



ESTIMATING QUANTITIES AND TYPES OF FOOD WASTE AT THE CITY LEVEL: TECHNICAL APPENDICES

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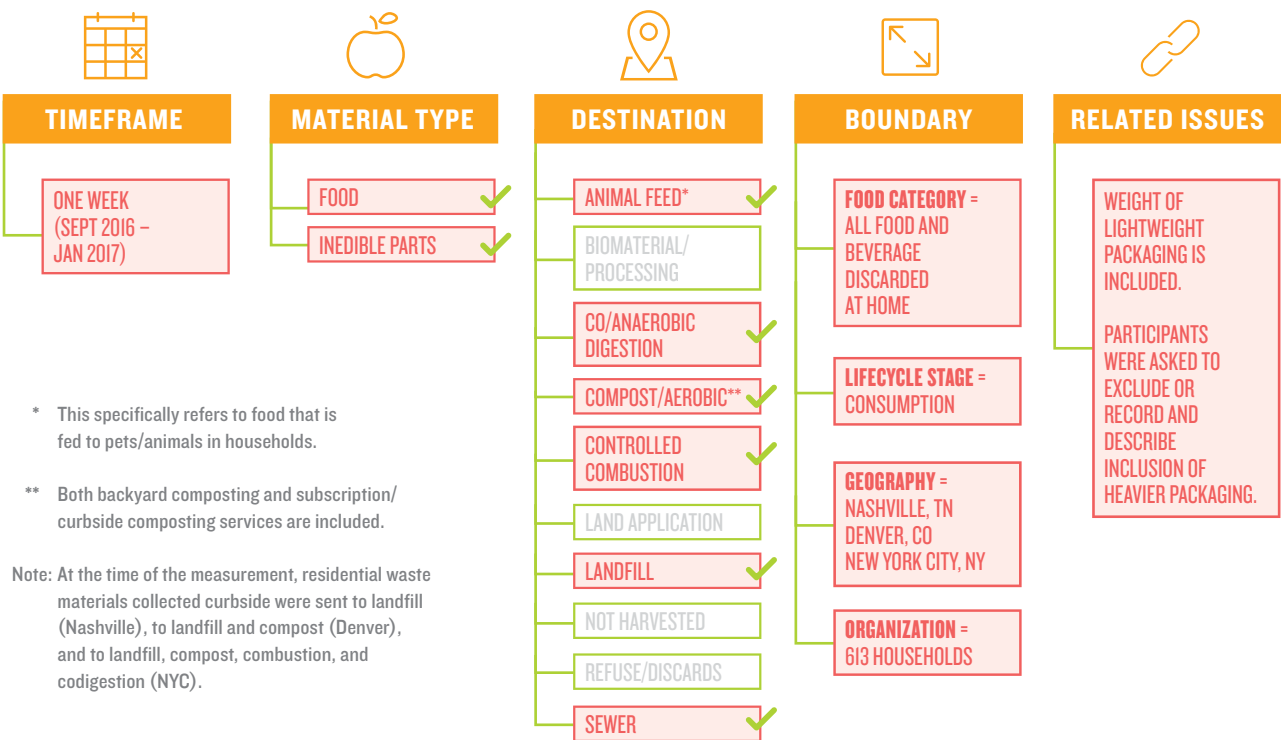
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These appendices provide more information on the methodology, research, and templates associated with the report *Estimating Quantities and Types of Food Waste at the City Level*, available at <https://www.nrdc.org/resources/food-matters-what-we-waste-and-how-we-can-expand-amount-food-we-rescue>.

Appendix A: Conformance with Food Loss and Waste Standard—Residential

The Food Loss and Waste Accounting and Reporting Standard (FLW Standard¹) provides a framework for accounting for and reporting on food loss and waste. The graphic below describes the scope of the residential assessment using the FLW Standard.

BASELINE FOOD WASTE ASSESSMENT: RESIDENTIAL (FOOD LOSS AND WASTE ACCOUNTING AND REPORTING STANDARD)



REQUIREMENT 1: BASE FLW ACCOUNTING AND REPORTING ON THE PRINCIPLES OF RELEVANCE, COMPLETENESS, CONSISTENCY, TRANSPARENCY, AND ACCURACY

A. Relevance:

- Characterize wasted food in households by type, weight, edibility, loss reason, and discard destination
- Explore food waste-related behaviors to better understand how they relate to the amount of food wasted by households and to identify potential interventions (e.g. behavior education campaigns)
- Contribute to a working model for other cities to perform similar assessments

¹ Food Loss and Waste Accounting and Reporting Standard, <http://flwprotocol.org> (accessed October 16, 2017).

B. Completeness: A total of 613 households in three cities tracked all food and beverage discarded to all destinations (including trash, home compost, curbside compost, drain disposal, feeding to pets) for one week using a kitchen diary. Additional data were derived from surveys and bin digs.

C. Consistency: Methodologies and templates used for tracking and analyzing data were identical across study cities (except for variations as noted in the detailed methodology below).

D. Transparency: Methodology, including assumptions and definitions, is available in this report (with additional details available upon request).

E. Accuracy: Analyses and calculations have been tested and verified; some accuracy of primary data cannot be assured due to inconsistencies in individual study participant tracking.

REQUIREMENT 2: ACCOUNT FOR AND REPORT THE PHYSICAL AMOUNT OF FLW EXPRESSED AS WEIGHT

Reported in pounds

REQUIREMENT 3: DEFINE AND REPORT SCOPE

A. Timeframe: The kitchen diary and bin digs account for one week (seven days) of residential waste.

Nashville: The field research took place during September/October 2016 in metropolitan Nashville, TN, including Antioch, TN. Participants were asked to start their kitchen diary on the day after their trash collection day and conclude on the following trash collection day. Start dates ranged from September 27 to 30, 2016. Two bin digs were completed for a subset of participating households. The first bin dig was the week prior to the kitchen diary and the second bin dig was the same trash collection day that the kitchen diary was completed.

Denver: The field research took place during November 2016 in Denver, Colorado. Participants were asked to start their kitchen diary on the day after their trash collection day and conclude on the following trash collection day. One bin dig was completed for a subset of participating households. The bin dig collection was timed to take place the morning after the day that the kitchen diary was completed.

NYC: The field research took place during January/February 2017 in New York City (including all boroughs except Staten Island). Participants were asked to start their kitchen diary on a given day (varied by household) and conclude after one week of recording. One bin dig was completed for a subset of participating households. In NYC, single family households and small multi-family buildings have trash collected two to three times per week. In Survey 1, participants were asked which day of the week they most frequently set out their trash. Trash was collected from the randomly selected households on the day indicated on Survey 1 to increase the likelihood of collecting a sample during the week of their kitchen diary. The bin dig results were then scaled appropriately to represent one week's worth of trash. Large multi-family buildings do not have a set schedule for trash collection by unit; instead, residents place trash down a chute or into a shared bin. For these buildings, arrangements were made with the building manager to collect trash samples from the compactor room. (See methodology in Requirement 4 for more details.)

Material Type: All food items included in both the kitchen diary and bin digs were given classifications related to edibility. Participants were asked to report both food and beverage items that were discarded. The primary classification first splits all items into “edible food” and “inedible parts” (the primary classification aligns with the definitions of “food” and “inedible parts” used in the FLW Standard). “Edible food” refers to any substance intended for human consumption (compatible with the definition of “food” in the FLW Standard). “Edible” does not reflect the state of food at any particular point in time (such as purchase or disposal), but is used to describe an item that would have been considered edible at some point. “Inedible parts” refers to components of food which are not typically consumed in the United States (e.g. banana peels) and/or for which significant skill or effort would be required to render this part of food “edible” (e.g. citrus rinds). (This definition is compatible with the definition of “inedible parts” in the FLW Standard.)

The secondary classification seeks to capture the complexity of defining edibility, especially in terms of culture and preference. Accordingly, items considered “edible food” were split into two groups: 1) Typically Edible and 2) Questionably Edible.

Typically Edible: These items are intended for human consumption and are not generally considered inedible. Examples include pizza, liquid coffee, and bananas without the peel.

Questionably Edible: These items can be safely eaten, but may not be considered edible by a portion of the population due to culture or preference. These items might also require additional processing/cooking to make them desirable to eat. Examples include potato peels, beet greens, kale stems, carrot peels/tops, and apple cores/peels.

TWO LEVELS OF CLASSIFICATION OF DISCARDED FOOD BASED ON “EDIBILITY”



See Appendix D for comprehensive lists of materials identified in the kitchen diaries and bin digs that were considered “inedible parts,” “questionably edible,” and “typically edible.”

For the bin digs, materials were sorted into ten food waste categories, one for inedible parts (using the definition of “inedible parts” described above), eight categories subcategorizing edible food, and one category for unidentifiable food waste. All kitchen diary entries were also coded to match the bin dig categories for comparison.

- 1. Inedible Parts:** Items not intended for human consumption (small amount of edible material associated with the inedible material were permitted to be included).
- 2. Edible – Meat & Fish:** Uncooked or cooked meat (with mostly edible components) unmixed with other types of food. Examples include beef, pork, and fish.
- 3. Edible – Dairy & Eggs:** Solid dairy or egg products unmixed with other food types or in original form. Examples include milk, cheese, butter, and eggs.
- 4. Edible – Fruits & Vegetables:** Solid uncooked or cooked vegetables and fruits (with mostly edible components) unmixed with other types of food. Examples include apples, lettuce, and fresh herbs.
- 5. Edible – Baked Goods:** Baked goods and bread-like products unmixed with other food types or in original form, including pastries. Examples include bread, cake, and tortillas.
- 6. Edible – Dry Foods:** Cooked or uncooked grains, pastas, legumes, nuts, or cereals unmixed with other food types or in original form. Examples include flour, nuts, lentils, and cereal.
- 7. Edible – Snacks, Condiments, & Others:** Includes confections, processed snacks, condiments, and other miscellaneous items. Examples include candy, chips, and sauces.
- 8. Edible – Liquids/Oils/Grease:** Items that are liquid, including beverages. Examples include cooking oil, liquid coffee, and soda.
- 9. Edible – Cooked/Prepared Items/Leftovers:** Items that have many food types mixed together as part of cooking or preparation. Examples include lasagna, burritos, falafel, stir-fry, sandwiches, and pizza.
- 10. Unidentifiable:** Used only if necessary

Additionally, waste that was not food was sorted into the following categories:

1. Food-Soiled Paper;
2. Yard Trimmings;
3. Glass;
4. Recyclable Paper and Cardboard (not food-soiled);
5. Metals;
6. Rigid Plastics;
7. Plastic Films and Composites; and
8. All Other Materials.

