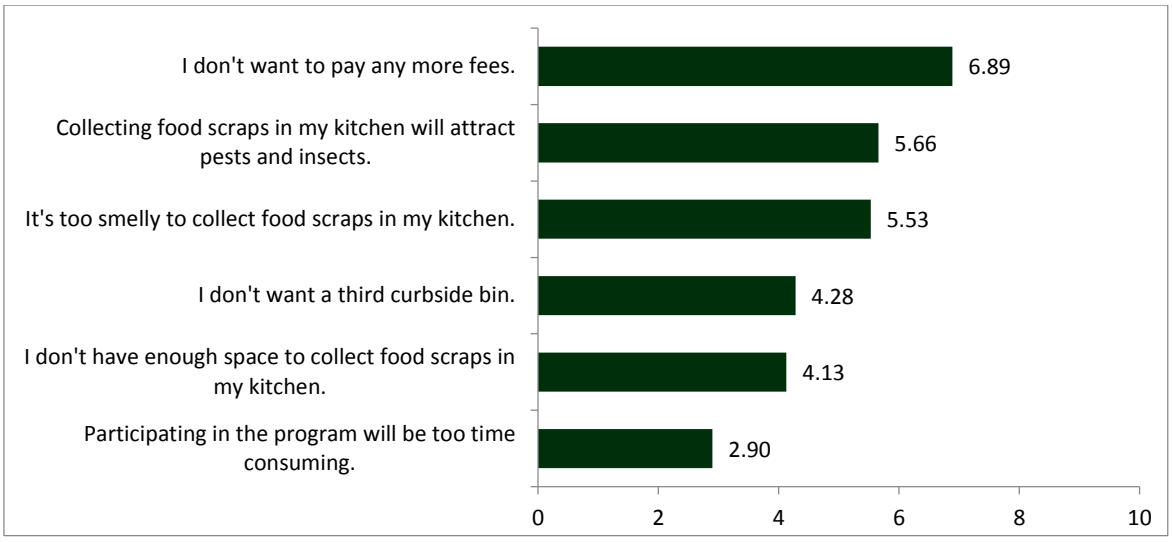
FIGURE 18. MEAN SCORE OF LIKELIHOOD OF HOUSEHOLD'S PARTICIPATION IN FOOD-SCRAP COLLECTION PROGRAM



On average, respondents reported being undecided about their likelihood of participating in food-scrap collection (*M*=5.78, SD=3.99). The majority of the respondents (79.7%) were split between *very likely* to participate, with 48.5% rating their likelihood from *7* to *10*, and *not at all willing* to participate, with 31.2% rating their likelihood from *0* to *3*.

Respondents were then read a series of statements and for each one, asked how big a reason it would be in keeping their household from participating in a food-scrap collection program. They were asked to use a *0* (not at all a reason) to *10* (a big reason) scale. Mean scores for each are shown below.

FIGURE 19. MEAN SCORES OF REASONS THAT MAY KEEP HOUSEHOLD FROM PARTICIPATING IN FOOD-SCRAP COLLECTION PROGRAM



The most significant barrier to participation was a *possibility of more fees* (*M*=6.89, SD=4.08), followed by *pests* (*M*=5.66, SD=4.08) and *smell* (*M*=5.53, SD=4.07) concerns. Respondents were less concerned with a *third bin* (*M*=4.28, SD=4.07) or *not enough space* (*M*=4.13, SD=3.96), and not particularly concerned that *it would take too much time* (*M*=2.90, SD=3.45).

CARVER COUNTY

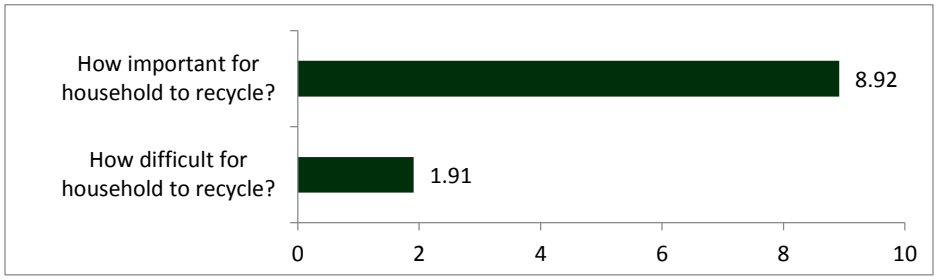
SAMPLE CHARACTERISTICS

- **Age:** The average respondent age was 55.6 years old, with ages ranging from 18 to 93. Just over one-third of the respondents (34.5%) were under the age of 50.
- **Gender:** Respondents were 52% female and 48% male.
- **Education:** Over one-third of the respondents (40%) had college degrees, 26.5% had a high school education or less, and 33.5% had some college.
- **Employment:** The majority of the respondents were employed full time (51%), retired (30.7%), or employed part time (7.6%).
- **Household Size:** Household sizes ranged from 1 to 9, with the average household having 2.8 persons.
- **Children:** Over two-thirds of the respondents (67.3%) lived in households that did not have any children under 18 years of age. In households with children, almost one-fourth (21.4%) had at least one child under 5 years of age.
- **Residence:** Over three-fourths of the respondents (81.5%) lived in single-family detached homes, followed by townhouses (10.5%), condominiums (4%), and duplex/triplex/fourplexes (4%).
- **Ownership:** The majority of the respondents (87.9%) reported that they own their home.
- **Race:** Most of the respondents (95.7%) identified themselves as White, with Black or African American as the next most prevalent race identity (1.9%). One percent stated they were Hispanic or Latino, and one percent was Asian.
- **Language:** Very few households (8.7%) had a language other than English spoken in their home, with six languages occurring more than once (Spanish, German, Finnish, French, Swahili and Russian).

General Recycling Attitudes

Respondents were asked to rate the *importance* of recycling on a *0* (not at all important) to *10* (extremely important) scale. They were also asked to rate the *difficulty* of recycling on a *0* (not at all difficult) to *10* (extremely difficult) scale. Mean scores are shown below.

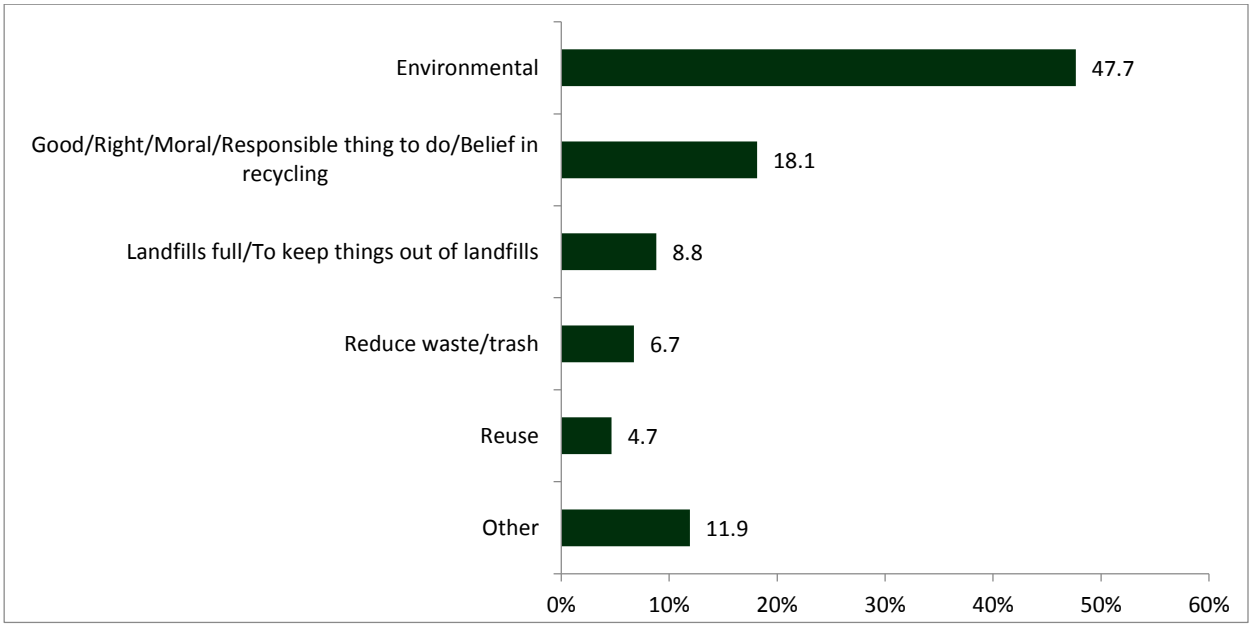
FIGURE 20. MEAN SCORES OF PERCEIVED IMPORTANCE AND DIFFICULTY OF RECYCLING



Respondents generally considered recycling *very important* (*M*=8.92, SD=1.89), with 91.3% of the respondents rating it from *7* to *10*, and *not very difficult* (*M*=1.91, SD=2.95), with 79.7% of the respondents rating it from *0* to *3*. While almost none of the respondents rated recycling as unimportant, there was a sizeable group of the respondents (12.6%) that rated recycling from *7* to *10* for difficulty.

Respondents were asked to provide the reasons why their household participated in recycling at home. They were not prompted in any way, and their responses were recorded verbatim. Those responses were then categorized and coded. The most frequently given reasons are presented below. Respondents could provide more than one answer, therefore, the responses will sum to greater than 100%.

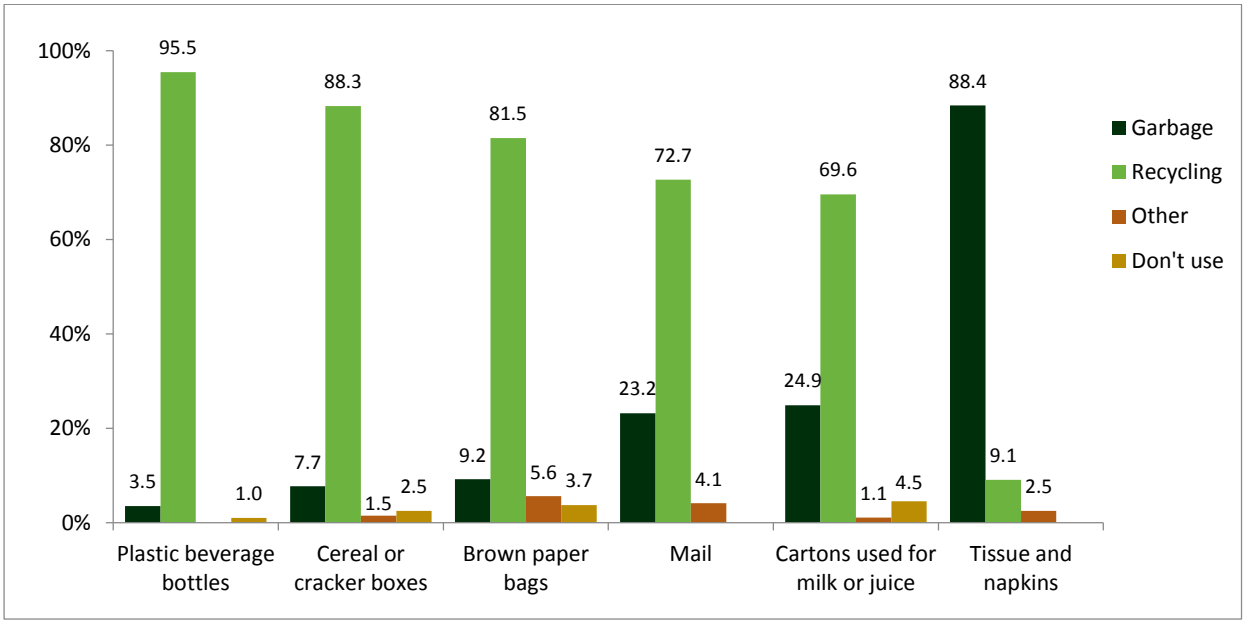
FIGURE 21. THE MOST FREQUENTLY GIVEN REASONS FOR PARTICIPATING IN RECYCLING AT HOME



Self-Reported Recycling Behaviors

Respondents were asked how they most often disposed of several common household items: plastic beverage bottles, brown paper bags, cartons used for milk or juice, mail (including envelopes with windows and junk mail), tissue and napkins, and cereal or cracker boxes. Responses were: garbage bin, recycling bin, and other (for those that did something else with the item). Respondents could also answer that they did not use the item. Percentages for each disposal method are shown below.

FIGURE 22. MOST COMMON DISPOSAL METHODS OF COMMON HOUSEHOLD ITEMS

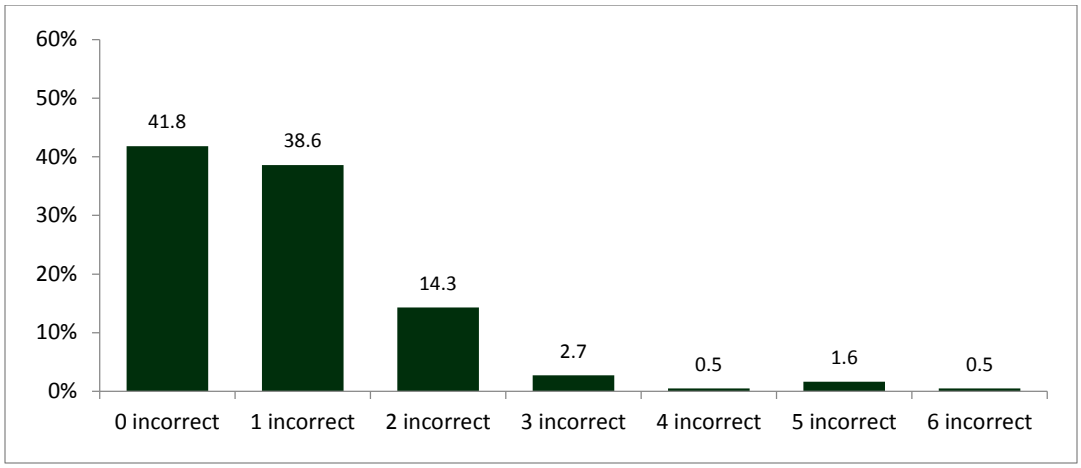


Nearly all of the respondents correctly disposed of *plastic beverage bottles* (95.5%), *cereal or cracker boxes* (88.3%), and *brown paper bags* (81.5%) in their recycling bin. The recyclable items that the respondents were least likely to recycle were *mail* (72.7%) and *milk and juice cartons* (69.6%). Most of the respondents (88.4%) understood that *tissues and napkins* were not recyclable and disposed of them in the garbage.

Wrong-Items Score

Respondent answers were summed to create a self-reported *wrong-items score*. The range of scores are displayed below:

FIGURE 23. SELF-REPORTED WRONG-ITEMS SCORE



Less than half of the respondents (41.8%) reported that they tossed all items into the correct bin and 38.6% of the respondents reported one wrong item.

General Recycling Experience

Next, the respondents were asked how often recycling was picked up by their waste hauler, and how many times out of the last four recycling pick-up days did they put out their recycling bin for collection. Respondents who answered anything less than four were then asked to give a reason why they did not put out their recycling bin every time. All of the respondents were also asked what they did with their recyclables when their recycling bin was full.

Most of the respondents (79.4%) reported that their recycling was picked up every other week, while 16.6% reported that their recycling is picked up weekly.

The majority of the respondents (79.5%) put out their recycling each of the last four times they had the opportunity.

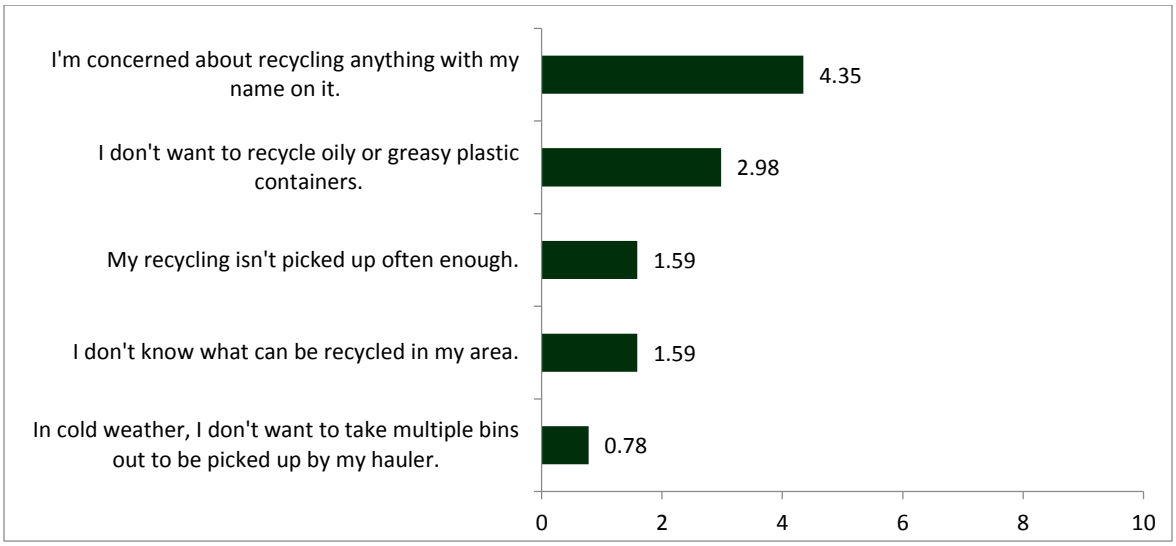
The most frequently mentioned reason given by those who did not put out their recycling bin all four times was that the *bin was not full* (48.9%), followed by *forgetting* (9.3%), and *not having time* (7.18%).

Just over one-third of the respondents (38%) reported that they have never experienced their recycling bin being too full, while another third of the respondents (34.9%) simply save the overflow for the next pickup.

Barriers to General Recycling

Respondents were read a series of statements and for each one, asked how big a reason it was for keeping their household from recycling everything they could. They were asked to use a *0* (not at all a reason) to *10* (a big reason) scale. Mean scores for each are shown below.

FIGURE 24. MEAN SCORES OF REASONS THAT MAY KEEP HOUSEHOLD FROM RECYCLING ALL RECYCLABLE ITEMS

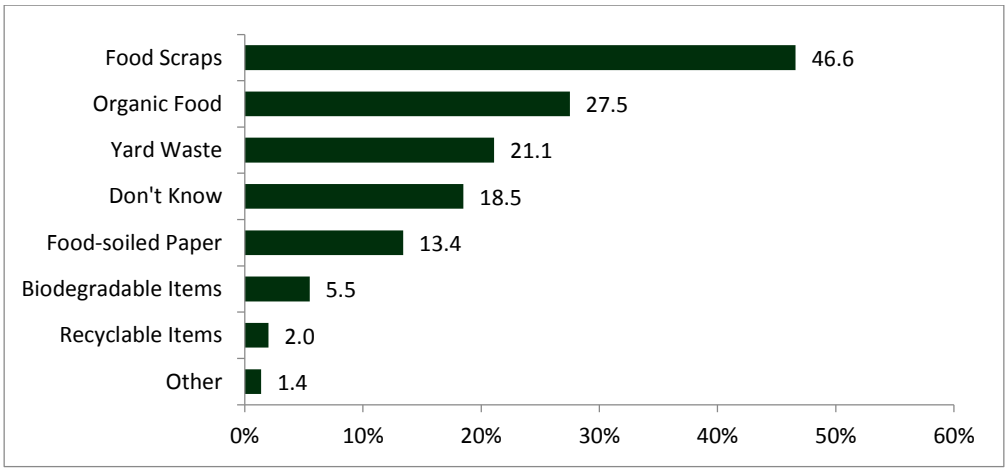


Respondents reported no significant barriers to recycling. The most influential barrier was *concern about personal information* (*M*=4.35, SD=4.31), with 38.3% of the respondents rating it from *7* to *10*. The next most important barrier was *not wanting to recycle oily or greasy plastic* (*M*=2.98, SD=3.87), with 22.7% of the respondents rating it from *7* to *10*.

ORGANICS TERMINOLOGY

Respondents were asked what they thought could go in an organics recycling bin. Their responses were then placed in categories. Responses that fell into the *other* category were looked at for similarities. As a result, *biodegradable Items* and *recyclable Items* were added to the existing list of items that could go into an organics recycling bin. The categories, along with the percentage of the respondents that gave answers that fit into each one, are shown below. Respondents could provide more than one answer, therefore, the responses will sum to greater than 100%.

FIGURE 25. PERCENTAGE OF THE RESPONDENTS STATING ITEM BELONGED IN ORGANICS RECYCLING BIN



Responses to this question were quite varied. Respondents were most likely to think *food scraps* would go into an organics recycling bin (46.6%) and least likely to think *food-soiled paper* would go in (13.4%). One-fifth of the respondents (18.5%) stated that they did not know what would go into an organics recycling bin.

Organics Recycling Knowledge and Attitudes

Respondents were asked how they currently disposed of their food scraps. Answer choices were: curbside organics collection bin, in the garbage disposal, garbage bin, compost pile in back yard, compost pile located somewhere else, worm bin, or other. Those who said a *curbside organics collection bin* were asked a different set of questions since the implication was that they were already participating in a food-scrap program. All others were asked questions about a hypothetical food-scrap collection program.

Just over half of the respondents (51.6%) currently dispose of their food scraps in the *garbage bin*, while 26.8% use their *garbage disposal*, and 13.1% dispose of food scraps via *backyard composting*.

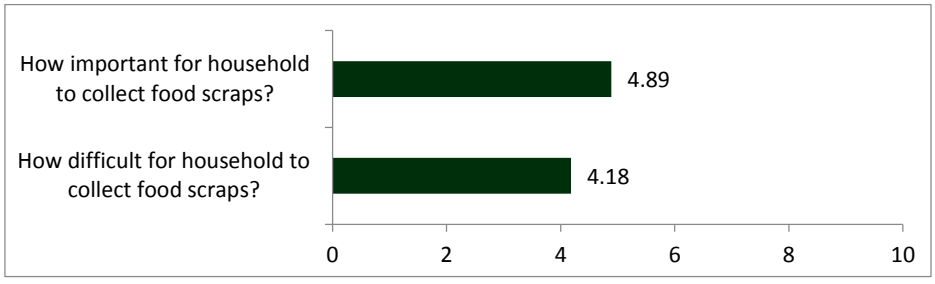
A small number of the respondents (2.1%) stated that they dispose of their food scraps in a curbside food-scrap collection bin. The number of the respondents was not large enough for statistical analysis on this group alone, and since they were asked different questions based on having actual program experience rather than theoretical experience, they are excluded from the county-level analyses below.

No Current Program

Respondents were asked to rate the *importance* of collecting food scraps on a *0* (not at all important) to *10* (extremely important) scale. They were also asked to rate the *difficulty* of collecting food scraps on a *0* (not at all difficult) to *10* (extremely difficult) scale.

Food-scrap collection was not seen as either very important or very difficult. Mean scores for importance and difficulty are shown below.

FIGURE 26. MEAN SCORES OF PERCEIVED IMPORTANCE AND DIFFICULTY OF COLLECTING FOOD SCRAPS



Although over one-third of the respondents (37.9%) rated the importance of collecting food scraps from *7* to *10*, overall, collecting food scraps was not seen as very important (*M*=4.89, SD=3.72).