While categorization of these materials was not the focus of the waste audit, collecting this additional information on wastage rates of commonly recyclable and other materials provides additional context and data on the types of materials found in the waste overall.

C. Discard Destinations:

Nashville: At the time of the study, Nashville’s trash only went to landfill, not incinerators or other alternative destinations. For bin digs, the only discard destination included was landfills. For kitchen diaries, the following discard destinations were included:

- Landfill (curbside trash collection)
- Home Compost or Subscription Compost Collection (curbside organics collection not available in Nashville; respondents did not distinguish which type of compost)
- Feeding Animals/Pets
- Drain Disposal

Denver: At the time of the study, Denver’s trash only went to landfill, not incinerators or other alternative destinations. Material collected in the curbside organics collection program was composted. For bin digs, the only discard destinations included were landfills (and some curbside compost). For kitchen diaries, the following discard destinations were included:

- Landfill (curbside trash collection)
- Home Compost
- Curbside Compost Collection
- Feeding Animals/Pets
- Drain Disposal

NYC: At the time of the study, New York City’s trash primarily went to landfill, with a small portion (approximately 15%) sent to incinerators. Material collected in the curbside organics collection program was composted or anaerobically digested/co-digested. For bin digs, the only discard destinations included were landfills (including a portion to incineration) and some curbside compost (including a portion to co/anaerobic digestion). For kitchen diaries, the following discard destinations were included:

- Landfill (majority of curbside trash collection)
- Home Compost
- Curbside Compost Collection
- Compost Drop-off
- Feeding Animals/Pets
- Drain Disposal
- *Controlled Combustion (not distinguished by respondent from landfill; represents destination of a portion of NYC’s trash)*
- *Co/Anaerobic Digestion (not distinguished by respondent from curbside compost; represents destination of a portion of NYC’s curbside compost)*

D. Boundary:

1. **Food category:** All food and beverage items discarded in households were included in the study. Participants were asked to qualitatively track how much food they discarded outside of their household, but that information was not integrated into the quantitative analysis of household-level wasted food.
2. **Lifecycle stage:** Consumption
3. **Geography:** Metropolitan Nashville, TN (including Antioch, TN); Denver, CO; New York City, NY (including all boroughs except Staten Island)

4. **Organization:** 613 households total

Nashville: 68 households completed the kitchen diaries. 51 of those households had their trash collected for bin digs.

Denver: 198 households completed the kitchen diaries. 51 of those households had their trash collected for bin digs, another 14 had their trash and compost collected, and one had only its compost collected.

NYC: 347 households completed the kitchen diaries. 94 of those households had their trash collected for bin digs, another 10 had their trash and compost collected, and 5 had only their compost collected.

E. Related Issues – Packaging: While kitchen diary participants were encouraged to use provided containers (tared) to weigh wasted food, some participants weighed food in other packaging. For the kitchen diaries and bin digs, lightweight packaging (such as plastic film) was included in the weight of the food materials, since it generally weighs very little compared with the food material. Heavier packaging materials (e.g. metal and glass) were removed from the food material for bin digs. For kitchen diaries, participants were asked to either remove food from heavy packaging, or to weigh the food in the heavy packaging but also describe the packaging material so it could be excluded later by researchers from the weight of the food material. However, a majority of respondents indicating the presence of heavier packaging did not provide size or other detailed information on the packaging, so we were unable to accurately remove the weight of packaging from weights tracked in the kitchen diaries. As a result, a small amount of packaging is included in the kitchen diary estimates.

REQUIREMENTS 4 AND 5: DESCRIBE THE QUANTIFICATION AND SAMPLING METHODS

Recruitment: In all cities, participants who signed up for the study received a free digital kitchen scale. Participants who completed the kitchen diary and surveys were given a \$50 gift card.

Nashville: There were two basic recruitment methods used in Nashville:

1. *Random Sampling:* From a list of all households receiving trash collection service from Metro Nashville, 300 households were randomly selected. The 300 households received post cards with information on the study and an online link to participate. Many of those households were also visited in-person by the field team.
2. *Convenience Sampling:* Using social media and email lists, information on how to participate in the study was publicized and participants could self-select to participate in the study.

It should be noted that participants who opted in to the study via the convenience sampling method were more likely to complete the kitchen diaries and surveys than those recruited via random sampling, likely resulting in a bias towards people already concerned and informed about the issue.

In total, 115 households in Nashville were recruited and 68 of them completed the kitchen diary as well as the surveys.

Denver: In total, 1,000 households were selected from a list of all households in Denver receiving trash collection services and each of those households received a postcard with information about the study and an online link to participate. 200 households were selected per trash collection day (five days a week). Additionally, 120 of the 1,000 households selected were subscribed to curbside organics collection. The 1,000 households were selected by randomly selecting an initial list of 50 households per trash collection day. To increase the ease of recruitment, households adjacent to the initial selected households were included until 200 households were selected per day.

Households opted into the study using the following:

1. *Postcard:* Some (under 50) of the original 1,000 households that received postcards opted into the study using the link provided.
2. *Door-to-Door Recruitment:* Households that received postcards were visited by door-to-door recruiters to solicit participation. Additionally, recruiters also visited surrounding households (within a block's radius of the initially selected household) to recruit other households. Recruitment was opened up to surrounding residents to increase participation and reduce burden of traveling on the recruitment team.

In total, 350 households in Denver were recruited and 198 of them completed the kitchen diary as well as the surveys.

NYC: Two techniques were used to recruit participating households, one for households in large multi-family buildings (10 or more units), and one for single-family households and small multi-family buildings (9 units or fewer). Different recruitment techniques were used owing to the difficulty of accessing the front doors of households in large multi-family buildings without permission for door-to-door recruitment.

1. *Single-Family and Small Multi-Family Buildings (9 units or fewer):* These types of households were assumed to have front doors accessible to recruiters without previous permission; thus, door-to-door recruitment techniques were used. In Brooklyn, Queens, and the Bronx, census tracts with at least 50% of households in that tract being single-family or small multi-family buildings were identified. From these selected census tracts, a total of 26 census tracts were randomly selected in Brooklyn, Queens and the Bronx for recruitment. In Brooklyn and Queens, 12 census tracts were chosen in each borough (3 with curbside compost collection and 9 without). In the Bronx, 2 census tracts without curbside compost collection were chosen. Recruiters went door-to-door in the census tracts for recruitment.
2. *Large Multi-Family Buildings (10 or more units):* These types of households were assumed to have front doors that were not easily accessible to our recruitment team. To recruit these households, homeowners' associations and building managers were contacted to grant permission to post information on the study or to present at building meetings. Participants in these buildings could opt in to the study once permission was granted. Where permitted by the building manager/homeowner association, recruiters set up a table in the building lobby to recruit residents as they passed through or presented to the homeowners' association as part of their regular monthly meeting.

In total, 686 households in NYC were recruited and 347 of them completed the kitchen diary as well as the surveys.

Kitchen Diaries and Surveys: Participating households were asked to complete one-week long kitchen diaries that track food and beverages that were discarded or not eaten. Additionally, each participating household was asked to complete two surveys (one before and one after participating in the kitchen diary) that collected basic demographic information as well as information on the household's food-related attitudes and behaviors.

The following information was collected in the kitchen diary for all discarded food and beverages:

- **Date**
- **Time**
- **Associated with Which Meal:** Breakfast, Lunch, Dinner, Dessert, Snack, Other
- **Description of Food/Beverage Being Discarded:** Written in by respondent (e.g. lasagna, bananas, ham sandwich with cheese, broccoli stems)
- **State of Food/Beverage at Time of Discard:** Cooked/Leftovers, Prepped (chopped or prepared, but not cooked), Whole, Inedible Parts, Other
- **Weight:** Measured to the nearest tenth of an ounce (ounces with one decimal point) on provided kitchen scale
- **Packaging:** If wasted food was in a glass, metal, or hard plastic container when weighed, participant was asked to estimate the size (dimensions or volume). Participants were instructed not to include the weight of plastic containers provided for weighing.
- **Discard Destination:** Trash, Drain Disposal, Home Compost, Curbside Compost Collection (Denver and NYC only), Compost Drop-off (NYC only), Feeding Pets, Other
- **Loss Reason:** Past Date on Label, Moldy or Spoiled, Didn't Taste Good, Improperly Cooked, Inedible Parts, Left Out Too Long, Too Little to Save, Don't Want as Leftovers, Other

Participants were provided with a pre-printed kitchen diary (see Appendix C for sample) to reduce time needed to complete each entry. They were also given a digital kitchen scale and two small plastic containers to assist with weighing the food. Additionally, a short guidebook describing how to complete the kitchen diary was provided to every participant, including information on how to prepare/tare the scale before use and answers to frequently asked questions. Participants also had access to support via text, phone, and/or email throughout the measurement process. Households were only asked to weigh and record details of food that is wasted in the household. However, households were asked to provide a short, daily narrative on food discarded outside of the household for every member of the household.

Physical kitchen diaries were collected and transferred to a spreadsheet. All entries were coded to:

- Standardize food names;
- Indicate “edibility” in terms of how it is defined for the study; and
- Categorize into food types in line with bin dig categories.

All original inputs from participants were saved; however, corrections were made if participant made a “mistake” in characterizing food. For instance, some entries described the food as moldy, but indicated that the loss reason was “inedible parts.” The original entry was saved; however, the final loss reason was corrected to “moldy/spoiled.”

Bin Digs: A subset of randomly selected houses (of those participating in the study) had their trash collected once before the study and once while participating in the study (Nashville only) or once while participating in the study (Denver and NYC). The waste material was collected, sorted, and categorized (see Requirement 3 for specific sorting categories). The bin digs were not used as a primary source of data to determine how much food is wasted; however, they were used to validate kitchen diary data (to compare reported quantities of wasted food with what was found in the trash bin).

As mentioned above, households in NYC have trash collection 2-3 days per week. In order to estimate weekly waste generation for bin digs, NYC households were asked in the second survey to indicate how many times they put out their trash the week of the study. This number was used to scale the results of the bin digs to represent one week’s worth of material. For instance, if household X had their trash collected for the study and indicated that they put out their trash twice that week in the survey, their bin dig results were multiplied by two to represent one week’s worth of trash.