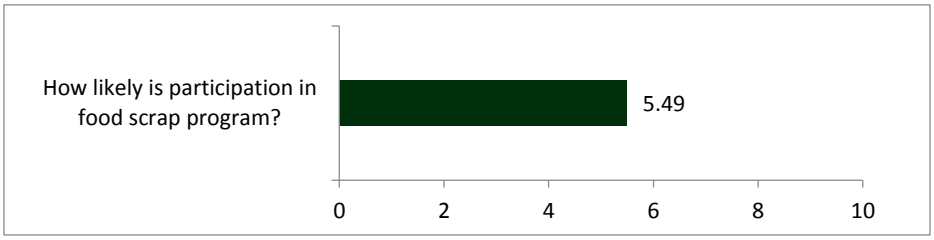
Almost half of the respondents (47.7%) rated the difficulty of collecting food scraps from *0* to *3*. However, almost one-third of the respondents (32.4%) rated the difficulty of collecting food scraps from *7* to *10* (*M*=4.18, SD=3.59).

BARRIERS TO ORGANICS RECYCLING

NO CURRENT PROGRAM

Respondents were asked to rate the *likelihood* of their household's participation in a food-scrap collection program using a *0* (not at all likely) to *10* (extremely likely) scale. The mean score is shown below.

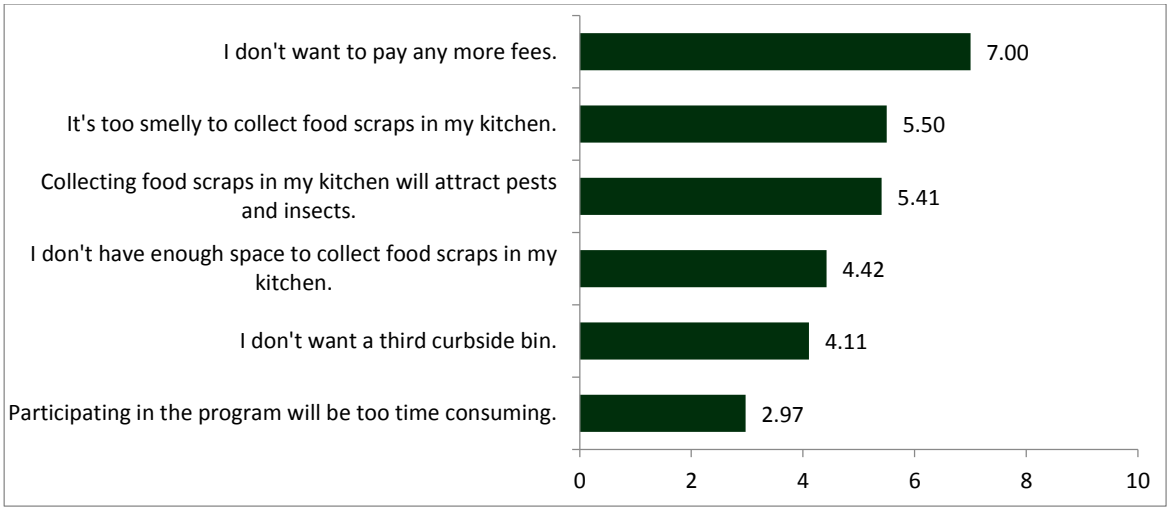
FIGURE 27. MEAN SCORE OF LIKELIHOOD OF HOUSEHOLD'S PARTICIPATION IN FOOD-SCRAP COLLECTION PROGRAM



On average, respondents reported being undecided about their likelihood of participating in food-scrap collection (*M*=5.49, SD=3.86). Respondents were split between *very likely* to participate, with 45.4% rating their likelihood from *7* to *10*, and *not at all willing* to participate, with 32.9% rating their likelihood from *0* to *3*.

Respondents were then read a series of statements and for each one, asked how big a reason it would be in keeping their household from participating in a food-scrap collection program. They were asked to use a *0* (not at all a reason) to *10* (a big reason) scale. Mean scores for each are shown below.

FIGURE 28. MEAN SCORES OF REASONS THAT MAY KEEP HOUSEHOLD FROM PARTICIPATING IN FOOD-SCRAP COLLECTION PROGRAM



The most significant barrier to participation was a *possibility of more fees* (*M*=7.00, SD=3.52), followed by *smell* (*M*=5.50, SD=3.93) and *pest* (*M*=5.41, SD=3.94) concerns. Respondents were less concerned with a *third bin* (*M*=4.11, SD=4.02) or *not enough space* (*M*=4.42, SD=4.02), and not particularly concerned that *it would take too much time* (*M*=2.97, SD=3.43).

DAKOTA COUNTY

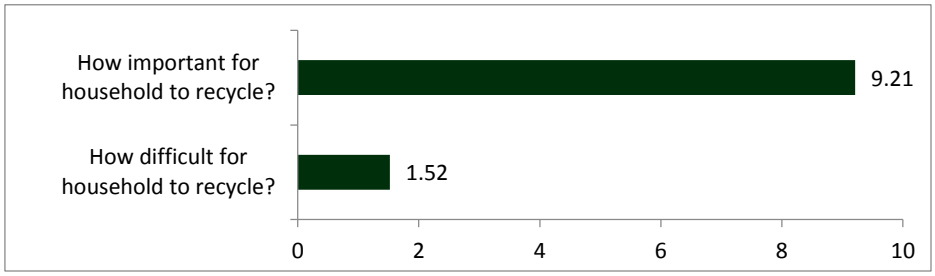
SAMPLE CHARACTERISTICS

- **Age:** The average respondent age was 54.8 years old, with ages ranging from 18 to 89. Over one-third of the respondents (36.3%) were under the age of 50.
- **Gender:** Respondents were 59% female and 41% male.
- **Education:** Almost half of the respondents (46.5%) had college degrees, 22.1% had a high school education or less, and 31.4% had some college.
- **Employment:** The majority of the respondents were employed full time (51.9%), retired (28.7%), or employed part time (7.5%).
- **Household Size:** Household sizes ranged from 1 to 9, with the average household having 2.7 persons.
- **Children:** Almost three-fourths of the respondents (73.5%) lived in households that did not have any children under 18 years of age. In households with children, one-fourth (25.9%) had at least one child under 5 years of age.
- **Residence:** Over three-fourths of the respondents (78.9%) lived in single-family detached homes, followed by townhouses (14.3%), condominiums (3.7%), and duplex/triplex/fourplexes (3.1%).
- **Ownership:** The majority of the respondents (92%) reported that they own their home.
- **Race:** Most of the respondents (88.8%) identified themselves as White, with Asian as the next most prevalent race identity (3.9%). Three percent stated they were Black or African American, two percent were Hispanic or Latino, and one percent were Native American or Alaskan Native.
- **Language:** Very few households (9.5%) had a language other than English spoken in their home, with two languages occurring more than once (Spanish and German).

General Recycling Attitudes

Respondents were asked to rate the *importance* of recycling on a *0* (not at all important) to *10* (extremely important) scale. They were also asked to rate the *difficulty* of recycling on a *0* (not at all difficult) to *10* (extremely difficult) scale. Mean scores are shown below.

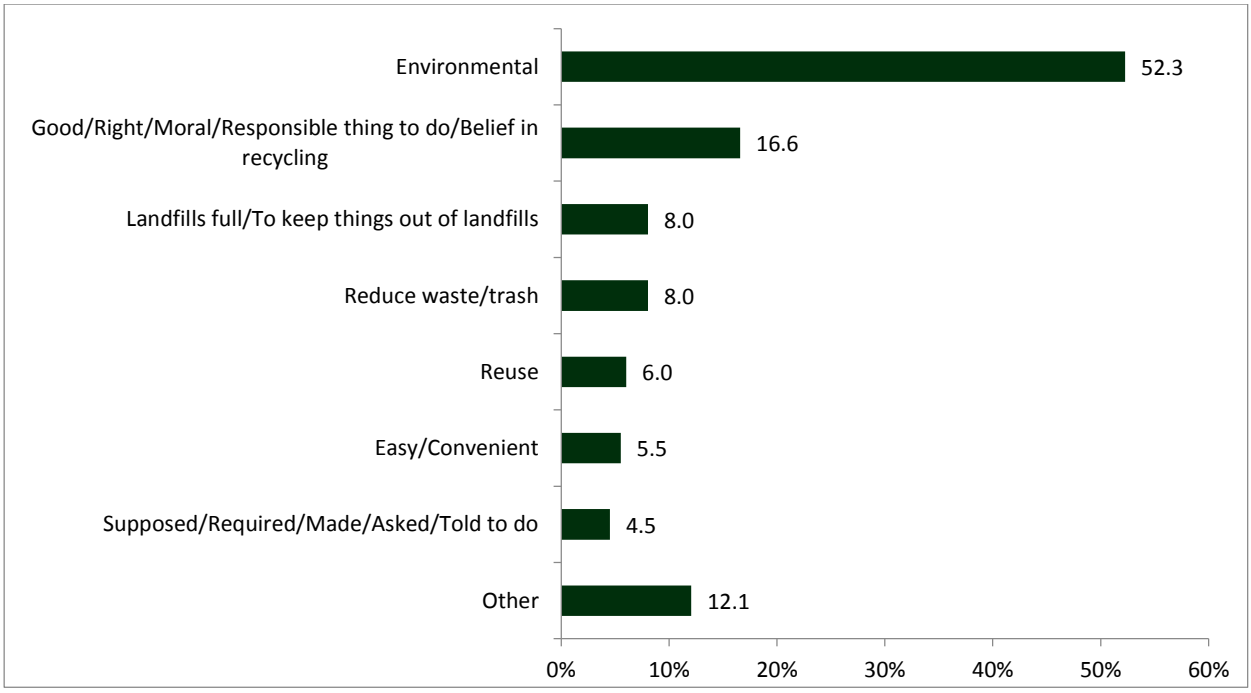
FIGURE 29. MEAN SCORES OF PERCEIVED IMPORTANCE AND DIFFICULTY OF RECYCLING



Respondents generally considered recycling very important (*M*=9.21, SD=1.48), with 93.4% of the respondents rating it from *7* to *10*, and not very difficult (*M*=1.52, SD=2.65), with 84.3% of the respondents rating it from *0* to *3*.

Respondents were asked to provide the reasons why their household participated in recycling at home. They were not prompted in any way, and their responses were recorded verbatim. Those responses were then categorized and coded. The most frequently given reasons are presented below. Respondents could provide more than one answer, therefore, the responses will sum to greater than 100%.

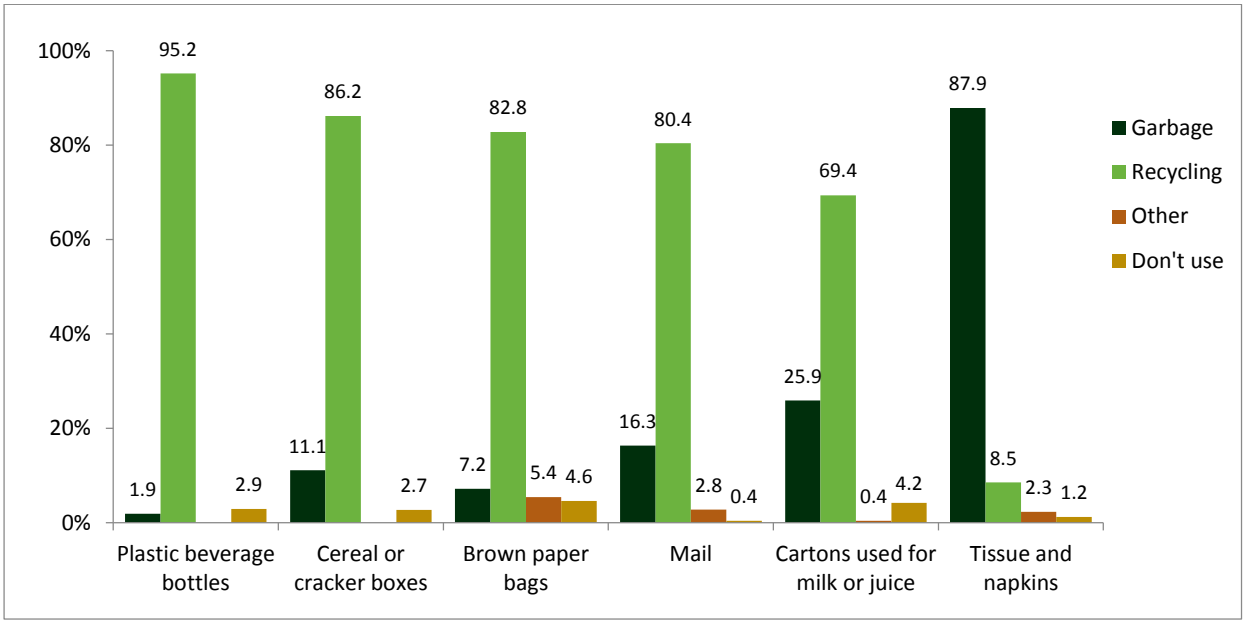
FIGURE 30. THE MOST FREQUENTLY GIVEN REASONS FOR PARTICIPATING IN RECYCLING AT HOME



Self-Reported Recycling Behaviors

Respondents were asked how they most often disposed of several common household items: plastic beverage bottles, brown paper bags, cartons used for milk or juice, mail (including envelopes with windows and junk mail), tissue and napkins, and cereal or cracker boxes. Responses were: garbage bin, recycling bin, and other (for those that did something else with the item). Respondents could also answer that they did not use the item. Percentages for each disposal method are shown below.

FIGURE 31. MOST COMMON DISPOSAL METHODS OF COMMON HOUSEHOLD ITEMS

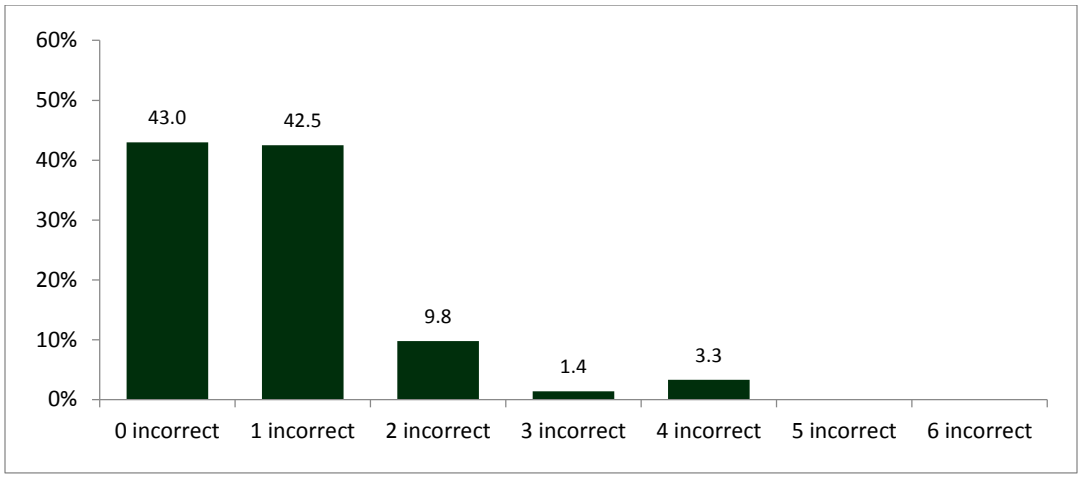


Nearly all of the respondents correctly disposed of *plastic beverage bottles* in the recycling (95.2%). Most of the respondents correctly disposed of *cereal or cracker boxes* (86.2%), *brown paper bags* (82.8%), and *mail* (80.4%), also in the recycling. The recyclable that the respondents were most likely to not recycle was a *milk or juice carton* (69.4%). Most of the respondents understood that *tissues and napkins* were not recyclable (87.9%) and disposed of them in the garbage.

Wrong-Items Score

Respondent answers were summed to create a self-reported *wrong-items score*. The range of scores are displayed below:

FIGURE 32. SELF-REPORTED WRONG-ITEMS SCORE



Less than half of the respondents (43%) reported that they tossed all items into the correct bin and 42.5% of the respondents reported one wrong item.

General Recycling Experience

Next, respondents were asked how often recycling was picked up by their waste hauler, and how many times out of the last four recycling pick-up days did they put out their recycling bin for collection. Respondents who answered anything less than four were then asked to give a reason why they did not put out their recycling bin every time. All of the respondents were also asked what they did with their recyclables when their recycling bin was full.

About two-thirds of the respondents (63.8%) reported that their recycling was picked up every other week, and one-third of the respondents (35.8%) reported that their recycling was picked up weekly.

The majority of the respondents (82.2%) put out their recycling each of the last four times they had the opportunity.

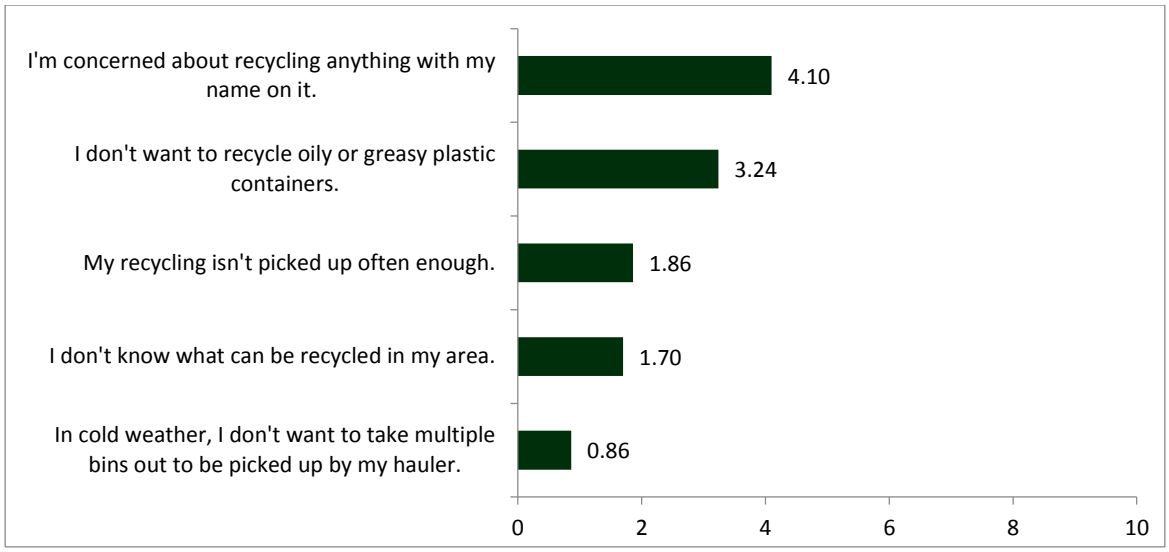
The most frequently mentioned reason given by those who did not put out their recycling bin all four times was that the *bin was not full* (42.8%), followed by *forgetting* (15.8%), and *not being home* (13.5%).

Just over one-third of the respondents (40.4%) reported that they have never experienced their recycling bin being too full, while another third of the respondents (35.1%) simply save the overflow for the next pickup.

Barriers to General Recycling

Respondents were read a series of statements and for each one, asked how big a reason it was for keeping their household from recycling everything they could. They were asked to use a *0* (not at all a reason) to *10* (a big reason) scale. Mean scores for each are shown below.

FIGURE 33. MEAN SCORES OF REASONS THAT MAY KEEP HOUSEHOLD FROM RECYCLING ALL RECYCLABLE ITEMS

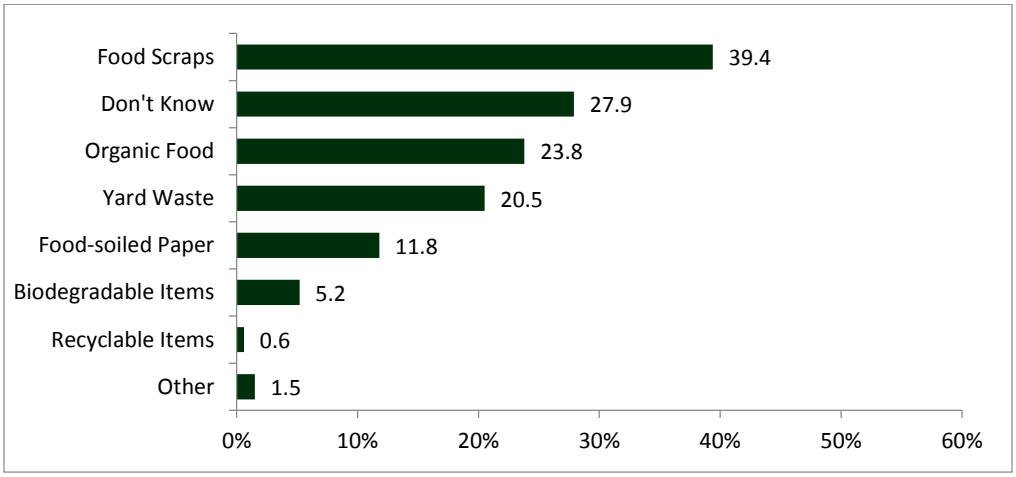


Respondents reported no significant barriers to recycling. The most influential barriers were *concern about personal information* (*M*=4.10, SD=4.36), with 35.8% of the respondents rating it from *7* to *10*, and *not wanting to recycle oily or greasy plastic* (*M*=3.24, SD=3.92), with 24.9% of the respondents rating it from *7* to *10*.

ORGANICS TERMINOLOGY

Respondents were asked what they thought could go in an organics recycling bin. Their responses were then placed in categories. Responses that fell into the *other* category were looked at for similarities. As a result, *biodegradable Items* and *recyclable Items* were added to the existing list of items that could go into an organics recycling bin. The categories, along with the percentage of the respondents that gave answers that fit into each one, are shown below. Respondents could provide more than one answer, therefore, the responses will sum to greater than 100%.

FIGURE 34. PERCENTAGE OF THE RESPONDENTS STATING ITEM BELONGED IN ORGANICS RECYCLING BIN



Responses to this question were quite varied. Respondents were most likely to think *food scraps* would go into an organics recycling bin (37.4%) and least likely to think *food-soiled paper* would go in (8.7%). Over one-fourth of the respondents (27.9%) stated that they did not know what would go into an organics recycling bin.

Organics Recycling Knowledge and Attitudes

Respondents were asked how they currently disposed of their food scraps. Answer choices were: curbside organics collection bin, in the garbage disposal, garbage bin, compost pile in back yard, compost pile located somewhere else, worm bin, or other. Those who said a *curbside organics collection bin* were asked a different set of questions since the implication was that they were already participating in a food-scrap program. All others were asked questions about a hypothetical food-scrap collection program.

Over half of the respondents (56.8%) currently dispose of their food scraps in the *garbage bin*, while 24.6% use the *garbage disposal*, and 12.5% dispose of food scraps via *backyard composting*.

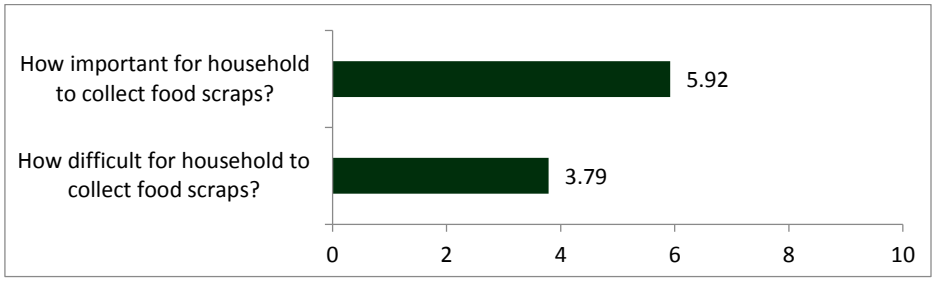
A small number of the respondents (0.9%) stated that they dispose of their food scraps in a curbside food-scrap collection bin. The number of the respondents was not large enough for statistical analysis on this group alone, and since they were asked different questions based on having actual program experience rather than theoretical experience, they are excluded from the county-level analyses below.