REQUIREMENT 6: PROVIDE A QUALITATIVE OR QUANTITATIVE ASSESSMENT OF UNCERTAINTY

The main source of information used to determine food waste generation was the kitchen diaries. The kitchen diaries only captured one week’s worth of discarded food and beverages, and therefore did not capture the seasonality of food waste generation and disposal, including seasonal differences in what types of food are eaten and thus discarded. Additionally, there is some evidence that people may be less likely to compost in rainy or cold weather, which is not captured. The week-long kitchen diaries were extrapolated to an entire year, thus there is uncertainty in that extrapolation.

Other factors may also influence the accuracy of or ability to extrapolate from kitchen diary data collected, including the challenge of accurately reporting all discards by multiple household members; having a sample population that may be more biased than average toward greater awareness around food and waste issues; and the hypothesis that our study may not have captured refrigerator or freezer clean-outs, which likely increase the amount of food discarded when they occur.

Additional sources of uncertainty include aspects mentioned in other sections of this Appendix and in Appendix D, such as sample sizes, inclusion of some packaging in reported weights, non-normal distribution, sampling bias, and participants changing behaviors as a result of study participation.

Accounting for Underreporting in Kitchen Diaries

When recording wasted food through kitchen diaries, it is expected that there will be underreporting as a result of:

■ **Changes of Behavior**

- **Social Acceptability Bias:** Most people do not like wasting food or consider wasting food a socially unacceptable behavior, thus may change their behavior during the kitchen diary process, both knowingly and unknowingly. In general, it is expected that behavior would change to waste less than if their behavior were not being recorded.

■ **Improper Recording**

- **Convenience:** Some people may not record all items because “they are too small” or delay recording items until after the study period due to the effort of recording every food item wasted. For example, respondents may decide to delay a refrigerator cleanout because of the burden of recording each item.
- **Confusion:** Some respondents may not record items if they don’t think it is “food” or “waste.” This study requested that both wasted food and beverages be recorded; however, there may be an underreporting of beverages because they are not considered “food” by respondents. Additionally, wasted ornamental food, like pumpkins for Halloween, may not be reported because they are not considered “food” by the household.

For this study, underreporting rates were determined by collecting discarded curbside material (primarily trash, as well as compost, when available) from a subset of households that were also participating in the kitchen diary data recording. Bin dig data from all three cities involved in this study (Nashville, Denver, and New York City) were combined to determine the underreporting rate for all three cities.

In Nashville, trash was collected twice from selected households during the study period. The first set of bin digs were performed prior to the respondents starting the kitchen diary, thus theoretically representing their “normal” trash generation. The second set of bin digs were performed at the end of the kitchen diary period; thus, wasted food found in the trash collected in the second set should be the same food as that recorded in the corresponding kitchen diary.

In Denver and New York City, trash (and curbside compost when it was available) was collected once from selected households during the study period. The bin digs were performed at the end of the kitchen diary period; thus, wasted food found in the trash collected should be the same food as that recorded in the corresponding kitchen diary. In New York City, trash/compost is collected regularly two to three days per week per household; for our sample, however, trash was only collected from households on one of their collection days. Respondents were asked in their second survey (completed after the kitchen diary period) to indicate how many times they set out their trash during the week-long study period. Using the information provided in the survey, the weekly amount of disposed material was extrapolated. Note that since only one bin dig was performed in these cities, this analysis does not include underreporting as a result of changes in behavior from participating in the research.

To understand the level of underreporting, a subset of households that participated in the kitchen diary data recording also had their trash (and curbside compost when available) collected at some point during the kitchen diary study period and sorted into the categories used in the bin dig analysis. The amount of total wasted food found in the trash or compost was compared to the amount of total wasted food reported as being thrown in the trash or compost in the kitchen diary. Trash and compost were compared separately.

One of the main challenges to this method is collecting only material for the week that corresponds to the kitchen diary. Collecting material from a specific week is challenging to do without significantly altering the behavior of the respondents. To get the most “accurate” results, the study design aimed to minimize the impact on the respondents’ regular routines. However, there were many issues that arose, including:

- Getting respondents to put out their trash during the week of collection.

Some households don’t regularly put out their trash or wait until their trash can is full to put it at the curb. Despite reminders, some respondents did not put out their trash.

- Getting more than a week’s worth of trash

If households do not put out their trash each week, collected material may represent multiple weeks of trash. Additionally, trash collected in indoor waste bins may have included waste generated prior to the kitchen diary period.

- Getting all the week’s trash to the curb

Some respondents may record their wasted food per week and put out their trash cans for collection; however, some waste material from the week may remain in their indoor waste bin, thus not making it to the curbside bin.

As a result of the above challenges, overreporting, in addition to underreporting, was observed. For the purposes of this report, we performed two sets of analyses: 1) Underreporting calculations considering all households; and 2) Underreporting calculations on the subset of households where more trash was found during the bin digs than reported. The second analysis aims to reduce the error caused by false instances of “overreporting.” Both sets of analyses are reported below; however, the first method is a more conservative method for determining underreporting (and the method we selected for our study).

Underreporting Analyses and Results

When analyzing all households, the average total wasted food underreporting rate ranged from 24% to 65% in the three cities (see Table 1 for more details). Both underreporting and overreporting were observed at the individual household level. On average, however, underreporting was dominant in each of the three cities.

TABLE 1. SUMMARY OF UNDERREPORTING FOR FOOD IN TRASH IN NASHVILLE, DENVER, AND NEW YORK CITY

	ANALYSIS WITH ALL HOUSEHOLDS		ANALYSIS WITH ONLY UNDERREPORTING HOUSEHOLDS	
	NUMBER OF HOUSEHOLDS	UNDERREPORTING RATE (BY WEIGHT)	NUMBER OF HOUSEHOLDS	UNDERREPORTING RATE (BY WEIGHT)
NASHVILLE	30	24%	17	71%
DENVER	37	65%	29	109%
NEW YORK CITY	53	47%	32	127%
AVERAGE		47%		108%

When comparing wasted food reportedly discarded in compost bins in the kitchen diary compared to what was found in the compost bins, an underreporting rate of 144% was found in New York City, while an overreporting rate of 19% was found in Denver (see Table 2). In NYC, this is likely a result of many sampled households having wasted food in their curbside collection bins, but having very little reported in their kitchen diary (potential causes for this include indoor bins not being emptied into curbside collection bins by the time of our pickup). In addition, some smaller NYC multi-family residences share compost bins (though may not necessarily share trash bins); samples collected from those shared compost bins may have included material discarded by neighboring non-participant households in addition to material discarded by the households participating in the study. The overreporting in Denver could be a result of respondents inaccurately reporting disposing of food in the compost, as composting is a more socially acceptable behavior than throwing food in the trash.

TABLE 2. SUMMARY OF REPORTING FOR FOOD IN COMPOST IN DENVER AND NEW YORK CITY

	ANALYSIS WITH ALL HOUSEHOLDS	
	NUMBER OF HOUSEHOLDS	REPORTING RATE (BY WEIGHT)
DENVER	14	19% Overreporting
NEW YORK CITY	6	144% Underreporting

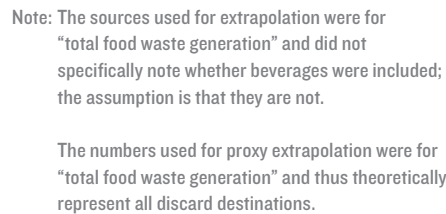
In Nashville, two bin digs were performed, one prior to the kitchen diary and one right after the kitchen diary. The comparison between the two digs was designed to capture any changes in behavior that resulted from participating in measuring their wasted food through the kitchen diary. The average total food waste generation for the first bin dig was 8 pounds/household/week while the average for the second was 5.9 pounds/household/week. This was a reduction in food waste generation of 22%. Edible food waste had an even larger reduction of 33% from the first to second bin dig.

Study Correction Factor

For the purposes of this study, the average total wasted food underreporting rate from the trash digs of all three cities combined, 47%, was used as a correction factor applied to kitchen diary results. This correction factor is applied to total food waste generation and is not dependent on discard destination (it is used for all discard destinations). The underreporting rate for trash is being used as a proxy for all other discard destinations. Even though the reporting rate for compost was also calculated, the sample size was too small to be significant, and the results were inconclusive.

A. ICI Estimates (All Cities)

BASELINE FOOD WASTE ASSESSMENT: ICI ESTIMATES (FOOD LOSS AND WASTE ACCOUNTING AND REPORTING STANDARD)



A. Relevance:

- B. Completeness:** All facilities within designated subsectors and geographies were included. Food waste generation estimates were derived from specific facility information obtained using several public and proprietary databases. Additional data were derived from surveys and bin digs.

NRDC

C. Consistency: Methodologies and templates used for tracking and analyzing data were identical across study cities; definitions used were identical to definitions used in residential study (and ICI bin digs) where applicable.

D. Transparency: Methodology, including assumptions and definitions, is available in this report (with additional details available upon request).

E. Accuracy: Analyses and calculations have been tested and verified; some accuracy of facility data cannot be assured due to inconsistencies in information provided in available databases.

REQUIREMENT 2: ACCOUNT FOR AND REPORT THE PHYSICAL AMOUNT OF FLW EXPRESSED AS WEIGHT

The metric reported is total food waste generation in tons per year.

REQUIREMENT 3: DEFINE AND REPORT SCOPE

A. Timeframe: The ICI food waste estimates were based on proxy extrapolation, thus do not represent a specific timeframe; however, the estimates are based on industrial, commercial, and institutional facilities operating for one year.

B. Material Type: The estimates include edible food and its associated inedible parts (as defined in Appendix A); however, they are not separated in the analysis.

C. Discard Destinations: The numbers used for proxy extrapolation are for total food waste generation and thus theoretically represent all discard destinations.

D. Boundary:

1. **Food category:** All food (not beverage) items
2. **Lifecycle stage:** Variable (Consumer-facing businesses & institutions, manufacturing, distribution)
3. **Geography:** Facilities within the city limits of Nashville, TN; Denver, CO; New York City, NY (all five boroughs)
4. **Organization:** 34,040 facilities (4,698 Nashville, 2,565 Denver, 26,777 NYC) were included from the following sectors:
 - Colleges & Universities
 - Correctional Facilities
 - Events & Recreation Facilities
 - Food Manufacturing & Processing
 - Food Wholesalers & Distributors
 - Grocers & Markets
 - Health Care (Hospitals and Nursing Homes)
 - Hospitality (Hotels)
 - K-12 Schools
 - Restaurants & Caterers

The following types of ICI facilities were not included even though they may significantly contribute to total food waste generation in the cities:

- Convenience Stores (lack of information on food waste generation)
- Food Banks and Pantries (lack of information on food waste generation)
- Coffee Shops (lack of information on food waste generation)
- Airports (lack of information on food waste generation)
- Corporate Cafeterias (lack of information on food waste generation and locations)

E. Related Issues: Numbers used did not include packaging.

REQUIREMENTS 4 AND 5: DESCRIBE THE QUANTIFICATION AND SAMPLING METHODS

Facility-Level Information

In order to conduct ICI food waste generation estimates, information on the types of facilities in each geographic area was obtained using several databases, both public and proprietary. Information on location, sales, number of employees, number of students, square footage, and number of beds at each facility was obtained to estimate food waste generation, whenever possible. The information collected from the database was “cleaned” to remove duplicates, facilities outside of the sectors of interest, and facilities located outside of the city limits.