No Current Program

Respondents were asked to rate the *importance* of collecting food scraps on a *0* (not at all important) to *10* (extremely important) scale. They were also asked to rate the *difficulty* of collecting food scraps on a *0* (not at all difficult) to *10* (extremely difficult) scale.

Food-scrap collection was seen as slightly important and not difficult. Mean scores for importance and difficulty are shown below.

FIGURE 35. MEAN SCORES OF PERCEIVED IMPORTANCE AND DIFFICULTY OF COLLECTING FOOD SCRAPS



Although almost half of the respondents (49.5%) rated the importance of collecting food scraps from *7* to *10*, overall, collecting food scraps was seen as only slightly important (*M*=5.92, SD=3.58).

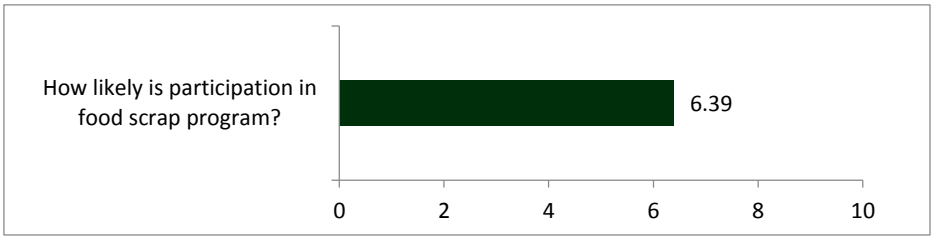
Half of the respondents (50.8%) rated the difficulty of collecting food scraps from *0* to *3*. However, over one-fourth of the respondents (26.9%) rated the difficulty of collecting food scraps from *7* to *10* (*M*=3.79, SD=3.47).

BARRIERS TO ORGANICS RECYCLING

NO CURRENT PROGRAM

Respondents were asked to rate the *likelihood* of their household's participation in a food-scrap collection program using a *0* (not at all likely) to *10* (extremely likely) scale. The mean score is shown below.

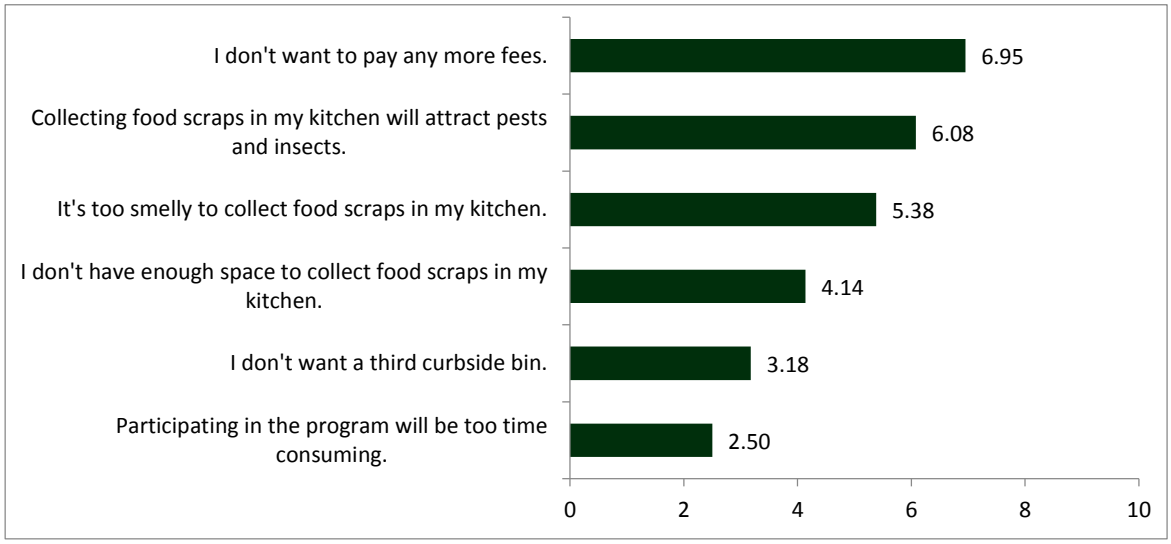
FIGURE 36. MEAN SCORE OF LIKELIHOOD OF HOUSEHOLD'S PARTICIPATION IN FOOD-SCRAP COLLECTION PROGRAM



On average, respondents were somewhat likely to participating in food-scrap collection (*M*=6.39, SD=3.65). Over half of the respondents (55.8%) rated their likelihood from *7* to *10*, but one-fourth of the respondents (24.3%) rated their likelihood from *0* to *3*.

Respondents were then read a series of statements and for each one, asked how big a reason it would be in keeping their household from participating in a food-scrap collection program. They were asked to use a *0* (not at all a reason) to *10* (a big reason) scale. Mean scores for each are shown below.

FIGURE 37. MEAN SCORES OF REASONS THAT MAY KEEP HOUSEHOLD FROM PARTICIPATING IN FOOD-SCRAP COLLECTION PROGRAM



The most significant barrier to participation they saw was a *possibility of more fees* (*M*=6.95, SD=3.45), followed by *pests* (*M*=6.08, SD=3.82) and *smell* (*M*=5.38, SD=4.04) concerns. Respondents were less concerned with *not enough space* (*M*=4.14, SD=3.88), a *third bin* (*M*=3.18, SD=3.83) and not particularly concerned that *it would take too much time* (*M*=2.50, SD=3.23).

HENNEPIN COUNTY

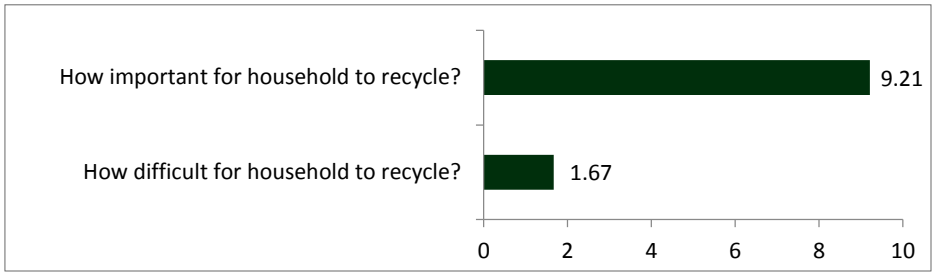
SAMPLE CHARACTERISTICS

- **Age:** The average respondent age was 54.2 years old, with ages ranging from 19 to 93. Just over one-third of the respondents (34.4%) were under the age of 50.
- **Gender:** Respondents were 52% female and 48% male.
- **Education:** Half of the respondents (51.9%) had college degrees, 14.9% had a high school education or less, and 33.2% had some college..
- **Employment:** The majority of the respondents were employed full time (49.6%), retired (30.3%), or employed part time (9%).
- **Household Size:** Household sizes ranged from 1 to 8, with the average household having 2.8 persons.
- **Children:** Over two-thirds of the respondents (68.0%) lived in households that did not have any children under 18 years of age. In households with children, just over one-third (35.9%) had at least one child under 5 years of age.
- **Residence:** Over three-fourths of the respondents (81%) lived in single-family detached homes, followed by townhouses (8.9%), condominiums (5.5%), and duplex/triplex/fourplexes (4.5%).
- **Ownership:** The majority of the respondents (85.3%) reported that they own their home.
- **Race:** Most of the respondents (86.8%) identified themselves as White, with Black or African American as the next most prevalent race identity (5%). Three percent stated they were Hispanic or Latino, two percent were Native American or Alaskan Native, and two percent were Asian.
- **Language:** Very few households (9.9%) had a language other than English spoken in their home, with only one language occurring more than once (Spanish).

General Recycling Attitudes

Respondents were asked to rate the *importance* of recycling on a *0* (not at all important) to *10* (extremely important) scale. They were also asked to rate the *difficulty* of recycling on a *0* (not at all difficult) to *10* (extremely difficult) scale. Mean scores are shown below.

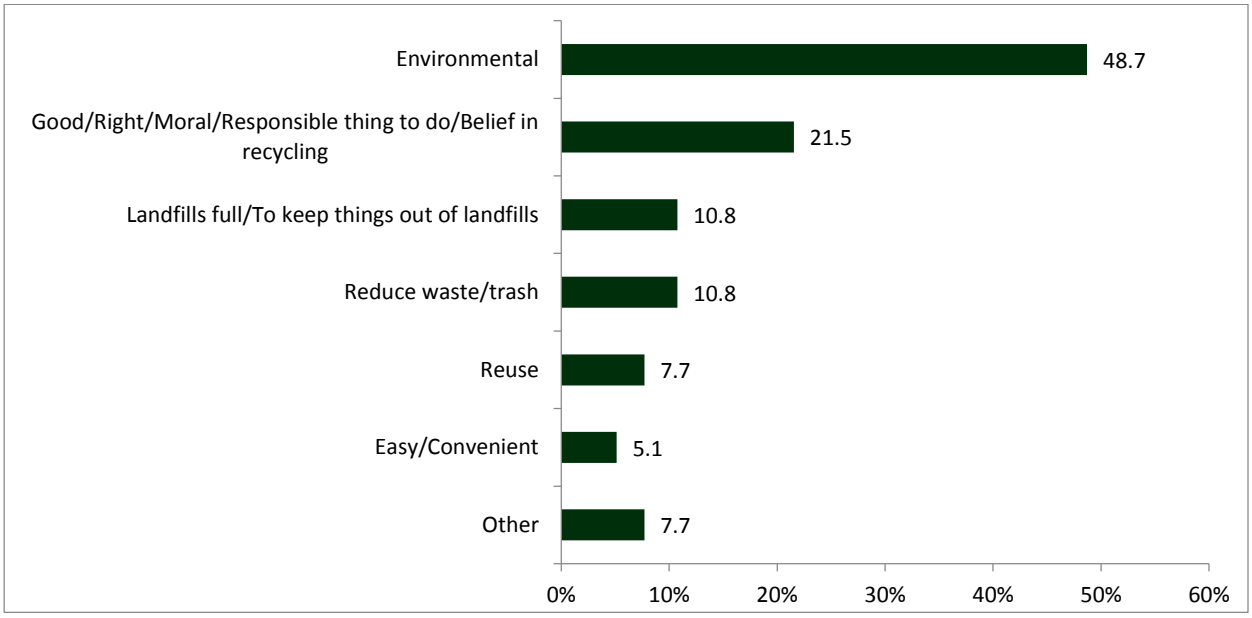
FIGURE 38. MEAN SCORES OF PERCEIVED IMPORTANCE AND DIFFICULTY OF RECYCLING



Respondents generally considered recycling very important (*M*=9.21, SD=1.87), with 94.6% of the respondents rating it from *7* to *10*, and not very difficult (*M*=1.67, SD=2.79), with 83.5% of the respondents rating it from *0* to *3*. While almost none of the respondents rated recycling as unimportant, there was a group of the respondents (10%) that rated recycling from *7* to *10* for difficulty.

Respondents were asked to provide the reasons why their household participated in recycling at home. They were not prompted in any way, and their responses were recorded verbatim. Those responses were then categorized and coded. The most frequently given reasons are presented below. Respondents could provide more than one answer, therefore, the responses will sum to greater than 100%.

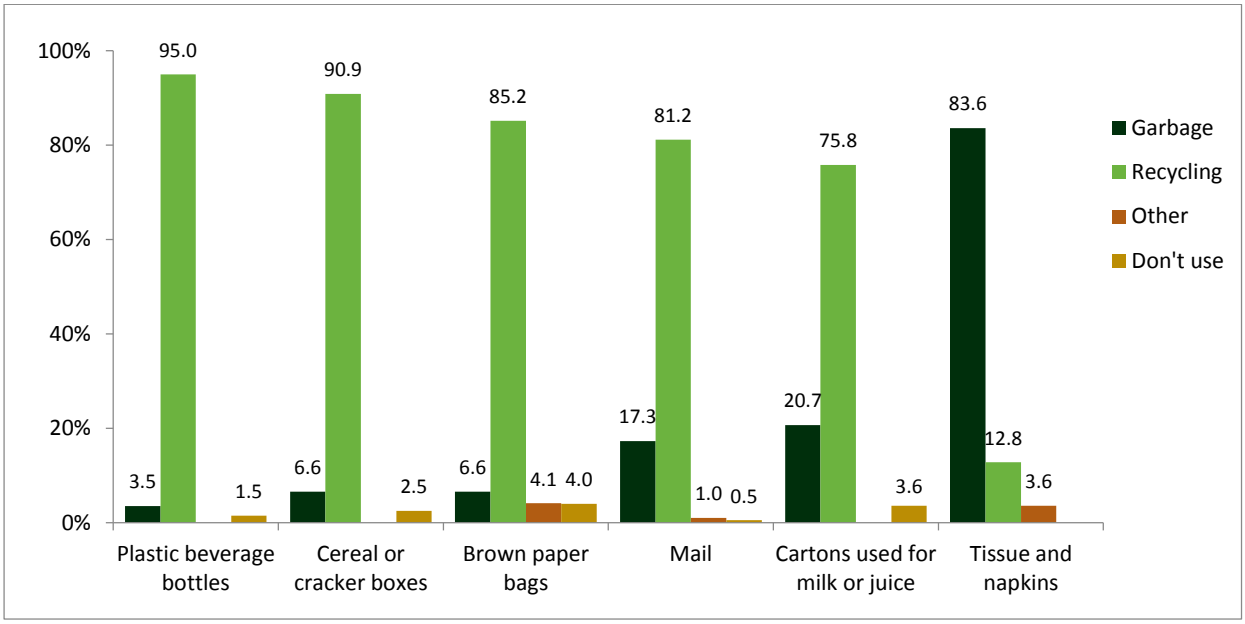
FIGURE 39. THE MOST FREQUENTLY GIVEN REASONS FOR PARTICIPATING IN RECYCLING AT HOME



Self-Reported Recycling Behaviors

Respondents were asked how they most often disposed of several common household items: plastic beverage bottles, brown paper bags, cartons used for milk or juice, mail (including envelopes with windows and junk mail), tissue and napkins, and cereal or cracker boxes. Responses were: garbage bin, recycling bin, and other (for those that did something else with the item). Respondents could also answer that they did not use the item. Percentages for each disposal method are shown below.

FIGURE 40. MOST COMMON DISPOSAL METHODS OF COMMON HOUSEHOLD ITEMS

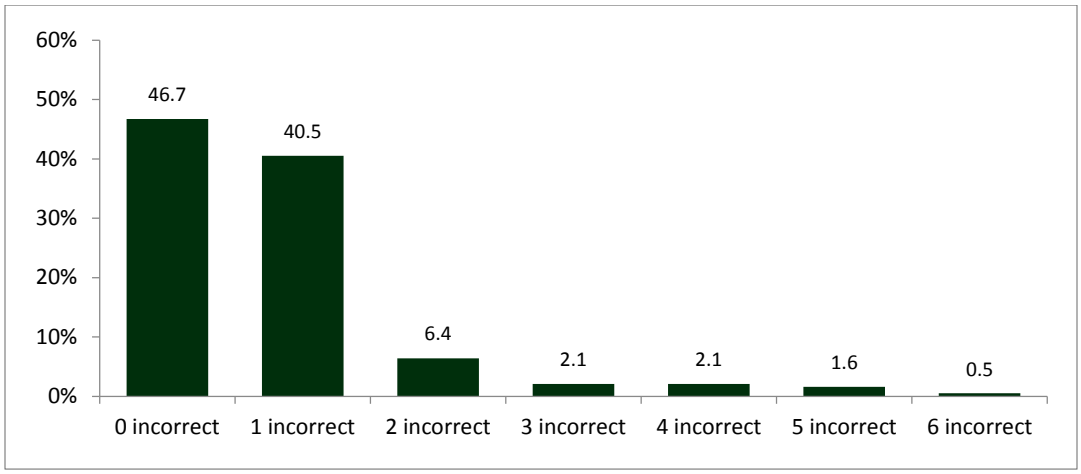


Nearly all of the respondents correctly disposed of *plastic beverage bottles* (95%), and *cereal or cracker boxes* (90.9%) in the recycling. Most of the respondents correctly disposed of *brown paper bags* (85.2%), and *mail* (81.2%), also in the recycling. The recyclable item that the respondents were least likely to recycle was a *milk or juice carton* (75.8%). Most of the respondents (83.6%) understood that *tissues and napkins* were not recyclable and disposed of them in the garbage.

Wrong-Items Score

Respondent answers were summed to create a self-reported *wrong-items score*. The range of scores are displayed below:

FIGURE 41. SELF-REPORTED WRONG-ITEMS SCORE



Almost half of the respondents (46.7%) reported that they tossed all items into the correct bin and 40.5% of the respondents reported one wrong item.

General Recycling Experience

Next, respondents were asked how often recycling was picked up by their waste hauler, and how many times out of the last four recycling pick-up days did they put out their recycling bin for collection. Respondents who answered anything less than four were then asked to give a reason why they did not put out their recycling bin every time. All of the respondents were also asked what they did with their recyclables when their recycling bin was full.

Most of the respondents (81.6%) reported that their recycling was picked up every other week, while 18.4% of the respondents reported that their recycling was picked up weekly.

The majority of the respondents (83.4%) put out their recycling each of the last four times they had the opportunity.

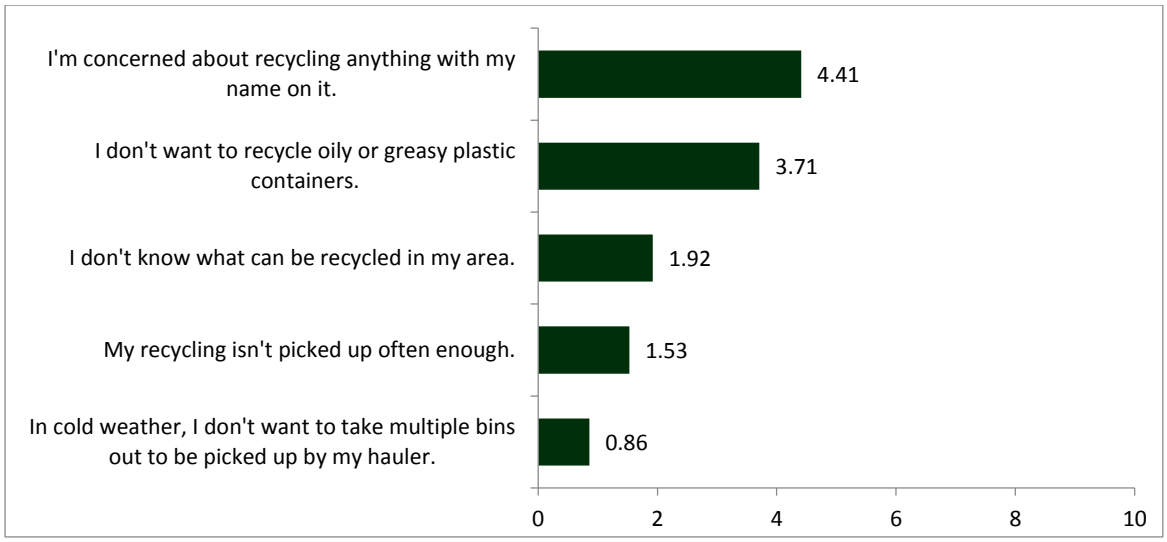
The most frequently mentioned reason given by those who did not put out their recycling bin all four times was that the *bin was not full* (30.2%), followed by *forgetting* (27.5%), and *not being home* (9%).

Over one-third (41.9%) of the respondents reported that they have never experienced their recycling bin being too full, while another third (35.3%) simply save the overflow for the next pickup.

Barriers to General Recycling

Respondents were read a series of statements and for each one, asked how big a reason it was for keeping their household from recycling everything they could. They were asked to use a *0* (not at all a reason) to *10* (a big reason) scale. Mean scores for each are shown below.

FIGURE 42. MEAN SCORES OF REASONS THAT MAY KEEP HOUSEHOLD FROM RECYCLING ALL RECYCLABLE ITEMS

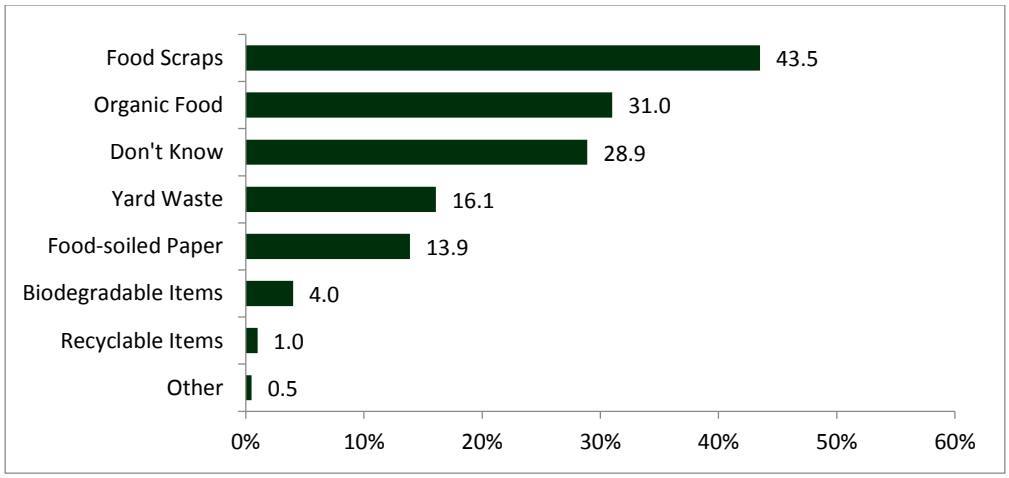


Respondents reported no significant barriers to recycling. The most influential barrier was *concern about personal information* (*M*=4.41, SD=4.21), with 35.7% of the respondents rating it from *7* to *10*. The next most important barrier was *not wanting to recycle oily or greasy plastic* (*M*=3.71, SD=4.07), with 30.3% of the respondents rating it from *7* to *10*.

ORGANICS TERMINOLOGY

Respondents were asked what they thought could go in an organics recycling bin. Their responses were then placed in categories. Responses that fell into the *other* category were looked at for similarities. As a result, *biodegradable Items* and *recyclable Items* were added to the existing list of items that could go into an organics recycling bin. The categories, along with the percentage of the respondents that gave answers that fit into each one, are shown below. Respondents could provide more than one answer, therefore, the responses will sum to greater than 100%.

FIGURE 43. PERCENTAGE OF THE RESPONDENTS STATING ITEM BELONGED IN ORGANICS RECYCLING BIN



Responses to this question were quite varied. Respondents were most likely to think *food scraps* would go into an organics recycling bin (43.5%) and least likely to think *food-soiled paper* would go in (11.9%). Over one-fourth of the respondents (28.9%) stated that they did not know what would go into an organics recycling bin.

Organics Recycling Knowledge and Attitudes

Respondents were asked how they currently disposed of their food scraps. Answer choices were: curbside organics collection bin, in the garbage disposal, garbage bin, compost pile in back yard, compost pile located somewhere else, worm bin, or other. Those who said a *curbside organics collection bin* were asked a different set of questions since the implication was that they were already participating in a food-scrap program. All others were asked questions about a hypothetical food-scrap collection program.

Over half of the respondents (62%) currently dispose of their food scraps in the *garbage bin*, while 22.1% use the *garbage disposal*, and 10.8% dispose of food scraps via *backyard composting*.