The following public databases were used (facility information for other sectors was found on proprietary databases):

- **National Center for Education Statistics:** Provided list of colleges/universities and K-12 schools (both public and private), including location, education levels, and number of students.
- **American Hospital Directory:** Provided list of hospitals, including location and number of beds.
- **PrisonPro.com:** Provided list of correctional facilities by location and number of beds.

Converting Facility-Level Information to Food Waste Estimates

For each sector, conversion factors were used to convert facility-level information to food waste generation estimates (see Table 1 below for list of conversion factors). The conversion factors used for this analysis were identified by the U.S. Environmental Protection Agency in their report entitled “Technical Methodology for the U.S. EPA Wasted Food Opportunities Map (Version 1.0)”². The sources were compared to other potential sources of information, including some of the limited number of food waste characterizations completed by local and state governments (see Appendix L for specific sources and more details).

Below is the main piece of facility-level information used to estimate food waste generation for each sector:

- Colleges & Universities (# of students)
- Correctional Facilities (# of inmates/beds)
- Events & Recreation Facilities (# of seats)
- Food Manufacturing & Processing (revenue)
- Food Wholesalers & Distributors (revenue)
- Grocers & Markets (# of employees)
- Health Care (# of beds for hospitals; revenue for nursing homes)
- Hospitality (Hotels) (# of employees)
- K-12 Schools (# of students, grade levels)
- Restaurants & Caterers (# of employees)

² Environmental Protection Agency, “Technical Methodology for the U.S. EPA Wasted Food Opportunities Map (Version 1.0),” to be available at <https://www.epa.gov/sustainable-management-food/technical-methodology-wasted-food-opportunities-map> (not yet available at time of print).

TABLE I. CONVERSION FACTORS USED IN ANALYSIS

SECTOR	CONVERSION FACTOR(S) USED	DATABASE USED FOR LIST OF FACILITIES
Colleges & Universities	.35 lbs/meal Residential – 405 meals/student/yr Non-Residential – 108 meals/students/yr	National Center for Education Statistics
Correctional Facilities	1 lb/inmate/day	PrisonPro.com
Events & Recreation Facilities	100 days/yr .6 lbs/seat/day Attendance is 80% of capacity OR (depending on available facility information) .45 lbs/visitor	Online Search
Food Manufacturing & Processing	.053 lbs/\$ of revenue/yr	Proprietary Database
Food Service Sector (Restaurants & Caterers)	3,000 lbs/employee/yr	Proprietary Database
Food Wholesalers & Distributors	.01 lbs/\$ of revenue/yr	Proprietary Database
Grocers & Markets	3,000 lbs/employee/yr	Proprietary Database
Health Care—Hospitals	3.42 lbs/bed/day	American Hospital Directory
Health Care—Nursing Homes	1.8 lbs/bed/day 23 beds/\$ million of revenue	Proprietary Database
Hospitality (Hotels)	1,984 lbs/employee/yr	Proprietary Database
K-12 Schools	31 weeks/year Elementary – 1.13 lbs/student/week Middle – .73 lbs/student/week High – .35 lbs/student/week All – .74 lbs/student/week Elementary/Middle - .93 lbs/student/week Middle/High - .54 lbs/student/week	National Center for Education Statistics

K-12 Schools

For K-12 schools, different wastage rates were used for elementary, middle, and high schools. However, some schools are combined middle/high schools or have all grades. It was assumed that there were 31 weeks of school per year. For combined schools, an average was used:

- Elementary/Middle School: .93 lbs per student per week
- Middle/High School: .54 lbs per student per week
- All Grades: .74 lbs per student per week

Nursing Homes

For nursing homes, it was estimated that 23 beds equate to \$1 million in revenue. This estimate was generated using information from the American Health Care Association³ stating that there are 1.7 million beds in nursing homes in the U.S. representing \$72 billion of revenue.

³ American Health Care Association, “Fast Facts,” available at https://www.ahcancal.org/research_data/trends_statistics/Pages/Fast-Facts.aspx (accessed on October 17, 2017).

Events & Recreation Facilities

A comprehensive list of events and recreation facilities serving food were not available. A list of facilities was generated through online searches; however, information on number of seats, number of employees, number of visitors, and revenue could not be found for all facilities. Additionally, events and recreation facilities represent a wide range of facility types and uses (number of days per year the facility is in use, types of event, etc.), thus determining a conversion factor that works for all is difficult. EPA's methodology did not include conversion factors for event facilities, so two conversion factors from Recycling Works Massachusetts⁴ were used due to the overall similarity between numbers used by Recycling Works and EPA.

If information on number of seats was available, the following assumptions and conversion factors were used:

- Each facility is in operation for 100 days per year (assumption by NRDC)
- 80% capacity (assumption by NRDC)
- .6 lbs/seat/day

If information on the number of visitors was available and number of seats was not, the following assumptions and conversion factors were used:

- .45 lbs/visitor

REQUIREMENT 6: PROVIDE A QUALITATIVE OR QUANTITATIVE ASSESSMENT OF UNCERTAINTY

The formulas used in this method should not be used to determine an individual facility's food waste generation. The conversion factors used are sector-based averages of food waste generation. The average represents an entire sector of diverse facilities with wide-ranging food waste generation rates. Additionally, this method cannot be used to track progress in reducing food waste; the data generated by these methods represent an estimate of sector-based food waste generation that should be used as a baseline estimate only.

The conversion factors used for this analysis were identified by the U.S. Environmental Protection Agency in their report entitled "Technical Methodology for the U.S. EPA Wasted Food Opportunities Map (Version 1.0)"⁵. Some of the factors were based on data and sources more than a decade old and others were based on data with a small sample size of facilities. While these conversion factors are based on some of the best existing data, the conversion factors used in this analysis should still be used with caution. Overall, there is very little research that would allow us to confidently determine whether these conversion factors are or are not indicative of industry-level averages. More research must be done to determine this.

Acknowledging that there are other potential sources of food waste generation information, we compared EPA's conversion factors to other potential sources of information, including some of the limited number of waste characterizations completed by local and state governments. Additionally, potential concerns about specific conversion factors were identified as potential areas for further research (see Table 2 below for concerns). Please note that this table is not comprehensive of all studies on food waste generated in the institutional, commercial, and industrial sectors. A sensitivity analysis was performed for some of the facility types (see Table 2 for list and Appendix L for sensitivity analysis) to determine the potential impact of specific conversion factors on the entire food waste generation estimate. Although we believe that the most appropriate conversion factors were selected for this analysis, the alternate estimations derived from the scenarios used to conduct the sensitivity analysis can be used as a range to show certainty if desired. (See Appendix L for detailed scenarios and conversion factors derived from the sensitivity analysis.)

Additionally, the formulas we used were derived from food waste characterization studies, of which there have been a very limited number to date. Many waste characterization studies do not include specific analysis of food waste separate from other organic waste, and those that do generally do not subdivide food waste into specific subcategories (such as estimates of the amount of food waste which was potentially edible or avoidable). Consequently, the formulas derived from these studies do not provide a way to estimate how much of the food generated by the ICI sector may have been edible, only estimates of total waste generated. (See NRDC's report "Modeling the Potential to Increase Food Rescue: Denver, New York City and Nashville"⁶ for information on how to estimate the amount of food that may be suitable for donation.)

⁴ Recycling Works Massachusetts, "Food Waste Estimation Guide," available at <http://recyclingworksma.com/food-waste-estimation-guide> (accessed on October 17, 2017).

⁵ Environmental Protection Agency, "Technical Methodology for the U.S. EPA Wasted Food Opportunities Map (Version 1.0)," to be available at <https://www.epa.gov/sustainable-management-food/technical-methodology-wasted-food-opportunities-map> (not yet available at time of print).

⁶ JoAnne Berkenkamp, "Modeling the Potential to Increase Food Rescue," Natural Resources Defense Council (2017), available at <https://www.nrdc.org/resources/food-matters-what-we-waste-and-how-we-can-expand-amount-food-we-rescue>.