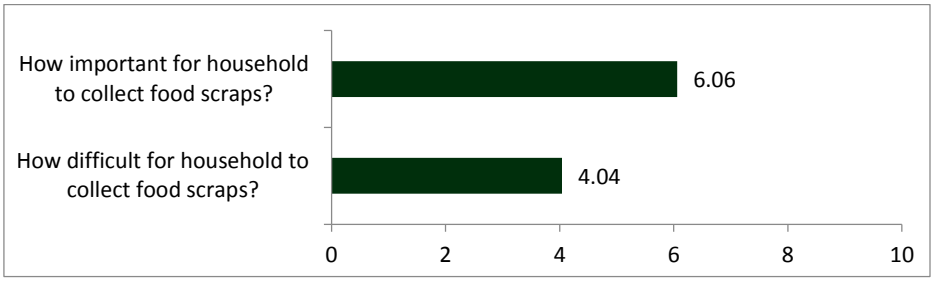
A small number of the respondents (4.6%) reported that they dispose of their food scraps in a curbside collection bin. The number of the respondents was not large enough for statistical analysis on this group alone, and since they were asked different questions based on having actual program experience rather than theoretical experience, they are excluded from the county-level analyses below.

No Current Program

Respondents were asked to rate the *importance* of collecting food scraps on a *0* (not at all important) to *10* (extremely important) scale. They were also asked to rate the *difficulty* of collecting food scraps on a *0* (not at all difficult) to *10* (extremely difficult) scale.

Food-scrap collection was seen as somewhat important and not very difficult. Mean scores for importance and difficulty are shown below.

FIGURE 44. MEAN SCORES OF PERCEIVED IMPORTANCE AND DIFFICULTY OF COLLECTING FOOD SCRAPS



Although almost half of the respondents (49.3%) rated the importance of collecting food scraps from *7* to *10*, overall, collecting food scraps was seen as only somewhat important (*M*=6.06, SD=3.58).

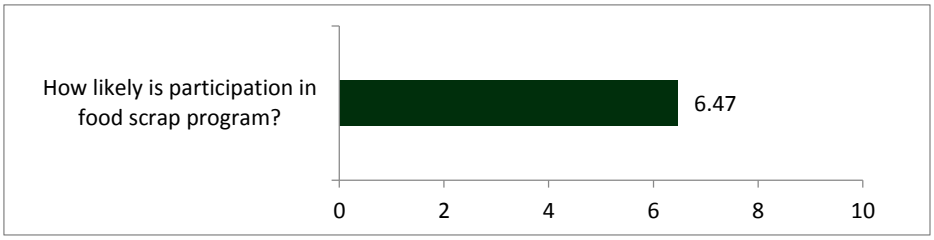
Almost half of the respondents (47.2%) rated the difficulty of collecting food scraps from *0* to *3*. However, over one-fourth of the respondents (26.3%) rated the difficulty of collecting food scraps from *7* to *10* (*M*=4.04, SD=3.40).

BARRIERS TO ORGANICS RECYCLING

NO CURRENT PROGRAM

Respondents were asked to rate the *likelihood* of their household's participation in a food-scrap collection program using a *0* (not at all likely) to *10* (extremely likely) scale. The mean score is shown below.

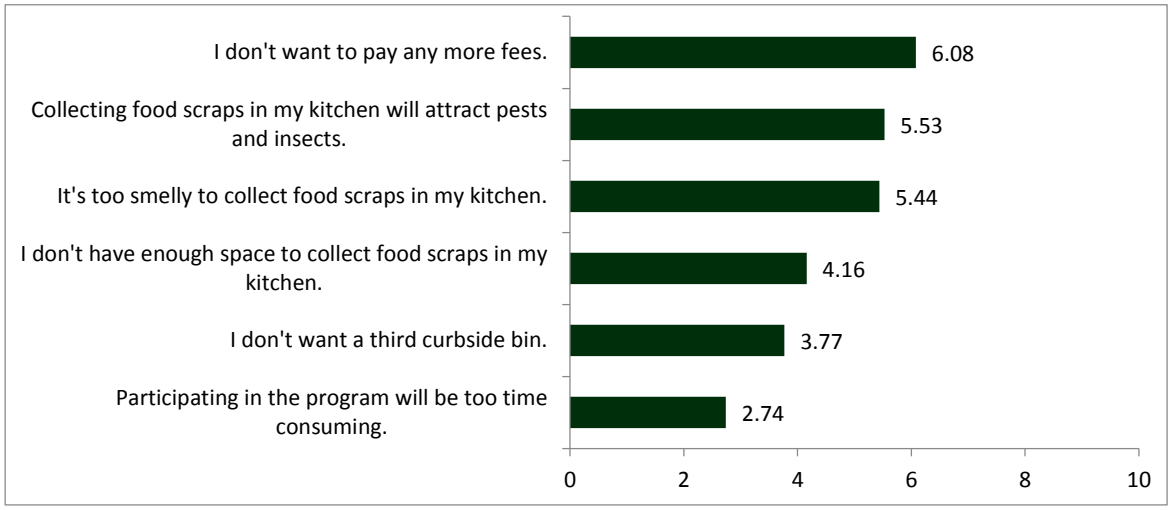
FIGURE 45. MEAN SCORE OF LIKELIHOOD OF HOUSEHOLD'S PARTICIPATION IN FOOD-SCRAP COLLECTION PROGRAM



On average, respondents were somewhat likely to participating in food-scrap collection (*M*=6.47, SD=3.67). Almost half of the respondents (49.3%) rated their likelihood from *7* to *10*, but one-fourth of the respondents (24.5%) rated their likelihood from *0* to *3*.

Respondents were then read a series of statements and for each one, asked how big a reason it would be in keeping their household from participating in a food-scrap collection program. They were asked to use a *0* (not at all a reason) to *10* (a big reason) scale. Mean scores for each are shown below.

FIGURE 46. MEAN SCORES OF REASONS THAT MAY KEEP HOUSEHOLD FROM PARTICIPATING IN FOOD-SCRAP COLLECTION PROGRAM



The most significant barrier to participation they saw was *a possibility of more fees* (*M*=6.08, SD=3.98), followed by *pests* (*M*=5.53, SD=3.92) and *smell* (*M*=5.44, SD=3.95) concerns.

Respondents were less concerned with *not enough space* (*M*=4.16, SD=3.92), a *third bin* (*M*=3.77, SD=4.09) and not particularly concerned that *it would take too much time* (*M*=2.74, SD=3.32).

RAMSEY COUNTY

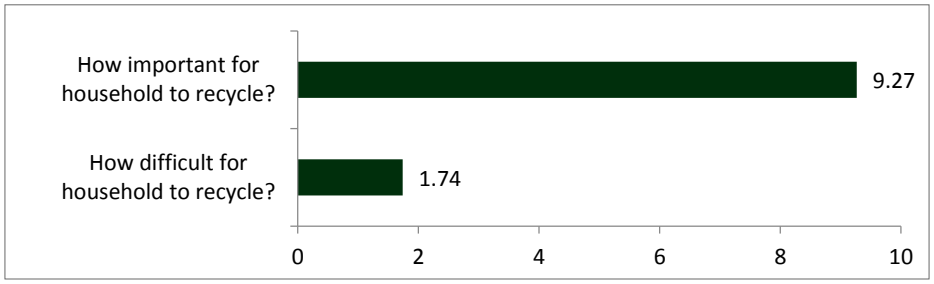
SAMPLE CHARACTERISTICS

- **Age:** The average respondent age was 57 years old, with ages ranging from 18 to 92. Over one-fourth of the respondents (28.9%) were under the age of 50.
- **Gender:** Respondents were 54.2% female and 45.8% male.
- **Education:** Almost half of the respondents (48.1%) had college degrees, 27.6% had a high school education or less, and 24.3% had some college..
- **Employment:** The majority of the respondents were employed full time (44.2%), retired (36.6%), or employed part time (11.6%).
- **Household Size:** Household sizes ranged from 1 to 9, with the average household having 2.7 persons.
- **Children:** Almost three-fourths of the respondents (73.2%) lived in households that did not have any children under 18 years of age. In households with children, almost one-third (32.8%) had at least one child under 5 years of age.
- **Residence:** Well over three-fourths of the respondents (87.6%) lived in single-family detached homes, followed by townhouses (4.5%), condominiums (4.4%), and duplex/triplex/fourplexes (3.4%).
- **Ownership:** The majority of the respondents (88.2%) reported that they own their home.
- **Race:** Most of the respondents (85.9%) identified themselves as White, with Black or African American as the next most prevalent race identity (5.4%). Five percent stated they were Asian, and three percent stated they were Hispanic or Latino.
- **Language:** Very few households (10.7%) had a language other than English spoken in their home, with two languages occurring more than once (Spanish and German).

General Recycling Attitudes

Respondents were asked to rate the *importance* of recycling on a *0* (not at all important) to *10* (extremely important) scale. They were also asked to rate the *difficulty* of recycling on a *0* (not at all difficult) to *10* (extremely difficult) scale. Mean scores are shown below.

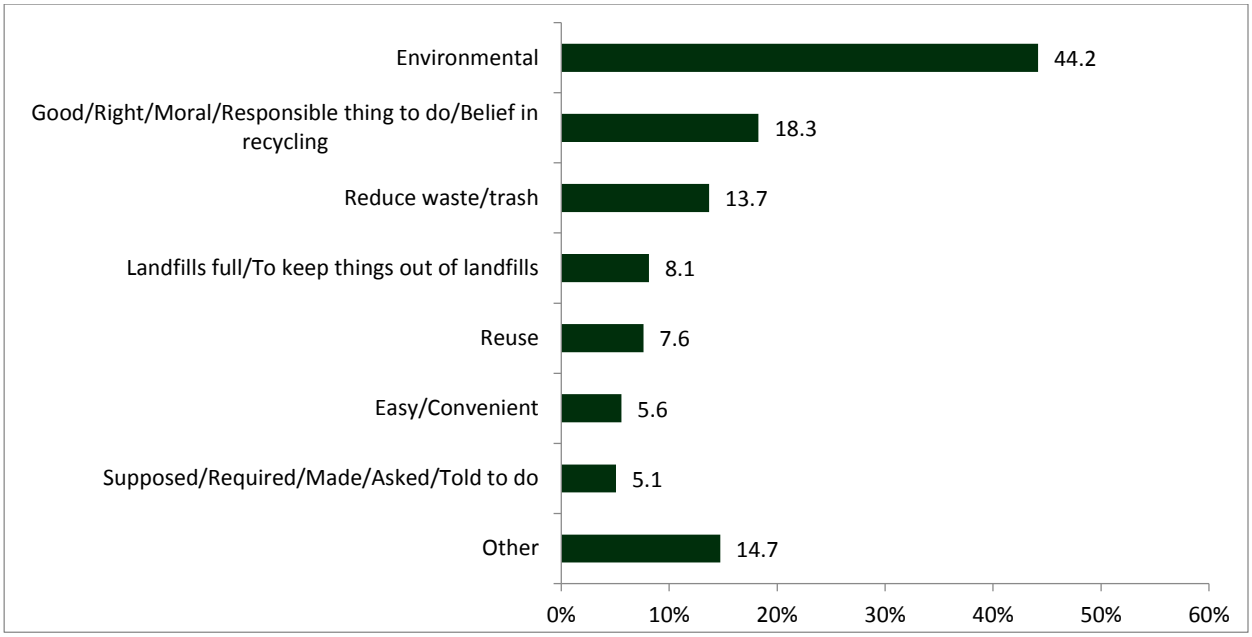
FIGURE 47. MEAN SCORES OF PERCEIVED IMPORTANCE AND DIFFICULTY OF RECYCLING



Respondents generally considered recycling very important (*M*=9.27, SD=1.64), with 94% of the respondents rating it from *7* to *10*, and not very difficult (*M*=1.74, SD=2.87), with 81.1% of the respondents rating it from *0* to *3*.

Respondents were asked to provide the reasons why their household participated in recycling at home. They were not prompted in any way, and their responses were recorded verbatim. Those responses were then categorized and coded. The most frequently given reasons are presented below. Respondents could provide more than one answer, therefore, the responses will sum to greater than 100%.

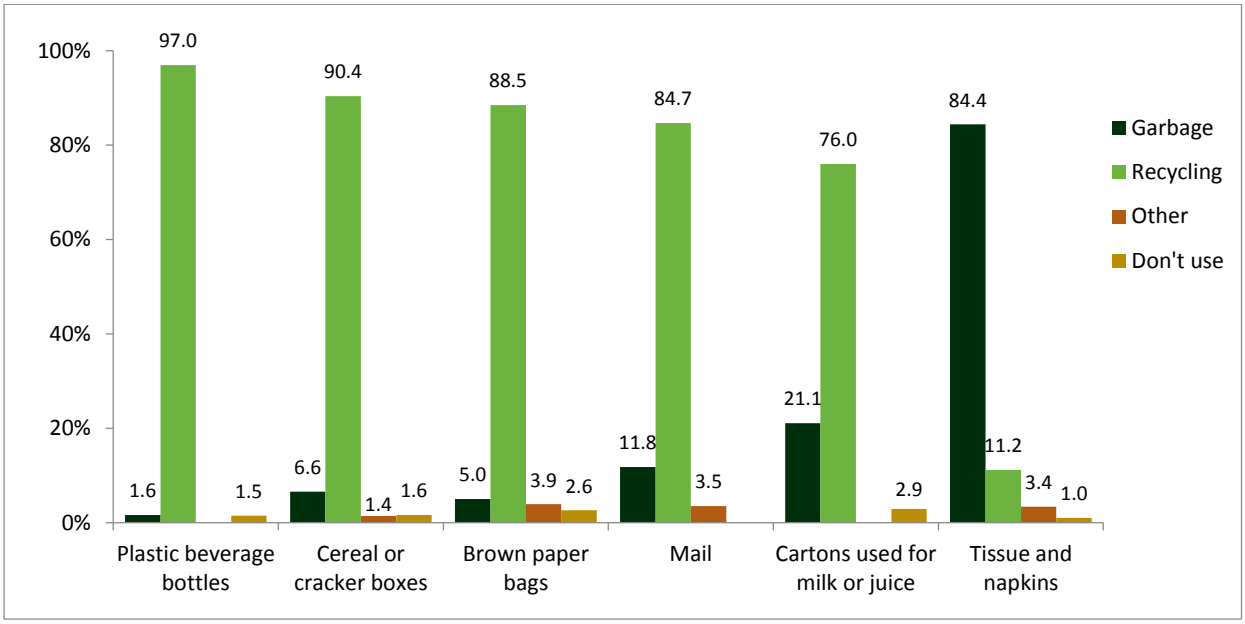
FIGURE 48. THE MOST FREQUENTLY GIVEN REASONS FOR PARTICIPATING IN RECYCLING AT HOME



Self-Reported Recycling Behaviors

Respondents were asked how they most often disposed of several common household items: plastic beverage bottles, brown paper bags, cartons used for milk or juice, mail (including envelopes with windows and junk mail), tissue and napkins, and cereal or cracker boxes. Responses were: garbage bin, recycling bin, and other (for those that did something else with the item). Respondents could also answer that they did not use the item. Percentages for each disposal method are shown below.

FIGURE 49. MOST COMMON DISPOSAL METHODS OF COMMON HOUSEHOLD ITEMS

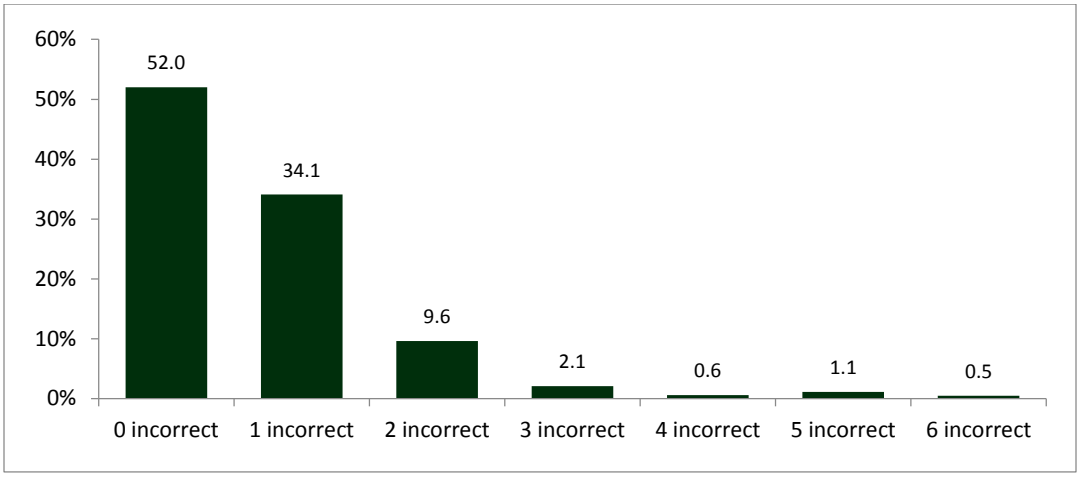


Nearly all of the respondents reported correctly disposing of *plastic beverage bottles* (97%), and *cereal or cracker boxes* (90.4%) in the recycling. Most of the respondents correctly disposed of *brown paper bags* (88.5%), and *mail* (84.7%), also in the recycling. The recyclable item that the respondents were least likely to recycle was a *milk or juice carton* (76%). Most of the respondents (84.4%) understood that *tissues and napkins* were not recyclable and disposed of them in the garbage.

Wrong-Items Score

Respondent answers were summed to create a self-reported *wrong-items score*. The range of scores are displayed below:

FIGURE 50. SELF-REPORTED WRONG-ITEMS SCORE



Over half of the respondents (52%) reported that they tossed all items into the correct bin and 34.1% of the respondents reported one wrong item.

General Recycling Experience

Next, respondents were asked how often recycling was picked up by their waste hauler, and how many times out of the last four recycling pick-up days did they put out their recycling bin for collection. Respondents who answered anything less than four were then asked to give a reason why they did not put out their recycling bin every time. All of the respondents were also asked what they did with their recyclables when their recycling bin was full.

Over half of the respondents (63.4%) reported that their recycling was picked up every week, while 34.1% of the respondents reported that their recycling was picked up every other week.

Three-fourths of the respondents (74.8%) put out their recycling each of the last four times they had the opportunity.

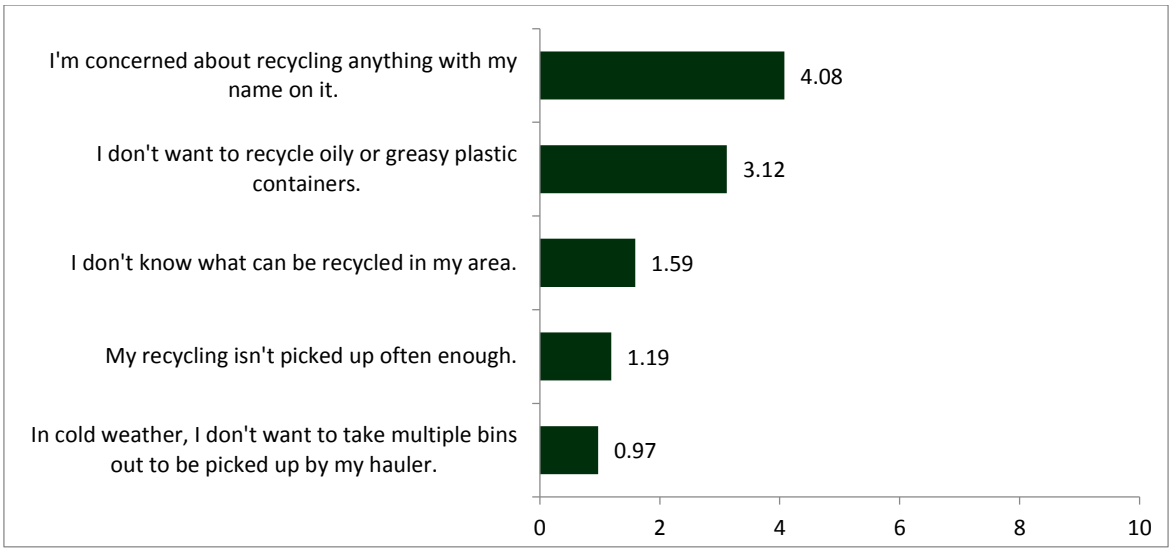
The most frequently mentioned reason given by those who did not put out their recycling bin all four times was that the *bin was not full* (33.7%), followed by *forgetting* (17.7%), and *not having time* (9.9%).

Over one-third of the respondents (39.1%) reported that they have never experienced their recycling bin being too full, while about one-fourth of the respondents (28.4%) simply save the overflow for the next pickup.

Barriers to General Recycling

Respondents were read a series of statements and for each one, asked how big a reason it was for keeping their household from recycling everything they could. They were asked to use a *0* (not at all a reason) to *10* (a big reason) scale. Mean scores for each are shown below.

FIGURE 51. MEAN SCORES OF REASONS THAT MAY KEEP HOUSEHOLD FROM RECYCLING ALL RECYCLABLE ITEMS

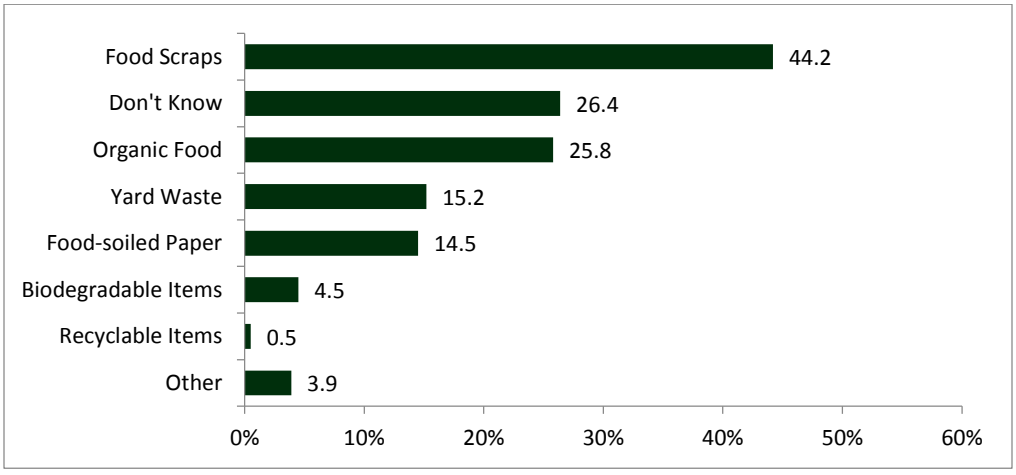


Respondents reported no significant barriers to recycling. The most influential barrier was *concern about personal information* (*M*=4.08, SD=4.26), with 36.1% of the respondents rating it from *7* to *10*. The next most important barrier was *not wanting to recycle oily or greasy plastic* (*M*=3.12, SD=3.90), with 22.5% of the respondents rating it from *7* to *10*.

ORGANICS TERMINOLOGY

Respondents were asked what they thought could go in an organics recycling bin. Their responses were then placed in categories. Responses that fell into the *other* category were looked at for similarities. As a result, *biodegradable Items* and *recyclable Items* were added to the existing list of items that could go into an organics recycling bin. The categories, along with the percentage of the respondents that gave answers that fit into each one, are shown below. Respondents could provide more than one answer, therefore, the responses will sum to greater than 100%.

FIGURE 52. PERCENTAGE OF THE RESPONDENTS STATING ITEM BELONGED IN ORGANICS RECYCLING BIN



Responses to this question were quite varied. Respondents were most likely to think *food scraps* would go into an organics recycling bin (44.2%), and least likely to think *food-soiled paper* would go in (14.5%). Just over one-fourth of the respondents (26.4%) stated that they did not know what would go in an organics recycling bin.

Organics Recycling Knowledge and Attitudes

Respondents were asked how they currently disposed of their food scraps. Answer choices were: curbside organics collection bin, in the garbage disposal, garbage bin, compost pile in back yard, compost pile located somewhere else, worm bin, or other. Those who said a *curbside organics collection bin* were asked a different set of questions since the implication was that they were already participating in a food-scrap program. All others were asked questions about a hypothetical food-scrap collection program.