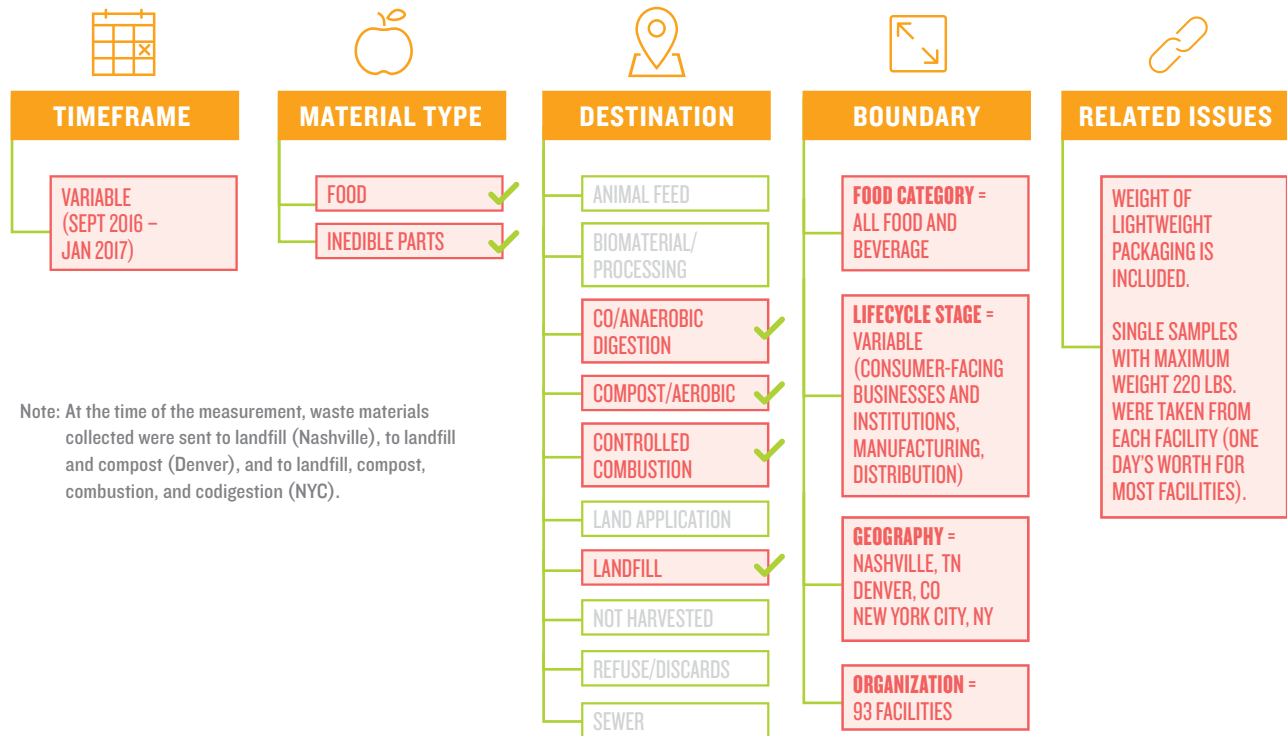
TABLE 2. CONCERNS ABOUT DATA AND SENSITIVITY ANALYSIS

SECTOR	CONCERNS ABOUT DATA	SENSITIVITY ANALYSIS?
Colleges & Universities		No
Correctional Facilities		No
Events & Recreation Facilities	■ Depends significantly on event types, number of events/year, and other factors that make this sector diverse ■ Seat capacity vs. visitors is important distinction (may only be able to find seat capacity)	No
Food Manufacturing & Processing		No
Food Service Sector (Restaurants & Caterers)	■ May be significant differences based on type of restaurant: quick service vs. full service vs. limited service	Yes (Used Metro Vancouver's and California's numbers & different assumptions for limited/quick service vs. full service).
Food Wholesalers & Distributors		No
Grocers & Markets	■ 3,000 lb number is from 1990's. There has been a reduction in employee size for grocers which may mean a higher food waste per employee number ■ Does not distinguish between hypermarkets, supermarkets, and smaller grocers ■ Does not include food that goes to reclaimer	Yes (Used California's number).
Health Care—Hospitals		No
Health Care—Nursing Homes		No
Hospitality	■ May significantly depend on what types of food services are provided (e.g. room service, restaurants, bars, etc)	Yes (Used California's number).
K-12 Schools	■ May be significant differences by public vs. private school within school level	No

B. ICI Bin Digs (All Cities)

The Food Loss and Waste Accounting and Reporting Standard (FLW Standard⁷) provides a framework for accounting for and reporting on food loss and waste. The graphic below describes the scope of the ICI bin digs using the FLW Standard.

BASELINE FOOD WASTE ASSESSMENT: ICI BIN DIGS (FOOD LOSS AND WASTE ACCOUNTING AND REPORTING STANDARD)



REQUIREMENT 1: BASE FLW ACCOUNTING AND REPORTING ON THE PRINCIPLES OF RELEVANCE, COMPLETENESS, CONSISTENCY, TRANSPARENCY, AND ACCURACY

A. Relevance:

- Use bin digs to help understand how much and what types of food are discarded from ICI facilities and to “groundtruth” ICI estimates.
- Contribute to a working model for other cities to perform similar assessments

B. Completeness: Representative facilities within designated subsectors and geographies were included. The facilities were recruited with the goal of working with at least one to four facilities per city from each sector listed below.

C. Consistency: Methodologies and templates used for tracking and analyzing data were identical across study cities; definitions used were identical to definitions used in residential study (and ICI estimates) where applicable.

D. Transparency: Methodology, including assumptions and definitions, is available in this report (with additional details available upon request).

E. Accuracy: Analyses and calculations have been tested and verified; some accuracy of or ability to extrapolate from facility data cannot be assured due to inconsistencies in materials collected as described below.

⁷ Food Loss and Waste Accounting and Reporting Standard, <http://flwprotocol.org/> (accessed October 16, 2017).

REQUIREMENT 2: ACCOUNT FOR AND REPORT THE PHYSICAL AMOUNT OF FLW EXPRESSED AS WEIGHT

The metric reported is total food waste generation in pounds (extrapolated where feasible to pounds per year).

REQUIREMENT 3: DEFINE AND REPORT SCOPE

A. Timeframe: The ICI bin digs collected trash and compost (when available) material from facilities. Most facilities had one day or a portion of one day's trash collected. The timeframe of the bin dig was noted for each facility.

B. Material Type: For the bin digs, materials were sorted into ten food waste categories, one for inedible parts (using the definition of "inedible parts" described in Appendix B), eight categories subcategorizing edible food (see Appendix B), and one category for unidentifiable food waste.

1. **Inedible Parts:** Items not intended for human consumption (it is acceptable for a small amount of edible material associated with the inedible material to be included).
2. **Edible – Meat & Fish:** Uncooked or cooked meat (with mostly edible components) unmixed with other types of food. Examples include beef, pork, and fish.
3. **Edible – Dairy & Eggs:** Solid dairy or egg products unmixed with other food types or in original form. Examples include milk, cheese, butter, and eggs.
4. **Edible – Fruits & Vegetables:** Solid uncooked or cooked vegetables and fruits (with mostly edible components) unmixed with other types of food. Examples include apples, lettuce, and fresh herbs.
5. **Edible – Baked Goods:** Baked goods and bread-like products unmixed with other food types or in original form, including pastries. Examples include bread, cake, and tortillas.
6. **Edible – Dry Foods:** Cooked or uncooked grains, pastas, legumes, nuts, or cereals unmixed with other food types or in original form. Examples include flour, nuts, lentils, and cereal.
7. **Edible – Snacks, Condiments, & Others:** Includes confections, processed snacks, condiments, and other miscellaneous items. Examples include candy, chips, and sauces.
8. **Edible – Liquids/Oils/Grease:** Items that are liquid, including beverages. Examples include cooking oil, liquid coffee, and soda.
9. **Edible – Cooked/Prepared Items/Leftovers:** Items that have many food types mixed together as part of cooking or preparation. Examples include lasagna, burritos, falafel, stir-fry, sandwiches, and pizza.
10. **Unidentifiable:** Used only if necessary

Additionally, waste that was not food was sorted into the following categories:

1. Food-Soiled Paper;
2. Yard Trimmings;
3. Glass;
4. Recyclable Paper and Cardboard (not food-soiled);
5. Metals;
6. Rigid Plastics;
7. Plastic Films and Composites; and
8. All Other Materials.

While categorization of these materials was not the focus of the waste audit, collecting this additional information on wastage rates of commonly recyclable and other materials provides additional context and data on the types of materials found in the waste overall.

C. Discard Destinations: The numbers used for proxy extrapolation are for total food waste generation and thus theoretically represent all discard destinations even though only composted and landfilled waste were collected. Facilities that discarded wasted food in other ways were either asked to collect that material for collection or provide information on their discard to other destinations. Facilities where the material collected or reported did not represent all food waste generation did not have their bin digs extrapolated to pounds per year.

D. Boundary:

1. **Food category:** All food and beverage items
2. **Lifecycle stage:** Variable (Consumer-facing businesses & institutions, manufacturing, distribution)
3. **Geography:** Metropolitan areas of Nashville, TN; Denver, CO; New York City, NY (all boroughs except Staten Island)
4. **Organization:** 93 facilities were included from the following sectors:
 - Airports
 - Colleges & Universities
 - Corporate Cafeterias
 - Correctional Facilities
 - Events & Recreation Facilities
 - Food Manufacturing & Processing
 - Food Rescue Organizations
 - Food Wholesalers & Distributors
 - Grocers & Markets
 - Health Care (Hospitals)
 - Hospitality (Hotels)
 - K-12 Schools
 - Restaurants & Caterers

E. Related Issues – Packaging: Lightweight packaging (such as plastic film) was included in the weight of the food materials, since it generally weighs very little compared with the food material. For food in heavier packaging materials (e.g. metal and glass), if the container was mostly empty (i.e. the weight of the container exceeded the weight of the food), then the item was included in the packaging material's category. If the container was mostly full (i.e. the weight of the food exceeded the weight of the container), the item was included with the food category and the container type noted.

REQUIREMENTS 4 AND 5: DESCRIBE THE QUANTIFICATION AND SAMPLING METHODS

Bin digs were performed in Nashville, Denver, and New York City to help understand how much and what types of food are discarded from institutional, commercial, and industrial (ICI) facilities. Facilities were recruited using existing relationships and cold calls in each of the cities. Facilities were given a confidential report of their results and anonymity was promised. The facilities were recruited to get at least a couple of facilities from each sector listed above.

Waste was collected from each facility on their regular trash collection day (or the evening before) and taken to an off-site location to be sorted by a field team. If facilities currently compost (using a hauler), waste material from their organics bins was also collected and sorted. Facilities that discarded wasted food in ways other than trash or compost were either asked to collect those materials for our collection or provide information on their discards to other destinations. Samples of up to 200 pounds of trash (and compost, when available) were collected from each facility, taken off-site, and sorted into 10 food and 8 non-food categories. Sorting protocols and categories were the same as for residential bin digs. Most facilities had one day's worth or a portion of one day's worth of trash collected. When samples collected did not represent an entire day's worth of waste material, the amount of waste that facility would typically generate in a day was estimated if possible from the proportion of total material collected (and used to derive annual generation estimates, as outlined below and in Appendix K).

Additionally, facilities were asked to fill out a survey which included basic information to aid in sample pickup coordination, facility characteristics such as number of employees and annual revenue, and information on current food- and food waste-related behaviors. Participating facilities received a free food waste characterization and a subsequent confidential report providing recommendations specific to their facility.

When feasible, findings from the bin digs were extrapolated to generate annual food waste generation estimates. Two methods of extrapolation were used based on available information: 1) If the bin dig represented all or a known portion

of food waste discarded for a known period of time, the amount was extrapolated for an entire year based on the number of days a facility operates per year (if the portion of waste material collected was not known, the bin dig was not extrapolated); and/or 2) If the bin dig represented all trash and/or compost materials discarded by that facility and the facility provided annual estimates of total waste generation in their survey, the percentage of total trash or compost material that food represented by weight in the bin dig was multiplied by the estimate of total food waste discarded per year. In some cases, both methods could be used to generate an estimate and numbers are presented as a range. For most cases, there was only enough information and/or the bin dig only allowed for extrapolation using one method. However, if it was evident that the sampled material did not represent a facility's normal waste pattern, the bin dig results were not extrapolated.

Using estimated annual food waste generation as determined, "conversion factors" were estimated for each facility, whenever possible. As applicable by facility type, conversion factors include food waste generation per: 1) employee; 2) bed; 3) student; 4) \$ of revenue; 5) rooms; and 6) meals. (See Appendix K for food waste generation estimates derived from ICI bin digs.)

REQUIREMENT 6: PROVIDE A QUALITATIVE OR QUANTITATIVE ASSESSMENT OF UNCERTAINTY

Bin digs were only conducted one time and generally represented between one and three days of waste materials from each facility. As such, these bin digs are "snapshots" and may not represent a facility's normal waste generation pattern. Additionally, the samples collected were a maximum of 200 pounds of material each; for example, for larger facilities with non-homogeneous waste (e.g., grocers), a single 200-pound sample may not have been "representative" of that facility's waste. When it was obvious that the sampled material did not represent a facility's normal waste pattern, the bin dig results were not extrapolated. (See Appendix K for more information on bin dig extrapolation.)

Appendix C: Baseline Assessment Field Methodology

Thanks to Tetra Tech for providing field information.

Note: More information and documents referred to in this appendix are available upon request from NRDC.

I. STAFFING

A. Recruitment Tactics

- Advertised job on Craigslist, Indeed, and to contacts at universities
- Templates available for job posting language and interview questions

B. Notes on Staffing Logistics

- Staff were expected to enter their hours into a web-based form each evening
- Staff were required to have a passport, or alternative pieces of identification, to complete their T9 form and prove that they were legally able to work in the U.S.

2. KITCHEN DIARY PARTICIPANT RECRUITMENT

A. Staff Training

Webinar

- A webinar was hosted for Community Ambassadors in the month prior to on-ground research.
 - Staff were provided with Community Ambassador Training Guide
 - Staff were provided with Recruitment Script

First Day Training Workshop

- On the first day of recruitment, all staff were given 2 hours of in-person training. Topics covered were:
 1. Kitchen Diary Kit Materials
 2. Daily data entry
 3. Practicing the recruitment script
 4. Safety measures and Personal Protective Equipment

On-the-Ground Training

- Tetra Tech field lead was present for the first week of recruitment. Each day, approximately one hour was spent one-on-one with each Community Ambassador to ensure that messaging was consistent and they were confident in their recruitment skills

B. Safety Considerations

- Staff wore high-visibility vests
- Staff were sent out in teams of 2 or 3 (but knocked on doors independently)
- Staff were instructed to wear weather-appropriate, protective clothing (including footwear to minimize the risk of slipping or falling)

C. Single Family & Small Multi-Family

- Staff worked approximately 6 hour shifts
- Staff were provided with maps of census areas via a shared online map. If they ran out of doors to knock on, they were instructed to go to streets adjacent to the census tracts for additional recruitment.

D. Large Multi-Family Buildings

- Multi-family building managers were contacted in advance of the project and asked to send out the participant sign-up link to all tenants in their buildings
- A recruitment flyer was sent out by email or posted in the building (with manager permission)
- A date was arranged in which Community Ambassadors set up a table in the lobby of the building
- Community Ambassadors gave out the kits to participants who had signed up via the online sign-up link and to new sign-ups
- Remaining kits from online sign-ups were left with the doorperson

E. Online Signups

- Participants were able to directly sign up online. Most online signups received the sign-up link through:
 - Receiving a door hanger from a Community Ambassador
 - Residing in a targeted multi-family building which had sent out a notice about the project to all tenants
- Remaining kits from online sign-ups were left with the doorperson

F. Materials

- Community Ambassadors were provided with the following materials for door-to-door work:
 - Kit Demonstration Folder
 1. Quick Start Guide
 2. Kitchen Diary
 3. Kitchen Diary Kit Manual
 4. Background on study
 - Data sheets to track participant information
 - Door-hangers to leave at residences where people were not home

3. DATA TRACKING FOR RESIDENTIAL PARTICIPANTS

A. Community Ambassador Data Entry

- Community Ambassadors were responsible to enter the participants that they had recruited on a daily basis into a web-based form.

B. Data Management

- Researchers off-site managed the spreadsheet of participants, including data entry, data cleaning, verifying each stage of recruitment and participation, and communicating with field researchers.

4. RESIDENTIAL PARTICIPANT FOLLOW-UP

- All participant follow-up correspondence was sent from a central project email address, phone, or text
- Participants were provided with email and phone contacts for questions
- Participant Follow-Up Schedule and Methodology scripts were used to ensure consistency

5. KITCHEN DIARY KIT DELIVERY

A. Kit Assembly

- The following supplies were included in residential study participation kits:
 - All kitchen diary and related materials
 - Quick Start Guide (with fill-in blanks for start date, end date, and survey 2 deadline)
 - Kitchen Diary
 - Kitchen Diary Kit Manual
 - Background on study
 - Pen
 - Two pieces of flagging tape per kit, approximately 1 yard each (only necessary in cases where you need to identify which garbage belongs to participants out of mixed source – not necessary where you are collecting from individual carts)
 - Labels with participant ID number affixed to all the above materials
 - Manila envelopes (postage included) if participants had the option to mail back completed diary
 - Kitchen scales

B. Kit Delivery

- Most kits were hand-delivered by Community Ambassadors, either on-site at time of recruitment or to multiple participants over the weekend to all sign-ups from the previous week
- If hand-delivered during recruitment, recruiters must be able to transport kits with them during recruitment (may be less ideal if all recruitment is done on foot)
- Kits were mailed to the following participants:
 - Anyone who requested that their kits be mailed to them
 - Participants in large multi-family buildings without a doorman
 - Online sign-ups who were located very far away from other participants
 - Late sign-ups

6. KITCHEN DIARY RETURNS AND PROCESSING

- In Nashville/Denver, participants returned the kitchen diary via direct pickup by Community Ambassadors
- In NYC, participants were instructed to return their kitchen diary via one of the following methods:
 - Mailing it back in the provided manila envelope with prepaid postage
 - Scanning the diary and emailing it back to the project email address

7. KITCHEN DIARY DATA ENTRY

- Kitchen diaries were entered into a spreadsheet as they were received
- Kitchen diaries were checked for completeness upon receiving. If received by email from the participant, any clarifying questions were asked (e.g. If one page was left blank, participants were asked to clarify why. Did they eat out all day? Did they eat at home but not discard anything? Were they out of town?).

8. RESIDENTIAL BIN DIGS

A. Curbside Pick-Ups

- Used routing software to create a route of curbside pick-ups for bin digs
- Participants on the curbside route were reminded via email or text message to set out their trash and/or compost (or keep in designated area) before a specified time the following day
- Pick-ups were done either in the early morning (Nashville/Denver) or at night (NYC), often when it was dark, so headlamps were provided to researchers

B. Multi-Family Pick-Ups

- Made arrangements with property manager for pick-ups at a specified date/time
- Participants were given tags for their bags and instructed to throw away waste as usual, but to tie a tag around the bag before placing in trash chute or dumpster

9. ICI BIN DIGS

A. Participant Recruitment

- Started recruitment about 6 weeks prior to field work
- Most participants preferred a phone call to discuss what the study would entail, and then the call was used to arrange logistics as well
- Once they agreed to do the study, they received an email with a link to the survey

B. Pick-ups

- Scheduling one to two weeks in advance worked best
- Information needed for scheduling pick-ups included:
 - Address, including specific area where waste is located
 - Access requirements, such as security check-in or gates
 - On-site contact (name and phone number)
 - Time and date of pick-up
 - Description of bins or location where bags will be placed
 - Whether there is trash and/or compost
- Information recorded when picking up waste:
 - Sample ID
 - Bags collected of each type
 - Weight of sample, if applicable
 - Subsamples collected, if applicable
 - What percentage of total waste was represented by amount of waste collected (if only a portion of waste was collected for sample)

10. GENERAL BIN DIG SORTING

- Samples were separated by ID into different piles
- Each sample was pre-weighed
- General set-up:
 - Food categories in bins on one side of the table
 - Non-food categories in bins on other side of the table
 - “Other” (#18) category at end of the table
 - One to two people on each side of the table, focusing on the categories on their side to increase speed of sorting
- Samples were sorted according to categories (see below), then weighed bin by bin
- Weights were recorded in a spreadsheet template
- Representative photos of food categories were taken (and some included in individual facility reports)

#	CATEGORIES	DEFINITION	GUIDES FOR WASTE SORT	SAMPLE WASTE SORTING PICTURE
1	Inedible	Items not intended for human consumption (acceptable for a small amount of edible material associated with inedible material to be included).	Peels, Pits, Shells, Bones, Husks	
2	Edible - Meat & Fish	Uncooked or cooked meat (with mostly edible components) unmixed with other types of food.	Beef, Pork, Poultry, Fish, includes Processed Meats, Fats. Includes small bones which are unavoidable. Meat/fish waste which is primarily bones should be placed in inedible waste category.	
3	Edible - Dairy & Eggs	Solid dairy or egg products unmixed with other food types or in original form. Eggs.	Milk, Cheese, Yogurt, Butter, Eggs, Sour Cream	
4	Edible - Vegetables/ Fruits	Solid uncooked or cooked vegetables and fruits (with mostly edible components) unmixed with other types of food.	Fruits, Vegetables, Soy and Meat-Like Products, Salads/Greens, Canned Beans, Fresh Herbs. Includes whole fruits and vegetables even though they may contain some inedible parts (e.g. whole orange includes peel). Includes edible peelings (e.g. apple or potato)	
5	Edible - Baked Goods	Baked goods and bread-like products unmixed with other food types or in original form, including pastries.	Bread, Tortillas, Naan, Pastry, Muffins, Cakes and Baked Desserts. From the bakery (either home-made or shop bought). No overly processed snacks.	
6	Edible - Dry Foods (Grains, Pasta, Cereals)	Cooked or uncooked grains, pastas, or cereals unmixed with other food types or in original form.	Dry Pasta, Rice, Cereal, Couscous, Quinoa, Flour, Oats, Nuts, Dried Lentils and Beans, Baking Supplies	