Two-thirds of the respondents (66.6%) currently dispose of their food scraps in the *garbage bin* (66.6%), while 15.9% use the *garbage disposal*, and 9% dispose of food scraps via *backyard composting*.

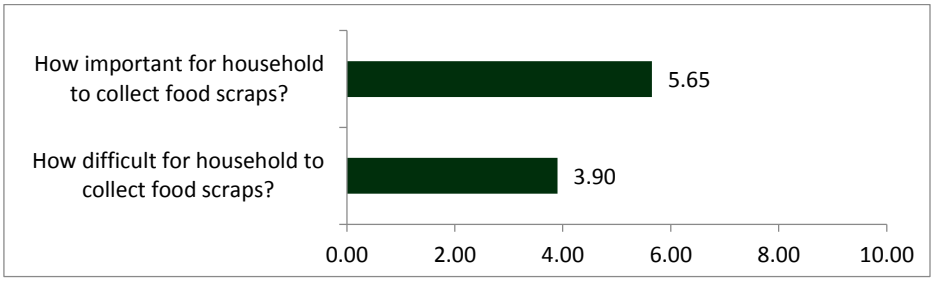
A small number of the respondents (1.1%) stated that they dispose of their food scraps in a curbside food-scrap collection bin. The number of the respondents was not large enough for statistical analysis on this group alone, and since they were asked different questions based on having actual program experience rather than theoretical experience, they are excluded from the county-level analyses below.

No Current Program

Respondents were asked to rate the *importance* of collecting food scraps on a *0* (not at all important) to *10* (extremely important) scale. They were also asked to rate the *difficulty* of collecting food scraps on a *0* (not at all difficult) to *10* (extremely difficult) scale.

Food-scrap collection was seen as somewhat important and not very difficult. Mean scores for importance and difficulty are shown below.

FIGURE 53. MEAN SCORES OF PERCEIVED IMPORTANCE AND DIFFICULTY OF COLLECTING FOOD SCRAPS



Although almost half of the respondents (48.5%) rated the importance of collecting food scraps from *7* to *10*, overall, collecting food scraps was seen as only somewhat important (*M*=5.65, SD=3.60).

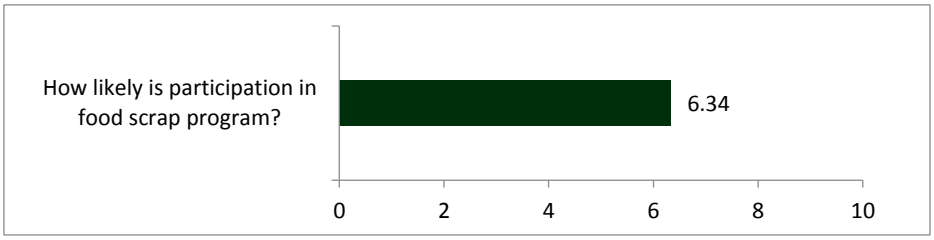
Almost half of the respondents (49.5%) rated the difficulty of collecting food scraps from *0* to *3*. However, over one-fourth of the respondents (27.2%) rated the difficulty of collecting food scraps from *7* to *10* (*M*=3.90, SD=3.58).

BARRIERS TO ORGANICS RECYCLING

NO CURRENT PROGRAM

Respondents were asked to rate the *likelihood* of their household's participation in a food-scrap collection program using a *0* (not at all likely) to *10* (extremely likely) scale. The mean score is shown below.

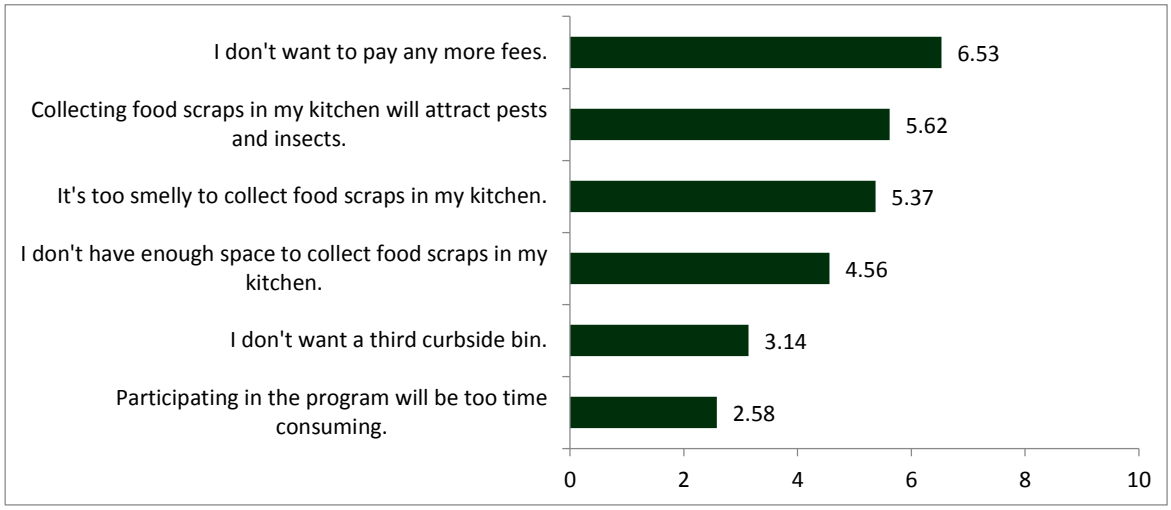
FIGURE 54. MEAN SCORE OF LIKELIHOOD OF HOUSEHOLD'S PARTICIPATION IN FOOD-SCRAP COLLECTION PROGRAM



On average, respondents were somewhat likely to participating in food-scrap collection (*M*=6.34, SD=3.83). Over half of the respondents (55.7%) rated their likelihood from *7* to *10*, but one-fourth of the respondents (26.7%) rated their likelihood from *0* to *3*.

Respondents were then read a series of statements and for each one, asked how big a reason it would be in keeping their household from participating in a food-scrap collection program. They were asked to use a *0* (not at all a reason) to *10* (a big reason) scale. Mean scores for each are shown below.

FIGURE 55. MEAN SCORES OF REASONS THAT MAY KEEP HOUSEHOLD FROM PARTICIPATING IN FOOD-SCRAP COLLECTION PROGRAM



The most significant barrier to participation they saw was a *possibility of more fees* (*M*=6.53, SD=3.82), followed by *pests* (*M*=5.62, SD=4.05) and *smell* (*M*=5.37, SD=3.99) concerns.

Respondents were less concerned with *not enough space* (*M*=4.56, SD=4.00), a *third bin* (*M*=3.14, SD=3.90), and not particularly concerned that *it would take too much time* (*M*=2.58, SD=3.38).

Washington County

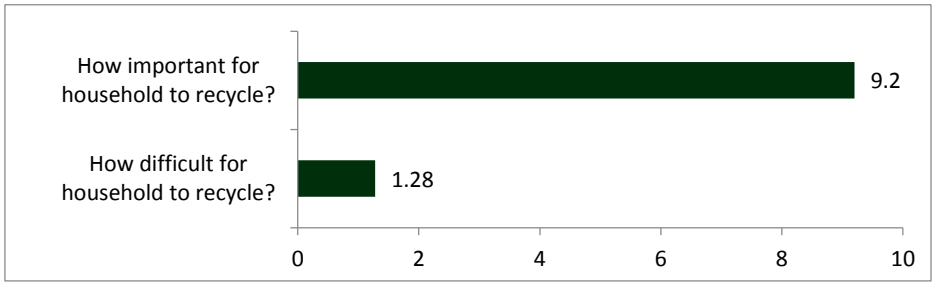
Sample Characteristics

- **Age:** The average respondent age was 58.2 years old, with ages ranging from 18 to 92. Less than one-third of the respondents (29.8%) were under the age of 50.
- **Gender:** Respondents were 64.5% female and 35.5% male.
- **Education:** Nearly half of the respondents (45.2%) had college degrees, 17.3% had a high school education or less, and 37.5% had some college..
- **Employment:** The majority of the respondents were employed full time (40.8%), retired (40.8%), or employed part time (9.3%).
- **Household Size:** Household sizes ranged from 1 to 8, with the average household having 2.8 persons.
- **Children:** Nearly three-fourths of the respondents (72.8%) lived in households that did not have any children under 18 years of age. In households with children, just over one-fourth (26.2%) had at least one child under 5 years of age.
- **Residence:** Well over three-fourths of the respondents (85.5%) lived in single-family detached homes, followed by townhouses (12.6%), duplex/triplex/fourplexes (1.1%), and condominiums (0.8%).
- **Ownership:** The majority of the respondents (92.6%) reported that they own their home.
- **Race:** Most of the respondents (97.1%) identified themselves as White. One percent of the respondents were Black or African American, one percent were Hispanic or Latino, and one percent were American Indian or Alaskan Native.
- **Language:** Very few households (5.7%) had a language other than English spoken in their home, with two languages occurring more than once (Spanish and German).

General Recycling Attitudes

Respondents were asked to rate the *importance* of recycling on a *0* (not at all important) to *10* (extremely important) scale. They were also asked to rate the *difficulty* of recycling on a *0* (not at all difficult) to *10* (extremely difficult) scale. Mean scores are shown below.

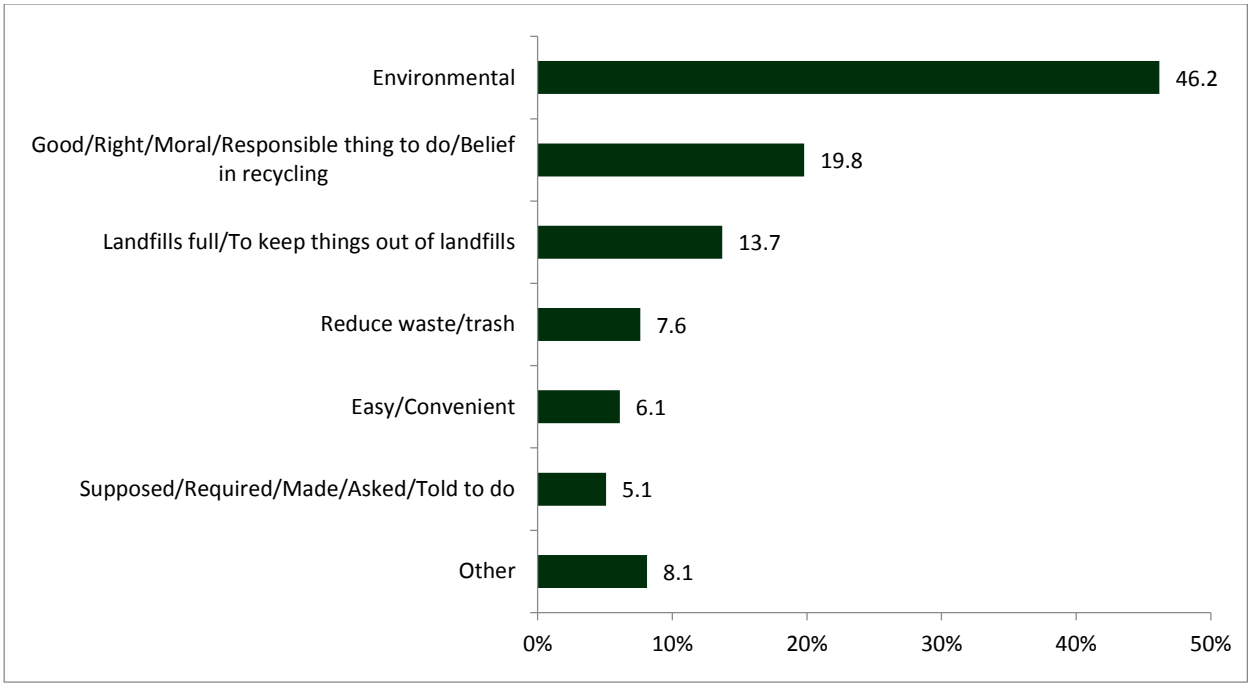
FIGURE 56. MEAN SCORES OF PERCEIVED IMPORTANCE AND DIFFICULTY OF RECYCLING



Respondents generally considered recycling very important (*M*=9.20, SD=1.56), with 95.5% of the respondents rating it from *7* to *10*, and not very difficult (*M*=1.28, SD=2.46), with 88.2% of the respondents rating it from *0* to *3*.

Respondents were asked to provide the reasons why their household participated in recycling at home. They were not prompted in any way, and their responses were recorded verbatim. Those responses were then categorized and coded. The most frequently given reasons are presented below. Respondents could provide more than one answer, therefore, the responses will sum to greater than 100%.

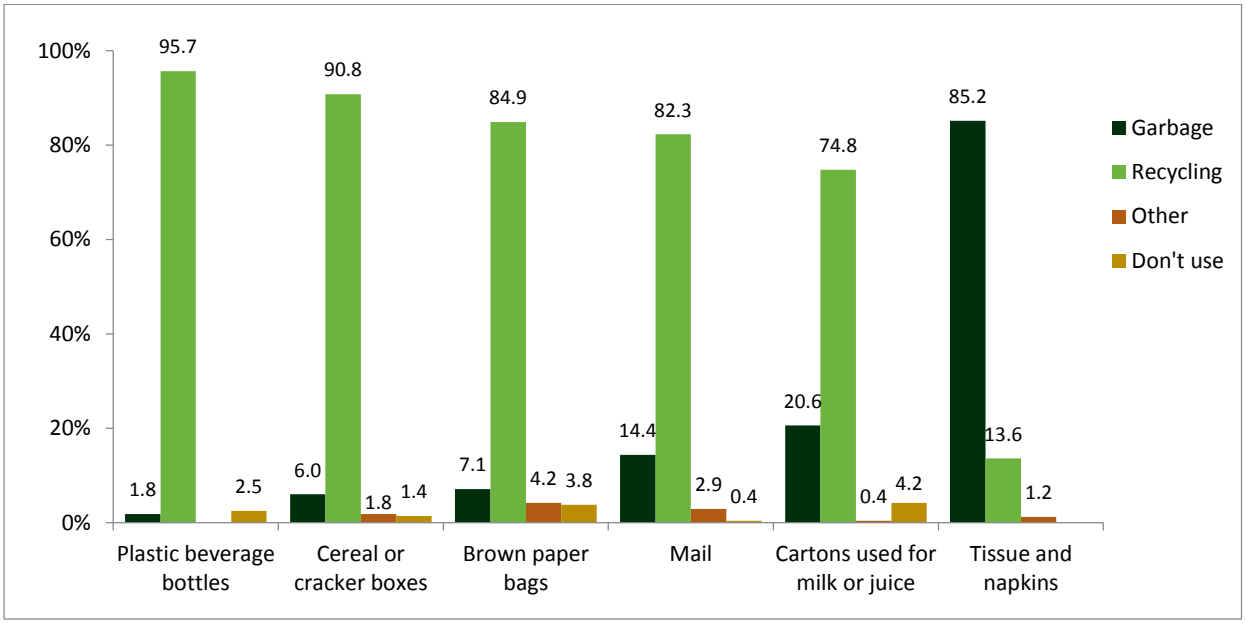
FIGURE 57. THE MOST FREQUENTLY GIVEN REASONS FOR PARTICIPATING IN RECYCLING AT HOME



Self-Reported Recycling Behaviors

Respondents were asked how they most often disposed of several common household items: plastic beverage bottles, brown paper bags, cartons used for milk or juice, mail (including envelopes with windows and junk mail), tissue and napkins, and cereal or cracker boxes. Responses were: garbage bin, recycling bin, and other (for those that did something else with the item). Respondents could also answer that they did not use the item. Percentages for each disposal method are shown below.

FIGURE 58. MOST COMMON DISPOSAL METHODS OF COMMON HOUSEHOLD ITEMS

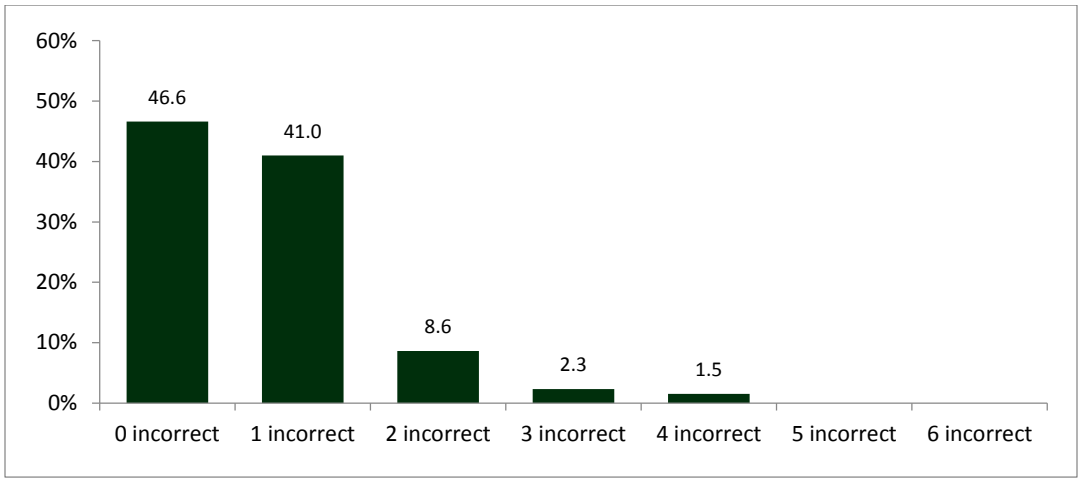


Nearly all of the respondents reported correctly disposing of *plastic beverage bottles* (95.7%), and *cereal or cracker boxes (*90.8%), in the recycling. Most of the respondents correctly disposed of *brown paper bags* (84.9%), and *mail* (82.3%), also in the recycling. The recyclable item that the respondents were least likely to recycle was a *milk or juice carton* (74.8%). Most of the respondents (85.2%) understood that *tissues and napkins* were not recyclable and disposed of them in the garbage.

Wrong-Items Score

Respondent answers were summed to create a self-reported *wrong-items score*. The range of scores are displayed below:

FIGURE 59. SELF-REPORTED WRONG-ITEMS SCORE



Almost half of the respondents (46.6%) reported that they tossed all items into the correct bin and 41% of the respondents reported one wrong item.

General Recycling Experience

Next, respondents were asked how often recycling was picked up by their waste hauler, and how many times out of the last four recycling pick-up days did they put out their recycling bin for collection. Respondents who answered anything less than four were then asked to give a reason why they did not put out their recycling bin every time. All of the respondents were also asked what they did with their recyclables when their recycling bin was full.

Half of the respondents (51.1%) reported that their recycling was picked up every other week, while 48.1% of the respondents reported that their recycling was picked up weekly.

The majority of the respondents (84.9%) put out their recycling each of the last four times they had the opportunity.

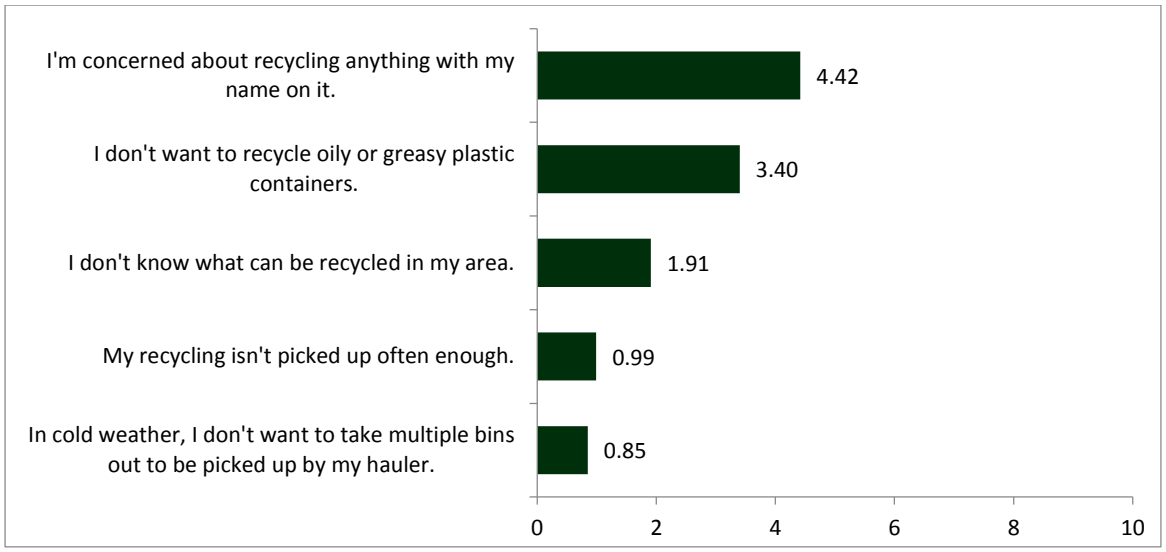
The most frequently mentioned reason given by those who did not put out their recycling bin all four times was that the *bin was not full* (61.4%), followed by *not being home* (9.8%), and *forgetting* (7.2%).

Just over one third of the respondents (37.2%) reported that they have never experienced their recycling bin being too full, while 40.3% of the respondents simply save the overflow for the next pickup.

Barriers to General Recycling

Respondents were read a series of statements and for each one, asked how big a reason it was for keeping their household from recycling everything they could. They were asked to use a *0* (not at all a reason) to *10* (a big reason) scale. Mean scores for each are shown below.

FIGURE 60. MEAN SCORES OF REASONS THAT MAY KEEP HOUSEHOLD FROM RECYCLING ALL RECYCLABLE ITEMS

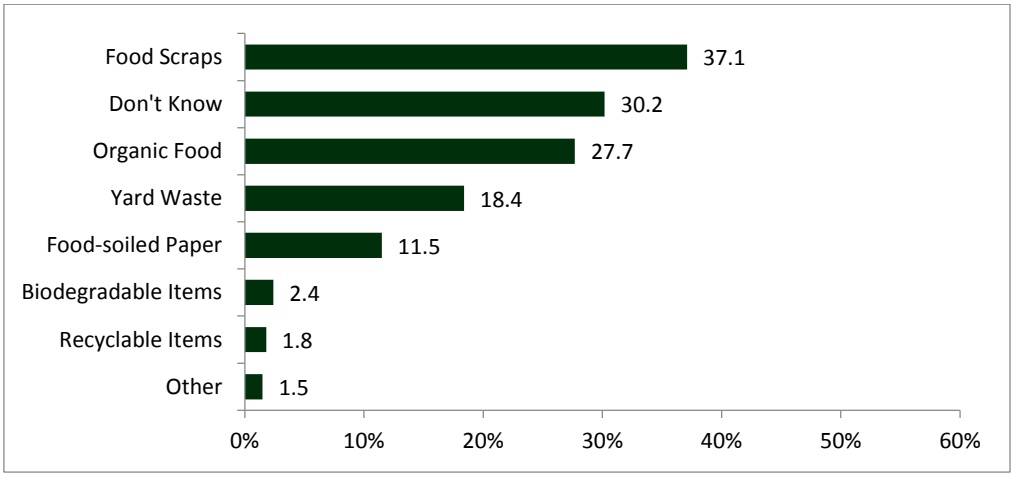


Respondents reported no significant barriers to recycling. The most influential barrier was *concern about personal information* (*M*=4.42, SD=4.31), with 36.6% of the respondents rating it from *7* to *10*. The next most important barrier was *not wanting to recycle oily or greasy plastic* (*M*=3.40, SD=4.05), with 26.9% of the respondents rating it from *7* to *10*.