7	Edible – Snacks, Condiments, & Other	Includes confections, processed snacks, condiments, and other miscellaneous items. Record “other” foods separately.	Candy, Processed Snacks, Confectionery, Crackers, Junk Food, Processed Desserts, Condiments, Spreads, Sauces. Items not included above that are generally packaged and processed. Chips, chocolate bars, ice cream, jam, ketchup.	
8	Edible - Liquids/Oils/ Grease	Items that are liquid, including beverages.	Juice, Pop, Coffee, Bottled Water, Oil	
9	Edible - Cooked/ Prepared Items/Leftovers	Items that have many food types mixed together as part of cooking or preparation.	Cooked food - homemade meals, take-away and microwave meals. All composite food including Soups, Sandwiches, Curry, Pasta dishes, Casseroles, Stir Fry, Samosa, Pizza)	
10	Unidentifiable	Use only if necessary	Includes food that was not sortable during the compositional analysis, food that has decomposed and is no longer identifiable, semi-liquid material, and food that is too mixed/small to be sorted.	
11	Food Soiled Paper		food-soiled paper, pizza boxes, paper towels	
12	Yard Trimmings		grass, leaves, branches, manure	
13	Glass		glass containers and bottles, excludes ceramics or glass objects	
14	Recyclable Paper and Cardboard		newspaper, office paper, cardboard, coffee cups, books	
15	Metals		metal containers and bottles, empty aerosol cans, foil trays, excludes metal objects	

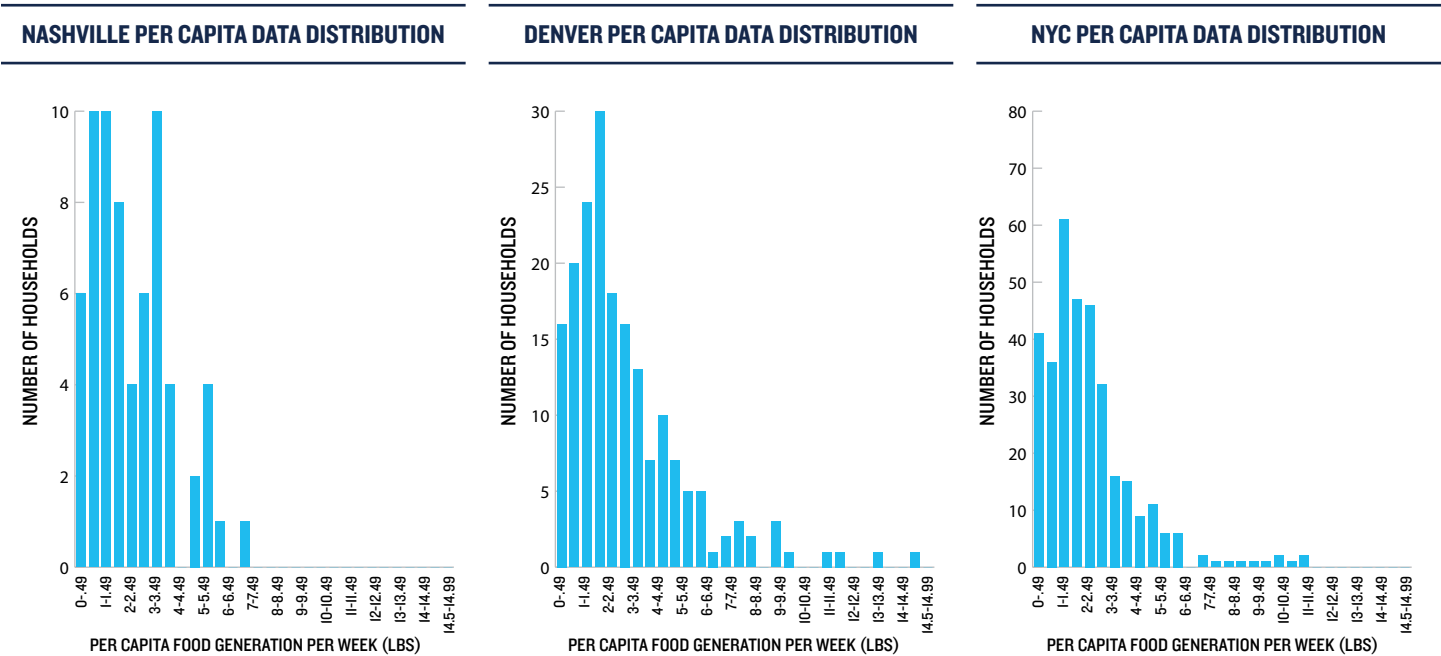
16	Rigid Plastics		#1-7 bottles and packaging, excludes compostable plastics, polystyrene foam and plastic products	
17	Plastic Films and Composites		retail bags and wrap, non-packaging such as zipper bags, tarps, pallet wrap	
18	All Other Materials and Fines		polystyrene foam, ceramics, plastic/glass/metal objects (non-packaging), compostable plastics, leather, textiles, rubber, treated wood, furniture, electronics, appliances, construction material, household hazardous waste, items <1" in size	 

Appendix D: Kitchen Diary Background for Analysis

Below is additional information that pertains to data collected for the residential study, primarily data derived from kitchen diaries. (See Appendix A for more details related to the residential study.)

I. HISTOGRAMS OF DATA DISTRIBUTION

As noted in the report, kitchen diary data results in terms of food wasted per household and per capita are not “normally distributed.” A non-normal distribution means that the data are not symmetrically distributed around the mean (see histograms of distribution below). For the statistical calculations used in our analysis, a normal distribution is a required assumption. However, because of the large sample size of our data in all three cities (see Section 2 below), the non-normal distribution is likely to have a minimal effect on the statistical analysis.¹



2. SAMPLE SIZE FOR FUTURE STUDIES

Given that similar studies have not been undertaken in the United States and very few have been conducted internationally, there was not enough information prior to the study to accurately estimate the needed sample size. Specifically, the variance for total food wasted by households or per capita was not available. After completing the study, the ideal sample size was back-calculated from the study results.

The ideal sample size depends on a variety of factors, including variance, size of the population of interest, margin of error, and confidence level.

If the purpose of the study is to estimate total food wasted (both edible and inedible portions) per household, the ideal sample size for *Nashville* is:

- 207 households (10% margin of error, 90% confidence level)
- 297 households (10% margin of error, 95% confidence level)

¹ Thomas Lumley, Paula Diehr, Scott Emerson, and Lu Chen, *The Importance of the Normality Assumption in Large Public Health Data Sets*, Annual Review of Public Health, Volume 23, 2002, <http://www.annualreviews.org/doi/pdf/10.1146/annurev.publhealth.23.100901.140546>

If the purpose of the study is to specifically estimate edible food wasted per household, the ideal sample size for *Nashville* is:

- 258 households (10% margin of error, 90% confidence level)
- 370 households (10% margin of error, 95% confidence level)

For this study, 68 Nashville households completed the kitchen diary and 76 completed the surveys.

If the purpose of the study is to estimate total food wasted (both edible and inedible portions) per household, the ideal sample size for *Denver* is:

- 206 households (10% margin of error, 90% confidence level)
- 294 households (10% margin of error, 95% confidence level)

If the purpose of the study is to specifically estimate edible food wasted per household, the ideal sample size for *Denver* is:

- 283 households (10% margin of error, 90% confidence level)
- 405 households (10% margin of error, 95% confidence level)

For this study, 198 Denver households completed the kitchen diary and 222 completed the surveys.

If the purpose of the study is to estimate total food wasted (both edible and inedible portions) per household, the ideal sample size for *New York City* is:

- 228 households (10% margin of error, 90% confidence level)
- 325 households (10% margin of error, 95% confidence level)

If the purpose of the study is to specifically estimate edible food wasted per household, the ideal sample size for *New York City* is:

- 401 households (10% margin of error, 90% confidence level)
- 573 households (10% margin of error, 95% confidence level)

For this study, 347 New York City households completed the kitchen diary and 428 completed the surveys.

3. LIST OF STANDARDIZED FOOD TYPES USED IN KITCHEN DIARY ANALYSIS

Each kitchen diary entry had a short description of the food or beverage wasted that was filled in by participants. To determine the most wasted foods (see Section 3.4.5 of the main report), the description given by participants was used by researchers to code each entry with a standardized food name. Entries were separated first into the primary classification of either “edible food” or “inedible parts”; items considered “edible food” were split into two groups: 1) typically edible and 2) questionably edible (see Appendix A for more information on definitions related to edibility). The lists below include all standardized food names for all items tracked in kitchen diaries, separated into the three secondary classifications (inedible parts, questionably edible, and typically edible).

List of “Inedible Parts”

Below is the list of materials identified in the kitchen diaries and bin digs that were considered “inedible parts” (the list is the same for all three cities). “Inedible parts” were determined to be those which are not typically consumed in the United States (e.g. banana peels) and/or whether significant skill or effort would be required to render this part of food “edible” (e.g. citrus rinds). (See Appendix A for more information.)

- Artichoke leaves (edible parts removed)
- Avocado skins/pits
- Banana/plantain peels
- Bean shells (tough shells including fava and edamame)
- Pepper cores/stems
- Bones
- Citrus rinds
- Coffee grounds
- Corn cobs/husks
- Date pits
- Dragon fruit skin
- Eggshells
- Eggplant tops
- Garlic skins
- Ginger peels
- Hard stems & stalks (including tomato, apple, bean)
- Lychee skins/pits
- Melon skins/seeds
- Okra tops
- Onion skins/root end
- Papaya seeds/peels
- Pineapple skins/tops
- Pomegranate peels
- Shells (mollusks and nut)
- Squash skins/seeds (including butternut and kabocha squash)
- Stone fruit pits
- Strawberry tops
- Tea bags
- Watermelon rinds

List of “Questionably Edible” Food Items

Below is the list of materials identified in the kitchen diaries and bin digs that were considered “questionably edible” (the list is the same for all three cities). “Questionably edible” is defined as items that can be safely eaten, but may not be considered edible by a portion of the population due to culture and preference. These items might also require additional processing/cooking to make them desirable to eat. (Note that these items were given a primary classification of “edible food” for this study. See Appendix A for more information.)