ORGANICS TERMINOLOGY

Respondents were asked what they thought could go in an organics recycling bin. Their responses were then placed in categories. Responses that fell into the *other* category were looked at for similarities. As a result, *biodegradable Items* and *recyclable Items* were added to the existing list of items that could go into an organics recycling bin. The categories, along with the percentage of the respondents that gave answers that fit into each one, are shown below. Respondents could provide more than one answer, therefore, the responses will sum to greater than 100%.

FIGURE 61. PERCENTAGE OF THE RESPONDENTS STATING ITEM BELONGED IN ORGANICS RECYCLING BIN



Responses to this question were quite varied. Respondents were most likely to think *food scraps* would go into an organics recycling bin (37.1%) and least likely to think *food-soiled paper* would go in (11.5%). Almost one-third of the respondents (30.2%) stated that they did not know what would go in an organics recycling bin.

Organics Recycling Knowledge and Attitudes

Respondents were asked how they currently disposed of their food scraps. Answer choices were: curbside organics collection bin, in the garbage disposal, garbage bin, compost pile in back yard, compost pile located somewhere else, worm bin, or other. Those who said a *curbside organics collection bin* were asked a different set of questions since the implication was that they were already participating in a food-scrap program. All others were asked questions about a hypothetical food-scrap collection program.

Over half of the respondents (57.6%) currently dispose of their food scraps in the *garbage bin*, while 24.2% use the *garbage disposal*, and 14.4% dispose of food scraps via *backyard composting*.

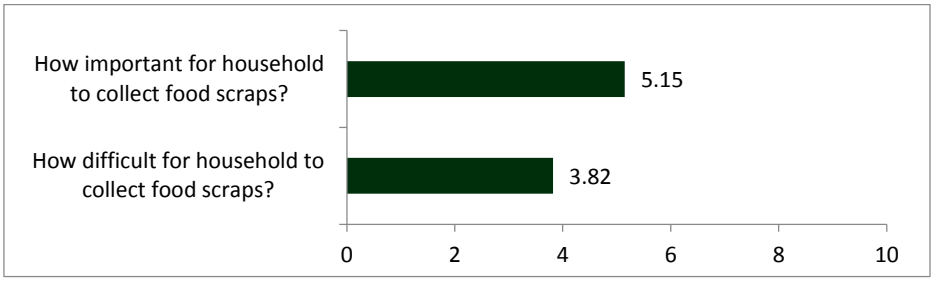
A small number of the respondents (0.4%) stated that they dispose of their food scraps in a curbside food-scrap collection bin. The number of the respondents was not large enough for statistical analysis on this group alone, and since they were asked different questions based on having actual program experience rather than theoretical experience, they are excluded from the county-level analyses below.

No Current Program

Respondents were asked to rate the *importance* of collecting food scraps on a *0* (not at all important) to *10* (extremely important) scale. They were also asked to rate the *difficulty* of collecting food scraps on a *0* (not at all difficult) to *10* (extremely difficult) scale.

Food-scrap collection was seen as somewhat important and not very difficult. Mean scores for importance and difficulty are shown below.

FIGURE 62. MEAN SCORES OF PERCEIVED IMPORTANCE AND DIFFICULTY OF COLLECTING FOOD SCRAPS



Although over one-third of the respondents (39.1%) rated the importance of collecting food scraps from *7* to *10*, overall, collecting food scraps was seen as only somewhat important (*M*=5.15, SD=3.60).

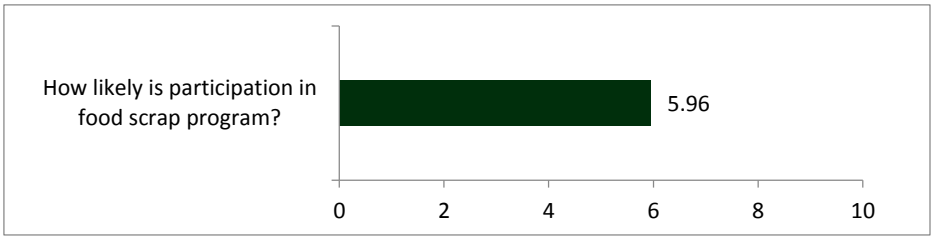
Half of the respondents (50.1%) rated the difficulty of collecting food scraps from *0* to *3*. However, over one-fourth of the respondents (24.2%) rated the difficulty of collecting food scraps from *7* to *10* (*M*=3.82, SD=3.43).

BARRIERS TO ORGANICS RECYCLING

NO CURRENT PROGRAM

Respondents were asked to rate the *likelihood* of their household's participation in a food-scrap collection program using a *0* (not at all likely) to *10* (extremely likely) scale. The mean score is shown below.

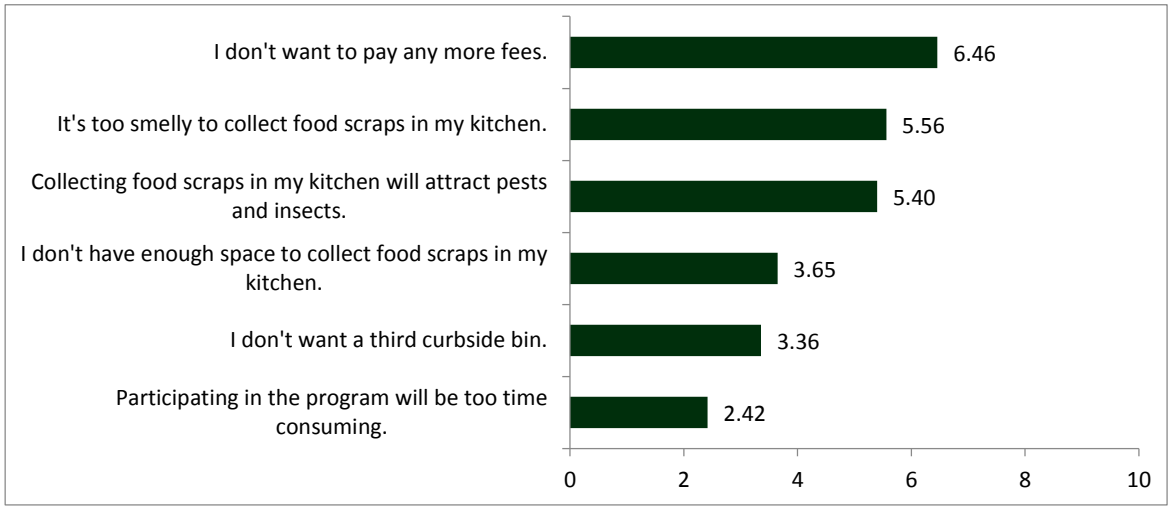
FIGURE 63. MEAN SCORE OF LIKELIHOOD OF HOUSEHOLD'S PARTICIPATION IN FOOD-SCRAP COLLECTION PROGRAM



On average, respondents were somewhat likely to participating in food-scrap collection (*M*=5.96, SD=3.67). Almost half of the respondents (48.5%) rated their likelihood from *7* to *10*, but one-fourth of the respondents (26.7%) rated their likelihood from *0* to *3*.

Respondents were then read a series of statements and for each one, asked how big a reason it would be in keeping their household from participating in a food-scrap collection program. They were asked to use a *0* (not at all a reason) to *10* (a big reason) scale. Mean scores for each are shown below.

FIGURE 64. MEAN SCORES OF REASONS THAT MAY KEEP HOUSEHOLD FROM PARTICIPATING IN FOOD-SCRAP COLLECTION PROGRAM



The most significant barrier to participation they saw was a *possibility of more fees* (M=6.46, SD=3.77), followed by *smell* (M=5.56, SD=3.86) and *pests* (M=5.40, SD=3.98) concerns.

Respondents were less concerned with *not enough space* (M=3.65, SD=3.71), a *third bin* (M=3.36, SD=3.88), and not particularly concerned that *it would take too much time* (M=2.42, SD=3.23).

RECOMMENDATIONS

Below are recommendations derived from the survey findings. The recommendations for general recycling and organics are addressed separately. The recommendations start with the general picture of recycling and organics, barriers that are important to address across the larger audience, specific audiences that need additional help, and suggestions for future research.

GENERAL RECYCLING

People in the Twin-Cities Region have very favorable attitudes toward recycling. Most people feel recycling is important, and not that difficult. They are motivated by the environmental messages and do not feel any barriers present a particular challenge. However, to improve the quality and quantity of recycled material collected across the region, there are two barriers worth addressing: (1) concern about personal information and (2) greasy and oily containers.

PERSONAL INFORMATION

The biggest barrier to recycling was concern about privacy. This may suggest that residents believe that material put in a recycling bin is being hand sorted or handled by a person more so than garbage (and thus, there is more opportunity for information to be stolen). People may also perceive that paper recycling is cleaner (i.e., paper arrives at the facility clean, personal information visible) and that this leaves them vulnerable to identity theft. Therefore, on a larger scale, this may be a misunderstanding worth addressing. This findings was particularly true for residents with a high school education or less.

GREASY CONTAINERS

Not wanting to deal with greasy or oily containers was a barrier, though no group rated it more important than another, suggesting that is a concern across the all residents. How this issue should be addressed does depend on the hauler's capabilities with respect to the technology that exists to deal with greasy or oily containers. We recommend addressing this concern in future program outreach.

SPECIFIC TARGET AUDIENCES

There were specific audiences that may need more assistance with and outreach about recycling.

MOST HOUSEHOLDS

Most households within the region report doing the right thing – their attitudes are in alignment with their reported behaviors.

- This group needs ongoing, accurate, and up-to-date information in order to sustain their current behaviors.
- The municipalities and haulers in this region should use messages that promote the high level of importance placed on recycling by the overwhelming majority of people in the region.
- Highlighting normative behaviors (i.e., large numbers of people are engaged in the desired behavior) can bring about change in tough-to-reach groups.

Renters and Attached Homes

Generally, people in non-ownership, single-family attached homes reported struggling more with recycling and reported more tossing mistakes. These residents are more likely to be transplants from other areas, or simply be moving more often, so they won't have the systems and understanding in place that someone who has lived awhile in their own home would have. They also are more likely to report issues with recycling not being picked up often enough, which could be related to smaller home sizes for storing overflow.

- We recommend working with landlords and building owners to ensure that these groups receive clear information on what to recycle, how recycling works in their residence, and that recycling is an important and valuable part of living there.

Lower Education and Part-Time Employment

Residents who reported having a high school education or part-time employment (and, most likely, a lower household income) are also clear targets for a focused program. These residents likely have more concerns and stressors in their lives, and do not have time or energy to wade through confusion or difficulty related to recycling. They were more likely to report greater general difficulty, more tossing mistakes, not knowing what to recycle, recycling not picked up often up, cold weather, and a greater concern about personal information.

- These groups would benefit from education and strategies to make the process of recycling more convenient and easier.

Households With Children

Households with children were also more likely to struggle with recycling. They reported significantly more issues with recycling not being picked up often enough, as it is likely that there are more barriers to storing any overflow, they have more people in a home and likely also produce more waste on average. They were also more likely to be concerned about not knowing what could be recycled, and had a higher number of disposal mistakes.

- This group would benefit from education.

Next Steps – Research

We recommend research focused on people living in single-family attached homes who have their own curbside bins. In-person interviews with these households are likely to reveal relevant information on ways to help this group overcome their recycling challenges.

In order to increase the quality and quantity of recycling throughout the region we recommend research focused on multi-family units where residents have shared bins stored in common areas of the property. The barriers to recycling in this context are expected to be very different from households who live in the types of homes included in this research effort.

ORGANICS

Overall, respondents were not negative about organics recycling. The general attitudes and perceptions of organics recycling could use some improvement, as people are not convinced it is an important action to take and may not know why it matters. The interest in participating in organics recycling overall was moderate.

BARRIERS TO PARTICIPATION

Three barriers were most influential to organics recycling: (1) *not wanting to pay more fees*, (2) *attracting pests*, and (3) *smell*. These barriers were prominent for residents who were interested in participating, as well as those who were not at all interested in participating. For those residents who were not at all interested, issues with *having a third bin*, *not enough space*, and *too time consuming* were also important and will need to be addressed through the program.

TARGET AUDIENCE

The research identified a willing audience for introduction of organics recycling into the Twin Cities Region.

LIKELY PARTICIPATION

There is a sizable, willing group of people who can provide the foundation for successful curbside organics collection; however, *increased fees*, *pests*, and *smells* will still need to be addressed for this group.

- This group will need credible convincing messages about increased fees.
- This group will need education and practical strategies to help overcome pests and smells in their kitchens and curbside bins.
- Outreach methods can involve early adopters in order to create social diffusion.
- Social diffusion (i.e., small groups used to influence neighbors, friends, and relatives) is effective in driving behavior change before a behavior becomes normative (i.e., *everyone* is doing it).
- Start small in order to create something big. The goal for this program would be to *use social diffusion to create a social norm* for organics recycling throughout the region.

In recognition of the fact that the region is comprised of six counties, each with a large number of cities and waste haulers who may be involved in program delivery, the extent to which program messages and elements can be the same will influence the speed of adoption of organics recycling behaviors. In other words, one organics bin color and type will be much more influential than five or ten or twenty different types. A curbside bin is highly influential as it is a public display of a private behavior. Although consistency is important, messages that are specific to certain groups or locations are sometimes necessary. Specialized messages are unlikely to disrupt program goals as long as the main elements of the program are consistent. Consistent program elements will also help when residents relocate within the region.

The research revealed a large group of college educated, full-time employed, and living in single-family detached homes for whom *fees*, a *third bin*, *time*, and *smells* were not a big issue. It is likely that this group will be fairly easy to engage in curbside organics recycling. Once the initial group of likely participants is engaged in organics recycling the other barriers (i.e., third bin, too time consuming, and no space) can be addressed to encourage organics recycling with a wider audience.

Next Steps – Research, Strategy Development, Pilot Testing Strategies

We recommend including research in the design of outreach materials, communication, and strategies. Focus groups or short intercept surveys with the target audience are essential to a successful program.

A very important next step will be to develop strategies and pilot test the strategies on a small scale in a few neighborhoods throughout the region. Piloting a variety of strategies using a control group will tell you which strategies achieved your program goals. Those strategies can then be promoted more widely across similar neighborhoods and municipalities throughout the region.

APPENDIX A: WHY PARTICIPATE IN RECYCLING AT HOME?

QRB5. What are the reasons why your household participates in recycling at home?
For the economy and the world.
To help the environment.
Just for the environment.
Save what we can for the environment and not put stuff in the landfill.
For the environment so it can be used for something different.
To save the environment.
Good for environment.
Important for environment and ecology.
I feel like it's a responsibility I can manage, it's good for the environment and less wasteful.
Good for environment.
It's important to recycle for the environment.
For the environment.
Important to keep environment clean and to be able to reuse things to bring the cost down.
It keeps our earth better. To me, recycling is something that is needed. Things can be used for other purposes. It's very necessary.
Trying to save the environment for my children and animals and plus, you can save money.
To protect the environment.
We love our environment.
To keep environment safer.
It's a habit and it's good for the environment.
For the environment.
To help the environment.
For the safety and future of the environment.
It's good for the environment.
Good for the environment.
To help the environment.
To keep the environment clean, reuse.
For the environment.
It saves the whole community money. The city gets money back for recycling. It's good for the environment.
For the environment.
I care about environment and future generations. I am not a wasteful person.
It's always good for Mother Nature. It's a good thing and we're paying for it so may as well do it. Generates money for county.
It is good for the environment.
Neater, nicer and helps the environment.
For the environment.
Because it is good for the environment.
I think it's safer for the environment. I think it's silly to throw out things that can be recycled.
Because we care about the atmosphere and we care about things collecting, and understand a need for things to be reused.
I think it's better for environment.
To help the environment and reuse valuable materials.
To help the environment.
Because we truly believe in it. It betters the environment.
It's a good thing for the environment, and our kids got into recycling programs in school years ago and brought it home.
Good for the environment.

QRB5. What are the reasons why your household participates in recycling at home?
Good for environment.
For where we live it's easy, it's good for the environment, and it has a positive impact on the economy.
It's important for the environment.
Protecting the environment as much as we can.
It is good for the environment. I do not want my great-grandkids yelling at me ten years from now for not caring.
It's good for the earth, and the right thing to do.
Better environment.
To help the environment.
It's good for the environment.
Because it's good for the environment.
It's good for the earth.
To be kind to the environment, recycling is a good thing.
To help the environment.
Because it's important to and for the environment.
Good for the environment.
Because we care about the environment, we understand that it helps everyone, we like to reuse and recycle.
Good for environment.
We care about the environment. Containers need to be recycled. Saving the environment is an important thing to do.
For the environment, for my grandkids.
It is important to do what I can to preserve the environment.
Good for the environment.
I think it's an environmental thing to do.
It's responsible and environmental.
I find it better for the environment.
We believe it's good for the planet, and it saves money on garbage.
For the environment and just to use resources wisely. Cut down on use of petroleum in the case of plastics.
I would say it's a good idea because it is to protect the environment.
To help the environment.
It is good for the environment so I recycle so other people could use it.
Well, we are required to, but beyond that, it's the right thing to do for the environment.
Because it's good for the environment. It's free.
I think it's good for the earth and environment.
It's important to recycle so the landfills are not filled up. It is generally important for the environment and community.
Because I think it is good for the environment and I think it is a good thing to do to keep things out of landfills and such.
The environment.
Because we're asked to recycle voluntarily and it's good and doesn't take much time or organization, and it's environmentally friendly.
To help the environment.
It creates less trash, good for the environment, really easy to do.
It's good for the environment and reduces the landfill.
To save the environment and landfills from filling up.
Because recycling is important, because it helps the environment, and it needs to be reused to help keep costs down. At least it is supposed to but I haven't seen that.
It's good for the environment.
We feel it's important environmentally.
For the environment.
Because I want it to be reused, and not wreck the environment.

QRB5. What are the reasons why your household participates in recycling at home?
It's good for the environment.
Because we believe in it. It's good for the planet.
To help planet earth.
Because not as much trash and good for the environment. Should use things more than once, reuse plastic and glass.
It's good for the environment; it's just the thing to do.
We firmly believe in recycling everything. Better for the environment.
Environmental.
It helps the economy and environment.
To help save the environment.
Environmental concerns.
Because it's good to mother earth. Reuse products.
Keeps down garbage and saves the planet.
Because it is good for the world.
For the environment.
Good for the environment.
We think it's good for the environment. Recycle, reuse.
Good for the environment.
Just to help the environment. Recycle what we can.
Instead of being stored to save the earth.
For the environment.
Want to help the earth.
Environment.
Good for the environment.
We believe it's good for the environment. We hope it's good for the environment.
It is good for the environment.
Because I believe as a good citizen I'm concerned for our environment.
Because it's good for the environment.
It's for the environment.
Well, saves the earth and landfills. Recycling for the earth.
Better for the planet. Paid by our taxes, no separate costs. Less garbage.
Feel that it is important for the environment.
Saves the earth, helps the world be a better place, it is economical, good for the earth.
To be environmentally conscious.
Because it protects the environment.
It's good for environment, not wasteful.
It is easy and good for the environment, well for everybody.
Help the environment.
Think it's good for environment.
It's good for the environment and easy to do.
For the environment.
Better for the earth and future generations.
It's important for the environment, and recycling can be used for different items, and it's easy.
I believe in keeping the environment clean.
Saving the planet.
Environment.
It's important to the environment.
Because it's environmentally intelligent. We are Christian people who believe in good creation helps to save creation.
We're concerned about environment and it is very easy to do. And concerned about the landfill.

QRB5. What are the reasons why your household participates in recycling at home?
Good for the environment.
For the environment.
Better for the environment.
For the environment, and global warming.
For the environment.
Because ecologically sound. Takes down trash amount and makes easier for trash man.
Because it helps keep the environment clean.
Good for the environment. My mom is a science teacher so we have to.
For the environment.
It's environmental reasons.
Hope it helps environment.
Believe in saving the environment.
Keep environment safe.
Good for environment.
The environment. We believe in recycling.
Well, keeps it out of landfills which is good for the environment.
For the environment.
For environment.
Environment.
Environmental.
Help the planet.
For the environment.
Just to reduce the waste we produce and to be more environmentally friendly.
For the environment.
Good for environment.
Good for environment.
Clean environment.
Just the point of being environmentally friendly.
It's just important for the environment.
Environmentally important and easy to do. I wish recycling was picked up weekly.
Important for environment to reuse items.
We have to keep the earth clean.
Good for the environment.
It's very important for the environment and the landfill.
Important for the planet.
Good for the environment.
Important for the environment and right thing to do.
For environment, future of my children, less landfills.
For environment.
Save our earth.
Good for environment.
Good, because it helps the environment.
Saves environment.
To save the environment.
For environment.
I just think it's the right thing to do for the environment.
To not burn stuff, to keep earth clean.
Good for the environment.
It's better for environment.

QRB5. What are the reasons why your household participates in recycling at home?
It's important for the earth.
Just good for the world.
For the environment. To reduce the landfills.
So that we can help the earth.
Save the environment.
For the environment.
It's easy and good for the environment.
It's good for the environment.
I think it's good for the earth.
Good for the environment.
Good for the environment, cleanliness, no debris.
We want to help the environment.
Because of the environment and the recycling in the landfill.
It's good for the environment. I do not like to waste anything.
Supposedly it is the more efficient and environmentally friendly way to do it. We get charged for it so we might as well use the service.
We can recycle pretty much everything. It's good for the environment.
I think it helps the environment.
Because it is eco-friendly and things can be reused.
Good for environment. Recycle everything we can because that's just how it is implanted in our minds.
Because it's environmentally conscious health.
Good for the earth.
For the environment.
Bring a better environment for our kids.
Save the environment.
Good for the environment.
Good for the earth.
To save the earth.
To see we can help out the environment.
Mostly out of environmental concerns.
Because we believe in it, honestly, it's good for the environment.
Good for the environment.
Because we are supposed to. It’s an ecology thing, it's more environmentally friendly.
Good for the environment.
For environment.
It's good for the environment.
The environment.
Environment.
It is sustainable for the environment.
Because it's good for the environment and our garbage hauler makes it very convenient for us to participate in recycling.
Best for environment.
Good for planet.
It's important for planet.
Environment. Children are concerned more about the environment.
Good for planet.
Environment.
Good for the environment.
Good for the environment.
Because we would like to help the environment.

QRB5. What are the reasons why your household participates in recycling at home?
Good for the environment.
To save the environment.
Environment.
Environment.
Good for the environment.
It's better for the environment and it's not going to fill up landfills, and if it can be good for the planet then let's do that.
Right thing to recycle for environment.
Good for environment.
Good for environment.
Good for the environment.
Environment.
Environment.
Environment.
Help the environment.
Environment.
Environment.
Environment.
Environment.
Environment.
Try to help the environment.
Prevent landfills from filling up, reuse material, and good for environment.
Environment.
Good for environment.
Clean up the environment.
Environment.
Saves the environment.
Save the earth.
Help the environment.
For the earth.
For the environment.
For the planet.
Saving the planet.
Environment.
I want to be environmentally responsible.
For the planet.
Good for the environment and city.
Help the environment.
For the environment.
For the planet.
Environmentally smart.
I want to keep the environment healthy.
Concerned for the environment.
The environmental purposes.
For the planet.
Better for the environment.
Good for the environment.
We believe in recycling for environment.
For environment.

QRB5. What are the reasons why your household participates in recycling at home?
For the planet.
Believe in it for the environment.
Environment.
For the planet.
Best thing for the environment.
For the environment.
For the planet.
Environment.
Our environment. Want it to be helped.
Save the environment.
Kind of gives back to the environment.
For the environment.
Because it's good for the environment.
Because it's good for the environment and the city gives us a bin to use.
We have to preserve the earth for the future generations. Also, to keep the contamination and pollution down.
I believe in protecting the environment. It is critical.
Less in my garbage can, save the earth.
For the environment.
I do it for environmental purposes, better for the environment.
To help the environment.
Environment.
It's better for the environment.
Because of the environment.
Because I know it's good for the environment.
It's good environmental policy.
It's the right thing to do for the environment.
I care about the earth.
Because it saves the earth. Anything you can do to decrease the garbage.
For the earth.
It's the right thing to do, saves the planet.
Help save the environment.
Good for the environment. Recyclables can be reused.
Because I think it's important for the environment.
Important for the environment.
Good for environment.
To help the environment.
It's very important for the environment.
Important to environment.
It's important to environment.
Better for the environment, my garbage does not fill up so quickly.
Environmental consequences, right thing to do.
Save the planet.
Because it's right for the environment.
Good for the environment.
It's important for the environment.
Keep the earth clean.
Just environmental.
Because it's good for the environment.
Because it's pretty wasteful. Landfills are full and it's better for the environment.

QRB5. What are the reasons why your household participates in recycling at home?
The environment, less garbage to the landfill.
Environmental concerns.
Clean the environment.
Environmental reasons. Keep our landfills to a minimum.
Good for the environment.
To help the environment.
Help the environment.
Preserve the earth.
Good for the environment.
Good for the environment.
Because we have the bin and better for the earth.
For the environment.
Want to do what's right for the environment.
It's important for the world. Landfills are too full.
Better for the environment.
Environmental.
Because it's good for the environment.
Good for the planet, no reason for someone not to recycle.
Cleaner earth.
Environmentally conscious.
It's the right thing to do for the environment.
We care about the environment.
It's important to the earth.
Environment.
Environment because my family makes a lot of recycling.
It is a good thing for the environment.
It is good for the environment.
Environment.
Because I think it is good for the environment and it is a waste to throw trash into our landfills. Matter of fact I wish they would do away with plastic bags all together.
Help environment. Reduce, reuse, recycle.
Good for the world.
I just think it is important for the environment and a way to properly dispose of items that would end up in our landfills.
Environmental concerns.
Better for the environment, I guess.
Save the environment.
I'm just passionate about recycling. I even take cans out of any garbage can that I am able to get to. I think way more people need to understand how much it means for our planet. I even put signs on my neighbor bins if I noticed that they were recycling plastic bags and now the city has put fliers on the cans as well. I am really involved in our local recycle programs.
It's the right thing to do and we get a break [on cost] by recycling.
It means less garbage. It is good for the environment.
For the environment.
Because it is good for the environment. The school sometimes gathers food scraps to feed the pigs and many times it is way more than they need.
Good for the earth.
Cuts down on trash, and helps the environment.
It's important to do your part to help the environment.

QRB5. What are the reasons why your household participates in recycling at home?
I don't know. The earth. It is the right thing to do. I even purchased a larger bin so that I could collect and store even more at a time.
Better for the environment, reuse it.
To help the environment.
To save the earth.
For the environment.
1. Keep area clean 2. Help people clean environment.
Good for environment.
Good for the environment.
For the environment, one day at a time.
Good for the earth.
Good thing to do for the environment.
Good for the environment.
For environment and it allows us to reuse things instead of throwing them at the landfill.
Make the world better.
More environmental.
For the environment.
Good for the environment.
It's important for the environment.
Because it is good for the environment and the recycling discounts.
Environmental conservation. My city will take anything and it's easy to do so I should participate.
Beneficial to world.
It is convenient and good for the environment.
Better for the environment, and make other products.
Reduce carbon footprints.
It's important for the earth.
Good for the earth.
If I didn't recycle I'd have to take it out to the trash. It's easier and better for the environment.
The right thing to do for the environment.
Good for environment.
Because it's the proper way, we're told that it will help the world.
Personal responsibility, taking care of the planet.
I think it's the convenient thing to do. I think it's good for the environment.
Save the earth.
Good for planet.
Good for the environment.
For the planet.
Protect the environment.
To keep the environment clean.
It's good for the planet.
I care about the environment.
Because it's better for the environment, to have less garbage.
Good for the environment.
Good for the environment.
The environment. Do our part.
Because it needs to be done for the environment.
It is good for the environment.
I guess we think it is good for the environment.
Environmental purposes.

QRB5. What are the reasons why your household participates in recycling at home?
Good for environment.
For the ability and because it is good for the environment and helps the landfills.
Good for environment.
Good for environment.
It's good for the environment.
Better for the environment.
To help the environment any way we can.
Extremely important. My recycle bin is fuller than garbage. Good for the environment.
I think it is best for the environment. It reduces the amount of space we use in our garbage bins.
For the planet.
Because I think it's important for the environment.
For the environment.
Good for the earth.
For the environment.
Helpful for the environment.
Got to keep the world clean. Two kids and the world has to be cleaner. We are dirty people in this world. Just being honest, sorry.
Help environment.
Was a teacher who taught it and always got it at school, and did it at home because we care about our earth.
Better for environment.
Good for earth.
Well, mainly our concern for our planet, and landfills are getting full. Protect the land.
For the environment.
Because we believe it's helpful to the environment and resources.
Fairly easy to do and common items. It's good for the environment.
It is good for the environment.
It's easy. Save environment.
Environment.
Environment.
Environment.
Because it's important for the environment.
To benefit the land.
Taking care of environment.
Good for the environment.
Environment.
For the environment and get discount on monthly charge on garbage.
Environmental reasons.
It makes sense. It is good for the environment.
I think it's great for the environment.
For the environment.
Important for the environment and right thing to do.
It is important for the environment and easy to do.
Went to School of Environmental Studies. Good for the environment.
Less trash. Good for the environment.
Better for environment.
It is the right thing to do for the environment, and things need to be reused, our landfills are overflowing.
Saving the earth.
We think it's better for environment.
Environment.

QRB5. What are the reasons why your household participates in recycling at home?
Good for environment.
Environment.
Concerned about the environment. Rather see things recycled than in landfills.
Good for the environment. It helps with renewing products.
Good for environment.
Environment.
Good for the environment, responsible kids.
Environmental health.
Save the earth.
Saving the environment.
Good for environment.
Environmental.
Good for the environment and helps keep the trash less full.
Save the environment.
To help the environment.
Because we want to help the environment.
We care about the environment.
Because you're supposed to, it's good for the environment.
Good for environment.
For the environment. Hopefully it works out.
Just the environment.
For environmental reasons. Resources.
Environment.
Environmental. Trying to be green.
It is good for the environment.
Good for planet.
It's best for the environment, the area, and the community.
For the environment. It has to go somewhere. It's the right thing to do.
Good for environment.
Good for the environment, keeps things organized.
It's better for environment.
Sake of the environment.
For the environment.
Keep the earth clean.
Convenient and helps the environment.
It's good for the economy and the environment.
To better the environment and we feel it's the right thing to do.
Because it helps the environment.
Like the idea of things being reused and protecting the environment.
Environment.
It's good for environment.
We need to better our environment.
Environment.
Environment.
Important for the environment and saves energy.
Because it's good for the environment.
I think it cuts down on pollution and it's better for the environment.
Environment.
Environment.

QRB5. What are the reasons why your household participates in recycling at home?
To help the environment.
For the environment and for generations growing up.
I feel that it's needed for the environment.
Because it's good for the environment and it produces less waste.
Environment.
We think it's important for the environment.
Help environment.
Because recycling is better for the environment.
It's important for environment.
Environment.
I have always recycled and it's important for environment.
To protect the earth and preserve it for my grandkids.
Environment.
The environment, cuts down on the other trash, and it's easy to do.
Very important for the environment.
To save the world.
Want environment to be better place.
For the environment.
Save the planet.
We believe it helps the environment. If we recycle and reuse, prices might even go down.
Environment.
The environment.
It is important for environment and it is easy to do. To be quite honest I would not do it if it weren't.
Better for the environment.
Because we believe in it wholeheartedly and it is good for society and necessary for the environment.
Help environment.
It is good for the environment and guilt.
Good for environment.
Helping out the environment as much as I can.
Hope it's the right thing for environment. Pay for own garbage truck so need something else to put stuff in. Good to reuse.
Better for the environment.
It is good for the environment.
To help the trash and to reduce trash.
So my trash can won't fill up.
Because it takes it out of the other garbage can.
That's the best way to reuse and decrease waste.
We take out less trash and it is just the right thing to do.
We're trying to do something to prevent waste.
Because it's less stuff in landfill, it's efficient, saves on producing garbage for landfills.
My garbage can will be too full. The county makes you do it.
To reduce waste in the environment, to provide recycling reuse.
To eliminate trash. It is a noble cause.
It helps cut down on the trash that needs to be taken care of and doesn't fill up the landfill.
We just don't want garbage.
Because if we didn't recycle the trash container would be too full.
Well, to save on garbage waste.
Cuts down on garbage, it is easy, and it makes me feel better.
Diminishes the amount of garbage we have.

QRB5. What are the reasons why your household participates in recycling at home?
Then it does not fill the garbage can or fill up the landfill.
Because I've got two kids in my family, if I didn't recycle, the garbage would be overflowing.
I just make them, there is no choice. It takes the burden off of the trash.
Keeps a lot of stuff from garbage.
Because it's important to reduce and to reduce landfill usage and to save materials.
They don't want the land to be filled with garbage.
I recycle because there is too much going into garbage.
Less garbage.
Trash cans fill up too quickly.
The biggest reason is that we don't have the space to put out the trash. And the next biggest reason is that the material can be reused.
Because we want to keep waste down.
Well, cuts down on garbage.
Less goes into the garbage.
Recycle because it takes away from garbage can.
Takes up less space in the garbage and easy to do.
Cuts down on trash.
Because I insist and because I will not tolerate a full garbage can in the house. My husband would not participate when it was just the little blue bucket because it just did not hold enough, but now that we have the bigger can he is all for it and of course we know that it is good for us.
To keep the earth free from garbage.
Don't want the trash to overrun.
I don't want it all going in the garbage - household or landfill.
Keep some of that stuff out of the trash.
I think it's important waste control.
Garbage fills up too fast otherwise.
A healthier way to live as well as it takes up less garbage space.
Garbage doesn't have to be taken out as often with recycling. It's green.
To reduce waste.
It cuts down on how much trash you have to put out.
Lower the garbage amount.
I don't know the exact reasons, just saves room in the garbage can.
Honoring the consumption that goes into the landfills by doing our part to eliminate created waste.
It's easier than throwing it out. Putting all that stuff in the landfill is a waste, rather than recycling it.
Cuts down amount of trash.
Run out of space in regular garbage bin.
We had trouble with our garbage being full, and not going to a landfill.
Firmly believe in it. Too much waste.
Important not to throw any trash away. Our trash can is hardly ever full.
Trash would be too full.
We think that it's good for economy. We have way too much waste. In general, population is way too much waste because some people don't recycle hardly at all.
It seems wasteful to throw everything in garbage when you can recycle.
Just so things can be reused, less waste, right thing to do.
Save on space in your garbage can.
To help control the garbage.
Save on garbage. It's a hobby for me.
Saves garbage space.
We have too much trash, people generate too much. We must decrease our impact on our planet. I'm a state advocate for national education on the issue. I believe all people should take responsibility on it.

QRB5. What are the reasons why your household participates in recycling at home?
Just reduces waste.
We have two small containers and it benefits you instead of filling trash bins.
Reduce garbage.
Because it reduces waste and it can contribute to reusing other items.
Main reason is because I go through a lot of garbage so having the recycling bin helps out.
Idea of not using the planet's resources and less to put in the garbage.
It piles up if we don't. Can't build landfills all over the place.
We personally choose to recycle. It reduces the amount of trash as well as we get a stipend from our trash provider. The more we recycle the more we get off of on our trash bill.
To reduce waste.
To reduce waste.
Cut down on landfills and garbage.
To reduce waste.
To reduce garbage.
Well, one thing is, there is so much garbage a family can make and we also have 2 compost piles as well. We are an organic farm and we recycle basically everything.
Smaller garbage bin, cut garbage in half.
We can use a smaller trash can.
To keep all the stuff out of landfills.
We're all trying to do a better job of keeping the landfills from filling up.
Because our landfills are getting full.
Cut down on landfills, it saves energy not making new products.
We don't want to fill up the landfills and the world is running out of resources.
To keep the landfills clean.
We feel we should not be filling landfills with garbage. We believe in recycling.
To keep it out of the landfill.
The less garbage I can put out in the dump. I would like to see them pick up garbage by the pound.
Because it's the right thing to do, don't want to fill up the landfills.
Items can be reused, and save landfill.
To reduce the amount of things in landfills.
Because we don't want to fill up the landfill and we want to reuse and recycle.
Just thinking it's better than filling up the landfill.
I just believe it's important to keep as much of the waste out of the landfill. We should recycle anything we can.
It's the thing to do because the landfills are filling up.
To keep the landfills from overloading.
Concern about the landfills and about reusing and recycling.
Because it's for everything to be recycled and not put in landfills.
We should be putting that paper type stuff in the trash not in landfills.
Cut down on the landfill. Recycle, reuse.
Because as I see it I have to, it's extremely important not to have more things go into the landfill.
Because it's a way to get rid of it without going into the landfill.
Because I love recycling and I don't want to have plastic sitting in landfills.
Keep the landfill down.
Don't want to fill landfills with trash for future generations.
To keep out of the landfill.
It is supposed to help the landfills and keep them from getting too full too fast and that is why I do it.
We want to minimize what we take to the landfill and be the best possible stewards of the environment.
Save landfills.
To help not fill the landfills up.

QRB5. What are the reasons why your household participates in recycling at home?
Cuts down on things going in dump. Some can be reused and recycled. I don't throw anything out that can be recycled.
Reduces amount of garbage in landfills and encouraged by our recycling hauler to use them.
It keeps the rubbish out of the garbage heaps.
Because I think it's good for the community landfills waste.
We've been teaching our youngsters to not have garbage landfills.
Keep products out of landfills.
Not to fill up the landfill. Why waste if I would use it again?
I'm paying for it. It doesn't contribute to the landfill.
It is important to keep stuff out of the landfill.
I think it helps out with landfill.
I am interested in trying not to put things in that are not supposed to be there; also the landfills are getting filled up.
Because I don't want it to go into landfills or garbage.
To reduce the amount of trash that goes into landfills. Non-reusable materials not healthy for environment.
It's good because it doesn't need to go in the landfill.
I think it's very important to keep things out of landfills.
So it can be reused and not put in a landfill. Opportunity for reuse.
It helps the landfill.
Just to not fill up landfills.
Because it needs to be done because our landfills are getting filled.
Better for our landfills.
We are kind of conscious about the landfills filling up.
Just to keep as much as we can out of landfills.
Filling the landfills.
Because I don't want to see things go into a landfill.
I don't like to throw everything in a landfill.
Why not save it from going into a landfill?
Keeps the landfill less full. Reuse those products.
We recycle so it doesn't fill the landfills.
Because we do not want to fill the landfills with too much stuff that does not need to go there.
So we do not fill up the landfills.
Because I feel it's important and worthwhile to cut back on landfill waste.
It does not belong in a landfill.
To keep products flowing and not fill up landfills. Reusable energy.
It keeps plastic out of the landfills.
So it doesn't go in the landfill, and save our resources.
Landfill overuse.
To keep it out of the landfill.
It keeps the stuff that does not decompose out of the landfill.
Reduce the landfills.
We have to recycle, it's a moral thing.
Because it is the right way thing to do and I want to contribute to doing the right thing. It is so easy to do. We have a mixed recycling bin so no excuse for not doing it.
Well, it's the right thing to do. Recycle if you can, so you don't fill up the landfills.
Because it is the right thing to do.
Because it make sense. Recycle the plastic to make other products. Too much energy, cost of fuel to make new when we can recycle.
It is the correct thing to do. I think recycling is important. We want to do all we can to help.
I think it's good. If you bury it, it doesn't do anybody any good.

QRB5. What are the reasons why your household participates in recycling at home?
Because it's a good thing to do.
I think it's important and too much trash gets thrown away.
Right thing to do and easy.
Because it's the best thing to do.
Because it's the right thing to do.
It is a good thing to do, the proper thing to do even if we get charged for it. But I wonder why should we have to pay extra for recycling?
It's important I think. I am not sure.
The best thing to do.
It's important because we all use so much paper and plastic, etc, and create so much waste, that we need to recycle whatever we can, so we do not use so many resources that go in the landfill, and we need to teach our kids to recycle.
It's a good thing to do. It's my civic duty.
Because it is a good thing to do.
Because it is good stewardship.
Believe in recycling.
I just believe in it.
Well, I think it is a great thing that they are doing. I am for recycling anything that can be recycled 100 percent. If too much waste, too much discarded, it doesn't dissolve.
It's the right thing to do. We don't fill the landfills.
We believe in it.
I think it's the right thing to do.
Because I know it's the right thing to do.
You ought to. No reason not to.
We feel it's important. We use the city. We do not have a hauler to pick up recycling.
Because it is the thing to do.
Because I want to do the right thing.
It's the right thing to do.
Because it's the responsible thing to do.
We need to do that. It's important to have it picked up.
I think that recycling is a good thing to be doing.
The right thing to do.
It's the right thing to do.
I simply believe in it. I know it makes sense, why not?
It's a good idea.
I think it's important to recycle. My family has recycled for 20-40 years.
Because it is the right thing to do.
Just because it's the thing to do.
Right thing to do.
Seems like the right thing to do.
It is the responsible thing to do.
I have a homemaker who feels it's very important. She takes care of it.
I think recycling is great and important.
It's important not to put everything in the dump.
The right thing to do.
Because it's the right thing to do.
Because we feel it's the right thing to do.
Because it's the right thing to do.
Because it is the right thing to do.
Follow the rules, good idea.

QRB5. What are the reasons why your household participates in recycling at home?
We just want to do our part.
Because it's the right thing to do.
Because it is the proper thing to do.
Thing to do.
Seems like a reasonable thing to do.
Because it's a good idea.
Everyone should recycle.
We think it's important.
Because I think it is important, and if it can be reused in some other form that's great.
We believe in it.
Right to do recycling, made easy.
It's the right thing to do.
Because it's easy and it's the right thing to do.
Right thing to do.
Right thing to do.
Because we feel it's very important.
It's the right thing to do.
Trying to do our part.
It's important. If we don't do it there will be all kinds of problems and health issues.
We feel it's important to do our part.
Just the right thing to do.
Because it's important.
The right thing to do.
Everyone else is doing it and it's a good thing.
It's the responsible thing to do.
To get rid of stuff and it's a good thing to do.
It is the responsible thing to do.
My son wants to participate. It should be done.
It's the right thing to do.
I just think it's a good thing do.
It is there and it is the right thing to do.
It's the right thing to do.
We have a toddler and we have so many plastic containers, that it's important for us.
It's the right thing to do, in this day and age.
It's the thing to do.
It's the right thing to do.
It's the right thing to do.
Makes sense to recycle.
Good idea, it's easy.
It is the thing to do.
Try to do our part. Don't want to litter.
I think it's necessary and good for people to do.
It feels good.
Good idea.
The thing to do and it's necessary.
It is just the right thing to do.
I think it is the right thing to do.
It is the right thing to do.
Right thing to do.

QRB5. What are the reasons why your household participates in recycling at home?
The thing to do.
We want to recycle.
We believe in it.
We think it's important.
Makes sense. It is good for the environment.
We think it's important.
I think it's important to recycle.
It is the right thing to do.
It's the thing to do and for environmental reasons.
We should.
I believe in it.
Because I have grandkids. I just want to be responsible.
The right thing to do.
It's the right thing to do. Have to save everything from going into the landfills.
It is the correct thing to do.
The right thing to do.
It's the right thing to do.
Recycling is important.
It's important to do.
Because it's a good idea.
The right thing to do.
I think it's everyone's responsibility to recycle.
Because it is easy to do and there are not many draw backs and it is just the right thing to do.
It's responsible. It's part of our job.
I don't know. I think it is responsible.
I believe in recycling.
That it's there and the right thing to do.
It is a good thing to do.
I love to do it. There should be no other reasons.
I just want to.
We want to do our part.
We believe it is a good thing.
You know we just always have. It just feels right.
Because it's the thing to do. I can't see all that stuff being thrown in landfills, plastic doesn't breakdown. I think that people who don't recycle should be fined.
We believe it's the right thing to do, it's our responsibility.
We own a recycling business and it's something we really believe in.
The right thing to do.
Because it's a very good thing to do.
It's important.
It's the right thing to be doing.
Because I think it's a good thing to do.
Good thing to do. Why not recycle? I wish I could have started earlier. Right thing to do, better for the environment, and make other products. Reduce carbon foot prints. It doesn't cost extra. Don't have to sort items, that is taken care of for us. Run out of space in regular garbage bin, save it from going into a landfill. Part of the garbage service. Personal responsibility.
Right thing to do.
Right thing to do.
It's the right thing to do.
It's the right thing to do.

QRB5. What are the reasons why your household participates in recycling at home?
Because plastic bottles never go away. Everyone should do it.
I think it is very important to do it and I recycle everything that I can.
Two kids in school so they're very adamant about recycling, cautious about going green.
Just because that's what we should do.
I believe it's a good cause.
It's the right thing to do.
Trying to be responsible and more green.
I just think it's a good idea. And it stops filling up our landfills.
The right thing to do and county makes it easy.
Right thing to do.
Just the ability, and morally correct.
It's important, responsible thing to do.
It's the right thing to do.
It's a good thing to do. Our landfill has too much junk, so items should be re used. It's a good way to take care of our trash.
It's environmentally acceptable.
Good idea.
Because it's a religious belief that we should be good stewards of what has been created for us.
It's the right thing to do for the future of our planet.
It's the right thing to do. It's not difficult.
Right thing to do, keeps stuff out of the landfills.
I have kids and teaching them how to be responsible.
Doing our part.
Right thing to do, less in landfills.
It's the right thing to do.
We think it is important when you can put items in the recycling bin that can be used to make other products.
Our duty to recycle and cuts back on garbage. No reason not to.
It's important because where is it going to go if not recycled? It can't all be in landfills.
Right thing to do. Saves garbage can from being too full.
Right thing to do for our city, town, and state. We do what we can not to damage the place with our junk and stuff.
Because it's a good thing to do to recycle. It's not difficult, it's not a laborious problem, it's just not a problem.
Because I think it's important. I want a green environment.
I think it's the right thing to do. Reduce waste.
Because it's the right thing to do.
We have to. It's important and you can reuse some things.
Because it's the right thing to do and it's not that hard.
Because it is important. It is necessary because our landfills are filling up and we have limited resources.
It's the right thing to do.
It's very important. I'm conscious of what I buy so I know I can recycle it.
We need to.
We feel this is important. It's simple that we can do.
Because we have to.
They say to do it.
Because we have to.
I'm told to.
Community guidelines say that you should recycle.
Because my wife makes us.
Because we feel we should and are obligated morally.
Because we're supposed to.

QRB5. What are the reasons why your household participates in recycling at home?
I do it because we're supposed to.
Because I have to.
Because they provide and tell us to do it.
It is required. We have an association.
Because we should.
I don't know, you're supposed to.
My dad wants me to.
We have to.
They ask me to.
I have to. I pay for it.
It's requested.
Because we're supposed to.
It's the law.
It's mandatory.
You're supposed to do it.
I just do it because someone told me to.
Because we have to.
Because in the community that we live in, it's mandated.
Supposed to do.
Because the county says we have to.
I'm asked to by my hauler.
I just believe that it is required.
Because the city requires it.
I think it's the law.
My wife makes me.
Because I'm supposed to.
Had to.
It's the law.
We're told to do it.
Because my mom made me.
We feel that we have to. The city is charging for that and giving me an extra garbage can.
Our city requires us to do it.
They tell me to.
Because we have to.
Well, because we need to recycle so we don't use raw material.
Just to save material. No need to waste them.
Conserve the natural resources.
To manage resources better.
Because we understand that resources are limited.
Because more resources are used, so we could reuse them.
It's reusing of resources.
To recycle what we can and for the future of our children.
Save planet for future generations.
I'm so worried about my grandchildren and it's polluting our planet. I'm recycling as much as possible.
Great future for my kids.
Because we have children and so we want the world to be clean and properly taken care of.
It's better for the future of my grandchildren.
To better the future of world and community.
Tell kids do it for the future.

QRB5. What are the reasons why your household participates in recycling at home?
I feel it's better to reuse the discarded material rather than it go to the burner.
Rather than throw away so it can be used again.
Because it makes sense to reuse things.
I don't want to throw out something useful and pollute the environment.
Because we reuse materials.
I think things are going to be reused, recycle.
To reuse material.
Reuse items.
Reuse material.
Important not to put garbage in recycle cans. Recycle for other use.
Because these items can be reused.
Because it can be reused, as simple as that.
It can be used for other things.
Material can be reused.
It's good to recycle and remain green.
Recycle, reduce, reuse.
It's available. So things don't get burnt but recycled/reused.
We have a lot of stuff that we throw out that can be reused and recycled.
Reuse as much as possible.
Reused materials and keep plastic bags for leaving.
Save the ecology. If it can be reused, let's use it.
It can be reused instead of being garbage.
To be reused and turned into other products.
Recycle and reuse everything.
Because we don't have to take it to a station.
Because of the ease of doing it.
I imagine it's easier to recycle then to do anything else with the stuff.
It's easy, not a big deal. It's a single sort.
Because it's convenient and easy.
It's smart and easy.
It is easy and convenient.
It is easy.
It's very convenient for us.
Because it's easy to do.
Because it is made easy.
It's easy.
Easy.
It's convenient.
It's just easier.
Convenient and well provided. Also it's for a good cause.
Convenient. Well our building is set up for recycling.
Just because it's convenient.
Convenient.
It's a big bin and easy and has wheels on it.
It's just really easy; we don't have to separate anything.
It's just as easy as throwing it in the garbage.
Attached bin right outside the door.
It's just easier to recycle.
It's a set up in our area and doing it is easy.

QRB5. What are the reasons why your household participates in recycling at home?
We're used to it.
Because my 96 yr old mother taught me to recycle at a very young age.
It's become a part of our routine.
It's something that she just does.
Programmed to do it. Lowers cost and only so many resources available, nice to reuse. And with oil going up, glass is more expensive if we need more plastic for it.
Always seen my parents do so.
We have done it from the beginning. It's just something we do.
It's just something we do.
We do it because we always did it. Our parents did it. It seems the right thing to do.
I've gotten so used to it over the years, and I save cans.
I've always recycled even before recycling came in.
Habit.
Because we're paying for it. It's now become a habit.
Because it's a value I had for 4o years.
Because we have become accustomed to.
We have always done it, even before it was required. We do it for the environment. We have brought up our children to do it. It is a good basic practice to do.
We grew up learning we should recycle.
We've been doing it forever. Thing to do.
That's the way I grew up. Cans and bottles and stuff don't break down and I don't want it sitting in the landfill.
Because my mom works in recycling and that's all we know.
Don't know, we just do it.
We just have for years.
It's something we do because it's available to us.
City gave us a dumpster we don't have to pay for, so I do it.
It's offered, so why not?
It is available.
Got the bins so why not use them.
They give you the option, and it can be done.
It's offered through our garbage pickup.
Because the service is there.
Our garbage pickup has recycling pick up.
Because it's there.
Recycling is available in community.
We live in a town house and it's part of fees paid.
Provided here in the area. Everyone gets a bin.
Because I live here. We pay for recycling.
Package deal with the city.
Why not? It's available.
Pay the bill anyways.
It is offered to us.
Because it's available.
It's available and doesn't cost extra.
Part of the trash service.
It doesn't cost extra. Don't have to sort items. That is taken care of for us.
Part of the garbage service.
The bin is there.
The bin is provided, it seems convenient. Not a lot of guilt like you are doing your part. Seems the right thing to do.
Well, convenience of having the container, and they pick it right up.

QRB5. What are the reasons why your household participates in recycling at home?
Because you should recycle. And, recycling is available.
Because it's free.
Because we pay for it.
Save the economy, ecology.
Ecological.
Ecology. Too much waste.
For ecology.
The eco-system. I don't want plastic in a landfill, no aluminum, nothing in a landfill that can't be rotted away.
Trying to be eco-friendly. Keep stuff out of landfill.
For the ecology.
For ecology reasons.
Cheaper than garbage.
It's good for the economy. We want the world to last.
It's better for economy.
Our economy.
Don't know.
It's good for the economy.
I do not participate at all because I am elderly and it is difficult for me to get around. I put everything in the trash.
I don't have recycling available at my home.
Don't know.
I don't know.
No real reason.
There is no reason.
Rebate on water bill.
I don't know.
There is no reason.
I don't know.
Expense, it saves us money.
Don't know.
Don't know.
I don't know.
Recycling is a tremendous savings.
Don't know.
Don't know.
I don't know.
Don't know.
Don't know.
I don't know.
We save a lot of money on trash.
I don't know.
To save on garbage.
Don't know.
I don't know.
I don't know.
I don't know.
I don't know.
No reason.
Don't know.
I don't know.

QRB5. What are the reasons why your household participates in recycling at home?
Don't know.
Don't know.
I'm not entirely sure.
I don't have any reason.
Because recycling is free and garbage is very expensive.
Because God gave us everything and God gave us the things we have so recycling is a wise use of the things that God has given us.
Because it seems wasteful not to.
I think one person throws away one thing, another person throws away two things, pretty soon everything is polluted.
We do not want to cause any more pollution.
Because that's what we should all be doing.
The lady the first time spoke too fast in order for me to get the proper information on how or where to go to get a container.
To be a good citizen.
Stop waste.
I want to get rid of stuff and don't want storage.
We don't recycle with the bins because we don't believe in it. I do take some items to recycle on my own.
What else would I do with it?
To be an effective member of humanity and not be wasteful. To be a part of the solution, not the problem.
My son is very adamant about recycling.
To get rid of the trash.
My dad works for the zoo and my mom is Canadian. We don't want to leave a big footprint on the planet earth.
Metal nails, etc, I put in a special bin to take to a special place.
They should have more recycling businesses. Don't like to see things go to waste.
I didn't want the garbage around.
No space.
No reason not to.
Just joined the club to do better.
The trash company separates it for us, so why should I help do their job?
To get rid of the things.
We should recycle everything at home.
It is something that we get to do together and a proper way to dispose of things.
We didn't at first, but my daughter made such a big deal about it when she was in elementary school so we started and have been doing it ever since. Me, a science teacher, was not very interested in recycling back then.
Good to know you are doing something.
Because I'm trying to be a good person.
Helps the air to be clean.
We live in a high rise. We all recycle here.
Because I need to get rid of it.
Get rid of garbage.
Because that's what our town does.
I'm worried about global warming.
It's culture.
Because I care.
Because I want to get rid of the stuff.
Because we thought about it in 1970's.
Get rid of. No, that's all.
Good for us.
To get rid of it.

QRB5. What are the reasons why your household participates in recycling at home?
So it's not so wasteful.
It's something to do.
We do compost. We recycle everything we can.
Because we want to reduce carbon raw material.
We got too much recyclables.
Just because we can.
I was an environmental for 15 yrs.
The rule.
To get everything clean in household and yard.
The only way to get rid of things.
Good for the community. Helps keep rodents away.
I worry about prescription medicine and left over paint with oil. I left the paint out for the garbage or the recycling people to take but they left it and I called to find out where to take and they told me where but I don't have a car so I would like to know what can be done when you don't have a car to take these items.
Respect for our country.
Well, I don't want it lying around.
If it wasn't for the pickup I probably wouldn't recycle.
Recycling is good for the community.
I think everything that can be recycled should be recycled. I burn most stuff.
Good to recycle for community.
I am in green construction so I have been well educated and I would like to see more composting.
Because we use so many paper products.
We have children and they learn about it.
Because I need extra garbage can.
Get rid of everything.
I just think it's dumb not to. I think everyone or everything now should be recycled. I think they should have a compost program.
I don't want to be bothered with it.
Just to be green, no reason to not do it.
For a better life.
Actually, I really don't feel that it is effective and somewhat of a waste of time. I reluctantly participate barely.
My parents' decision.
Wife said better to recycle.
Don't want to live in a pile of garbage.
My wife is an adamant recycler.
My husband is eco-friendly and it's important to him.
Just something to do.
We want to.
It is important for the community.
Disposes trash or recycles items.
Everybody else does it.
It's all over around you.
We're just educated about it.
My husband is a hippy.
No reason not to recycle.
We like helping the community.
Mother works for the state of Minnesota.
Just so we can contribute more to the land.
To get rid of it.

APPENDIX B: SURVEY INSTRUMENT

Solid Waste Management Coordinating Board: Minnesota

Residential Recycling Study

INTRO1. Hello, my name is _____ and I'm calling on behalf of Rethink Recycling. We are not selling anything. I would like to talk with you about your household's garbage and recycling practices. This interview should take about 10 minutes to complete.

INTRO2. Are you at least 18 years of age?

1. YES [►IF LANDLINE SKIP TO QQ1; IF CELL SKIP TO INTRO4]
2. NO [►ASK FOR HOUSEHOLD MEMBER AT LEAST 18 YEARS OF AGE; REPEAT INTRO1]

[►IF NO ONE AT LEAST 18 IS AVAILABLE, GO TO INTRO3]

INTRO3. Okay, thank you. When would be a better time to reach an adult?

[FOR CELL PHONE SAMPLE RECORDS READ INTRO4, INTRO5a AND INTRO5b]

INTRO4. This sounds like a cell phone. Are you in a place where you can safely talk on your cell phone? **[IF NO, ASK FOR A BETTER TIME TO CALL BACK]**

INTRO5a. Do you use this phone only for business calls?

1. NO
2. YES **[TERMINATE]**
8. DON'T KNOW **[TERMINATE]**
9. REFUSED **[TERMINATE]**

INTRO5b. Do you get personal calls on a landline as well as this cell phone or do you get all of your calls on this cell phone?

1. GET CALLS ON LANDLINE AND THIS CELL PHONE
2. GET CALLS ON THIS CELL PHONE ONLY
8. DON'T KNOW
9. REFUSED

QQ1. I need to verify that you live within our study area. Can you tell me, in what county do you live?

1. ANOKA
2. CARVER
3. DAKOTA
4. HENNEPIN
5. RAMSEY
6. WASHINGTON

[SKIP TO QQ2]

7. NOT ON LIST
8. DON'T KNOW
9. REFUSE

[IF QQ1=7, 8 OR 9ASK]

QQ1a. Can you tell me, in what city do you live?

1. CITY IS ON LIST
8. CITY NOT ON LIST **[TERMINATE]**
9. REFUSE **[TERMINATE]**

QQ1b. COUNTY CODE

QQ2. Do you live in a single-family home, a duplex or triplex, a townhouse, or an apartment or condominium?

1. Single family home
2. Duplex/Triplex/4-plex
3. Townhouse
4. Apartment/Condominium
5. OTHER **[TERMINATE]**
8. DON'T KNOW **[TERMINATE]**
9. REFUSE **[TERMINATE]**

[IF QQ2=3 or 4 ASK]

QQ2_1. Are there four or fewer units in your building?

1. YES
2. NO **[TERMINATE]**
8. DON'T KNOW **[TERMINATE]**
9. REFUSE **[TERMINATE]**

INTRO6. Thank you. We will not ask for your name or any other personal information that can identify you. The answers you give will be kept strictly confidential. You do not have to answer any questions you do not want to and you may stop the interview at any time. Results from this study will be used to improve recycling programs in your area.

Attitudes & Beliefs: Recycling

TRA. I would like to start by asking you a few questions about your beliefs about the curbside recycling program in your community. By recycling, I mean placing items in your recycling bin and then placing the bin at the curb for pick-up.

QRA1. Using a scale from 0 to 10, where 0 equals not at all important and 10 equals extremely important, how important do you think it is for your household to participate in curbside recycling?

0 - - - 1 - - - 2 - - - 3 - - - 4 - - - 5 - - - 6 - - - 7 - - - 8 - - - 9 - - - 10 - - - 98 DK - - 99 REF

QRA2. Using a scale from 0 to 10, where 0 equals not at all difficult, and 10 equals extremely difficult, how difficult is it for your household to participate in curbside recycling?

0 - - - 1 - - - 2 - - - 3 - - - 4 - - - 5 - - - 6 - - - 7 - - - 8 - - - 9 - - - 10 - - - 98 DK - - 99 REF

Recycling Behaviors

QRBEH1. Sometimes people are not sure whether a particular item should be recycled or tossed into the garbage. I would like to ask you about some of these items. Please tell me if you place the item MOST

OFTEN in the garbage bin or the recycling bin. If the item is disposed of in another way or if you do not use the item, please say so.

[RANDOMIZE a-i]

	Garbage Bin	Recycling Bin	Other [specify]	Don't Use Item	DK/REF
a. Plastic beverage bottles, such as for soda or water	☐	☐	☐	☐	☐
QRBEH1a_oth. SPECIFY OTHER					
b. Brown paper bags	☐	☐	☐	☐	☐
QRBEH1b_oth. SPECIFY OTHER					
c. Cartons used for milk or juice	☐	☐	☐	☐	☐
QRBEH1c_oth. SPECIFY OTHER					
e. Mail, including envelopes with windows and junk mail	☐	☐	☐	☐	☐
QRBEH1e_oth. SPECIFY OTHER					
f. Tissue and napkins	☐	☐	☐	☐	☐
QRBEH1f_oth. SPECIFY OTHER					
g. Cereal or cracker boxes	☐	☐	☐	☐	☐
QRBEH1g_oth. SPECIFY OTHER					

Barriers & Benefits: Recycling

TRB. Now I would like to ask you a few questions about recycling in your community.

QRB1. How often does your waste hauler pick up recycling, weekly or every other week?

1. WEEKLY
2. EVERY OTHER WEEK
3. I DON'T HAVE CURBSIDE RECYCLING
4. OTHER **[SPECIFY]**
8. DON'T KNOW
9. REFUSE

QRB1_oth. SPECIFY OTHER

QRB2. Think back to the last 4 times your household could have put out the curbside recycling bin to be picked up. Out of those 4 times, how many times did your household put out your recycling bin?

1. 4
2. 3
3. 2
4. 1
5. 0
8. DON'T KNOW
9. REFUSE

[IF QRB2=1 SKIP TO QRB3]

QRB2a. For the times your household did not put out the curbside recycling bin for pick up, what was the reason?

1. RECORD VERBATIM RESPONSE
9. REFUSE

QRB3. What do you do with your recyclable items if your curbside recycling bin is full?

1. THIS HAS NEVER HAPPENED
2. THROW IT IN THE GARBAGE
3. SAVE IT UNTIL THE NEXT PICK UP
4. USE THE NEIGHBOR'S BIN
5. OTHER **[SPECIFY]**
8. DON'T KNOW
9. REFUSE

QRB3_oth. SPECIFY OTHER

QRB4. Next, I'm going to read a series of statements. Using a scale from 0 to 10, where 0 equals not a reason and 10 equals a big reason, please tell me if the statement is a reason that keeps you from recycling everything you can.

[RANDOMIZE a-l]

How much of a reason is:	**Not a Reason**										**A Big Reason**	**REF**
c. I don't know what can be recycled in my area.	0	1	2	3	4	5	6	7	8	9	10	99
f. In cold weather, I don't want to take multiple bins out to be picked up by my hauler.	0	1	2	3	4	5	6	7	8	9	10	99
h. I don't want to recycle oily or greasy plastic containers.	0	1	2	3	4	5	6	7	8	9	10	99
j. I'm concerned about recycling anything with my address or personal information on it.	0	1	2	3	4	5	6	7	8	9	10	99
k. My recycling isn't picked up often enough.	0	1	2	3	4	5	6	7	8	9	10	99

QRB5. What are the reasons why your household participates in recycling at home?

1. RECORD VERBATIM RESPONSE
9. REFUSE

Organics Recycling

TOR. Now I would like to ask you a few questions about how your household thinks about different types of recycling.

QOR2. If you saw a bin labeled, "Organics Recycling," what do you think should go in that bin?

[SELECT ALL THE ANSWERS THAT THEY SAY]

1. FOOD SCRAPS
2. FOOD-SOILED PAPER
3. YARD WASTE
4. ORGANIC FOOD
5. OTHER **[SPECIFY]**
8. DON'T KNOW
9. REFUSE

QOR2_oth. SPECIFY OTHER

TSOR. Many communities in the Twin Cities region are either starting or considering implementing a recycling program for household food scraps and food-soiled paper that may or may not require additional fees. By food scraps, I mean items such as leftovers from meal preparation or uneaten food after a meal. By food-soiled paper, I mean items such as paper cups, paper plates, and pizza boxes. The collected material will be composted in order to reduce the amount of waste that goes to the landfill.

QOR3. Where do you currently place most of your household food scraps?

1. CURBSIDE ORGANICS/FOOD SCRAP RECYCLING BIN - FROM WASTE HAULER
2. IN THE GARBAGE DISPOSAL
3. GARBAGE BIN
4. COMPOST PILE IN BACKYARD
5. COMPOST PILE NOT AT HOME **[SPECIFY WHERE]**
6. WORM BIN
7. OTHER **[SPECIFY]**
8. DON'T KNOW
9. REFUSE

QOR3_where. SPECIFY WHERE

QOR3_oth. SPECIFY OTHER

[IF QOR3=1 SKIP TO QHOR1, ELSE CONTINUE]

QOR4. On a scale from 0 to 10, where 0 equals not at all important and 10 equals very important, how important do you think it would be to collect your household's food scraps for this type of program?

0 - - - 1 - - - 2 - - - 3 - - - 4 - - - 5 - - - 6 - - - 7 - - - 8 - - - 9 - - - 10 - - - 98 DK - - 99 REF

QOR5. On a scale from 0 to 10, where 0 equals not at all difficult and 10 equals very difficult, how difficult would it be for your household to collect food scraps for this type of program?

0 - - - 1 - - - 2 - - - 3 - - - 4 - - - 5 - - - 6 - - - 7 - - - 8 - - - 9 - - - 10 - - - 98 DK - - 99 REF

QOR6. On a scale from 0 to 10 where 0 equals not at all likely and 10 equals very likely, if your community were to start a food scrap collection program, how likely is it that your household would participate?

0 - - - 1 - - - 2 - - - 3 - - - 4 - - - 5 - - - 6 - - - 7 - - - 8 - - - 9 - - - 10 - - - 98 DK - - 99 REF

QOR7. Next, I'm going to read a series of statements. Please tell me how much each statement is a reason why your household might not participate in curbside food scrap and food-soiled paper recycling. Please use a scale from 0 to 10, where 0 equals not a reason and 10 equals a big reason.

[RANDOMIZE a-f]

How much of a reason is:	**Not a Reason**										**A Big Reason**	**REF**
a. I don't have enough space to collect food scraps in my kitchen.	0	1	2	3	4	5	6	7	8	9	10	99
b. I don't want to pay any more fees.	0	1	2	3	4	5	6	7	8	9	10	99
c. I don't want a third curbside bin.	0	1	2	3	4	5	6	7	8	9	10	99
d. Participating in the program will be too time consuming.	0	1	2	3	4	5	6	7	8	9	10	99
e. It's too smelly to collect food scraps in my kitchen.	0	1	2	3	4	5	6	7	8	9	10	99
f. Collecting food scraps in my kitchen will attract pests and insects.	0	1	2	3	4	5	6	7	8	9	10	99

[SKIP TO TD]

QHOR1. On a scale from 0 to 10, where 0 equals not at all important and 10 equals very important, how important do you think it is for your household to participate in curbside organics recycling?

0 - - - 1 - - - 2 - - - 3 - - - 4 - - - 5 - - - 6 - - - 7 - - - 8 - - - 9 - - - 10 - - - 98 DK - - 99 REF

QHOR2. On a scale from 0 to 10, where 0 equals not at all difficult and 10 equals very difficult, how difficult do you think it is it for your household to participate in curbside organics recycling?

0 - - - 1 - - - 2 - - - 3 - - - 4 - - - 5 - - - 6 - - - 7 - - - 8 - - - 9 - - - 10 - - - 98 DK - - 99 REF

QHOR3. Next, I'm going to read a series of statements. For each statement, please tell me if it explains why members of your household may not place all organic recyclable items in the curbside organic recycling bin. Please use a scale from 0 to 10, where 0 equals not a reason and 10 equals a big reason.

[RANDOMIZE a-d]

How much of a reason is:	**Not a Reason**										**A Big Reason**	**REF**
a. I don't have enough space to collect food scraps in my kitchen.	0	1	2	3	4	5	6	7	8	9	10	99
b. Participating in the program is too time consuming.	0	1	2	3	4	5	6	7	8	9	10	99
c. It's too smelly to collect food scraps in my kitchen.	0	1	2	3	4	5	6	7	8	9	10	99
d. Collecting food scraps in my kitchen attracts pests and insects.	0	1	2	3	4	5	6	7	8	9	10	99

Demographic Variables

TD. We are almost done. I have a few more questions for classification purposes.

QD1. In what year were you born?

1. RECORD 4-DIGIT YEAR
9999. REFUSE

QD2. What is the highest grade or year of school you have completed?

1. SOME HIGH SCHOOL
2. HIGH SCHOOL GRADUATE OR GED
3. SOME COLLEGE, INCLUDE 2-YR DEGREE
4. BACHELOR'S DEGREE
5. GRADUATE DEGREE
6. OTHER **[SPECIFY]**
9. REFUSE

QD2_oth. SPECIFY OTHER

QD3. Including yourself, how many people live in your household?

1. RECORD ANSWER VERBATIM
9. REFUSE

IF QD3=1 SKIP TO QD6

QD4. Of those, how many are children under 18?

1. RECORD ANSWER VERBATIM
9. REFUSE

IF QD4=0 SKIP TO QD6

QD5. Of those, how many are children under 5?

1. RECORD ANSWER VERBATIM
9. REFUSE

QD6. Do you own or rent your home?

1. OWN
2. RENT
8. DON'T KNOW
9. REFUSED

QD7. Are you currently…?

1. Employed full-time
2. Employed part-time
3. A full-time student
4. A part-time student who also works part-time
5. A full-time homemaker
6. Not currently employed
7. Retired
9. REFUSED

QD8. What race do you consider yourself to be?

[CHOOSE ALL THAT APPLY]

1. White
2. Black or African American
3. Hispanic or Latino
4. American Indian or Alaskan Native
5. Asian
6. Pacific Islander
7. OTHER **[SPECIFY]**
8. DON'T KNOW
9. REFUSED

QD8_oth. SPECIFY OTHER

QD9. Is there a language other than English spoken in your home?

1. YES
2. NO
8. DON'T KNOW
9. REFUSED

ASK IF QD9=1

QD9a. What language would that be?

1. RECORD ANSWER VERBATIM
9. REFUSE

CLOSE. Thank you very much for your time and participation.

IC1. INTERVIEWER RECORD GENDER

1. MALE
2. FEMALE