- Apple cores/skin
- Asparagus ends
- Broccoli stalks
- Cabbage cores
- Carrot peels/tops
- Cauliflower stalks
- Cheese rinds
- Chive/green onion/scallion ends
- Celery tops
- Cucumber peels
- Herb stems (e.g. cilantro/parsley)
- Leek ends
- Lettuce cores
- Kale stalks
- Kiwi peels
- Meat/fish parts (fat/skin)
- Mushroom stems
- Pear cores/skin
- Pickle juice
- Pineapple core
- Potato peels
- Radish leaves
- Root vegetable peels
- Summer squash peels
- Tomato core/skin

List of “Typically Edible” Food Items

Below is the list of materials identified in the kitchen diaries and bin digs that were considered “typically edible” (the list varies for all three cities). “Typically edible” is defined as intended for human consumption and not generally considered inedible. (See Appendix A for more information.) Some items were mixtures of multiple food types, so they were coded in one of three ways:

1. Mixed food items appearing frequently, such as salad, pasta, pizza, and sandwich, were coded as such (e.g. sandwich);
2. Produce-based mixed food items that were unprepared or uncooked and that appeared infrequently (e.g. vegetable scraps of unknown vegetable origin) were categorized as “mixed fruits & vegetables”; and
3. Mixed food items that were cooked or prepared and that appeared infrequently (e.g. lasagna, squash casserole) were categorized as “non-meat dish,” “poultry dish,” “seafood dish,” or “red meat dish.”

“Unidentifiable” was used only in cases where food did not meet any of the criteria above and it could not be determined if food was non-meat-based or meat-based.

Nashville “Typically Edible” Foods

• almond milk	• cheese	• greens	• oil	• salad
• apple	• chicken	• grits	• okra	• sandwich
• artichoke	• chickpeas	• guacamole	• olive	• sauce
• arugula	• chips	• herb	• onion	• seafood dish
• asparagus	• chocolate	• hot dog	• orange	• seitan
• avocado	• coconut milk	• ice cream	• pancake	• shellfish
• banana	• coffee	• jicama	• parsnip	• soda
• beans	• cookie	• kale	• pasta	• soup
• beef	• corn	• kiwi	• pastry	• sour cream
• beer	• couscous	• kohlrabi	• peach	• spinach
• beet	• cracker	• leek	• pear	• squash
• berries	• cranberry	• lemon	• pepper	• strawberry
• bread	• cream cheese	• lentils	• pineapple	• sugar
• broccoli	• cucumber	• lettuce	• pizza	• tea
• brownie	• donut	• lime	• pomegranate	• tomato
• brussels sprout	• egg	• mango	• popcorn	• tortilla
• burrito	• eggplant	• melon	• pork	• turkey
• butter	• fig	• milk	• potato	• turnip
• cabbage	• fish	• mixed fruits & vegetables	• poultry dish	• unidentifiable
• cake	• garlic	• muffin	• pumpkin	• waffle
• cantaloupe	• ginger	• mushroom	• radish	• watermelon
• carrot	• granola	• non-meat dish	• raisin	• wine
• cauliflower	• grape	• nutritional yeast	• raspberry	• yogurt
• celery	• grapefruit	• nuts	• red meat dish	• zucchini
• cereal	• green bean	• oatmeal	• rice	

Denver “Typically Edible” Foods

- alfalfa sprouts
- almond butter
- almond milk
- apple
- artichoke
- arugula
- asparagus
- avocado
- baby formula
- bamboo shoot
- banana
- beans
- beef
- beer
- beet
- berries
- bread
- broccoli
- brussels sprouts
- burrito
- butter
- cabbage
- cactus pear
- cake
- candy
- cantaloupe
- caramel
- carrot
- cauliflower
- celery
- cereal
- chard
- cheese
- chicken
- chili
- chips
- coconut water
- coffee
- cookie
- corn
- cottage cheese
- couscous
- crackers
- cream cheese
- cucumber
- edamame
- egg
- eggplant
- elk
- fennel
- fish
- flour
- garbanzo beans
- garlic
- ginger
- goat
- granola
- grape
- grapefruit
- green bean
- greens
- guacamole
- herb
- ice cream
- jalapeno
- kale
- kiwi
- kohlrabi
- lamb
- lemon
- lettuce
- lime
- mango
- margarine
- milk
- mixed fruits & vegetables
- mushroom
- non-meat dish
- nuts
- oatmeal
- oil
- olive
- onion
- orange
- pancake
- papaya
- parsley
- passionfruit
- pasta
- pastry
- peach
- peanut butter
- pear
- peas
- pepper
- persimmon
- pheasant
- pineapple
- pistachio
- pizza
- plantain
- plum
- pomegranate
- popcorn
- pork
- potato
- poultry dish
- pretzels
- pumpkin
- radicchio
- radish
- raisin
- red meat dish
- rice
- salad
- salt
- sandwich
- sauce
- seafood dish
- seaweed
- shrimp
- soda
- soup
- sour cream
- soy milk
- spinach
- squash
- sugar
- taro
- tea
- tomato
- tortilla
- turkey
- turnip
- unidentifiable
- vinegar
- waffle
- watermelon
- wine
- yogurt
- zucchini

NYC “Typically Edible” Foods

- apple
- artichoke
- arugula
- asparagus
- avocado
- bamboo shoot
- banana
- beans
- beef
- beer
- beet
- berry
- bok choy
- bread
- broccoli
- brussels sprout
- burrito
- butter
- cabbage
- cake
- candy
- capers
- carrot
- cauliflower
- celery
- cereal
- cereal & milk
- cheese
- cherry
- chicken
- chili
- chinese yam
- chips
- chocolate
- coconut
- coffee
- collard greens
- cookie
- corn
- couscous
- cracker
- cream cheese
- crepe
- cucumber
- dates
- dragon fruit
- dry spices
- duck
- edamame
- egg
- eggplant
- endive
- fig
- fish
- flour
- frosting
- garbanzos
- garlic
- ginger
- grape
- grapefruit
- green bean
- guacamole
- herbs
- honey
- ice cream
- jackfruit
- juice
- kale
- kiwi
- lamb
- leek
- lemon
- lentil
- lettuce
- lime
- lotus
- lychee
- mango
- melon
- milk
- mixed fruits & vegetables
- muffin
- mushroom
- nectarine
- non-meat dish
- nuts
- oatmeal
- oil
- okra
- olive
- onion
- orange
- pancake
- papaya
- parsnip
- pasta
- pastry
- peach
- pear
- peas
- pepper
- persimmon
- pickle
- pineapple
- pizza
- plum
- pomegranate
- pomelo
- popcorn
- pork
- potato
- poultry dish
- pretzel
- prune
- pudding
- pumpkin
- quinoa
- radish
- red currant
- red meat dish
- rice
- salad
- sandwich
- sauce
- seafood dish
- seaweed
- seeds
- smoothie
- soda
- soup
- sour cream
- soursop
- soybean
- spinach
- squash
- sugar
- swiss chard
- tamarind
- taro
- tea
- tomato
- tortilla
- turkey
- turnip
- unidentifiable
- vinegar
- waffle
- watercress
- wheat
- wine
- yogurt
- yucca
- zucchini

Appendix E: Kitchen Diary Data

FOOD WASTED BY HOUSEHOLDS (CORRECTED FOR UNDERREPORTING)				
	NASHVILLE	DENVER	NYC	WEIGHTED AVERAGE ALL CITIES
AVERAGE TOTAL POUNDS PER HOUSEHOLD	7.5	9.6	8.4	8.7
AVERAGE EDIBLE POUNDS PER HOUSEHOLD	4.6	7.5	5.4	6.0
AVERAGE TOTAL POUNDS PER CAPITA	3.4	4.2	3.2	3.5
AVERAGE EDIBLE POUNDS PER CAPITA	2.1	3.2	2.1	2.5

FOOD WASTED BY EDIBILITY								
	NASHVILLE		DENVER		NYC		TOTAL	
	# LB	%	# LB	%	# LB	%	# LB	%
Typically Edible	199.1	56%	848.2	66%	1017.1	51%	2064.4	57%
Inedible	130.7	37%	317.1	25%	695.4	35%	1143.2	32%
Questionably Edible	20.2	6%	125.8	10%	264.5	13%	410.4	11%
(blank)	3.5	1%	0.0	0%	0.0	0%	3.5	0%
Total	353.6	100%	1291.0	100%	1977.1	100%	3621.6	100%

FOOD WASTED BY CATEGORY								
	NASHVILLE		DENVER		NYC		TOTAL	
	# LB	%	# LB	%	# LB	%	# LB	%
Inedible	130.7	37%	317.1	25%	695.4	35%	1143.2	32%
Meat & Fish (edible)	8.6	2%	71.5	6%	61.9	3%	141.9	4%
Dairy & Eggs (edible)	18.5	5%	71.4	6%	77.9	4%	167.8	5%
Fruits & Vegetables (edible)	84.3	24%	371.8	29%	522.7	26%	978.7	27%
Baked Goods (edible)	9.9	3%	67.1	5%	78.8	4%	155.8	4%
Dry Food (edible)	4.1	1%	5.9	0%	20.2	1%	30.2	1%
Snacks & Condiments (edible)	11.9	3%	30.6	2%	28.9	1%	71.3	2%
Liquids, Oils, & Grease (edible)	33.6	10%	111.2	9%	81.7	4%	226.5	6%
Prepared Foods & Leftovers (edible)	47.7	13%	239.9	19%	409.7	21%	697.2	19%
Unidentifiable	4.4	1%	4.5	0%	0.0	0%	8.9	0%
Total	353.6	100%	1291.0	100%	1977.1	100%	3621.6	100%

FOOD WASTED BY DISCARD DESTINATION								
	NASHVILLE		DENVER		NYC		TOTAL	
	# LB	%	# LB	%	# LB	%	# LB	%
Trash	181.4	52%	696.2	54%	1033.4	52%	1911.1	53%
Home Compost			145.6	11%	97.5	5%	243.0	7%
Curbside Compost			171.8	13%	444.3	22%	616.1	17%
Compost (unspecified)	97.0	28%					97.0	3%
Compost Dropoff					166.6	8%	166.6	5%
Down the Drain	51.8	15%	207.6	16%	141.0	7%	400.4	11%
Feeding Animals	12.1	3%	31.0	2%	21.7	1%	64.9	2%
Other	3.2	1%	1.8	0%	22.4	1%	27.4	1%
(blank)	4.6	1%	37.0	3%	50.2	3%	91.8	3%
Total	350.1	100%	1291.0	100%	1977.1	100%	3618.2	100%
All Compost (above combined)	97.0	28%	317.4	25%	708.3	36%	1122.6	31%

FOOD WASTED BY LOSS REASON								
	NASHVILLE		DENVER		NYC		TOTAL	
	# LB	%	# LB	%	# LB	%	# LB	%
Improperly Cooked	3.2	1%	2.8	0%	10.8	1%	16.8	0%
Left Out Too Long	24.8	7%	98.8	8%	134.7	7%	258.3	7%
Don't Want As Leftovers	37.7	11%	149.7	12%	206.8	10%	394.1	11%
Past Date on Label	9.5	3%	54.3	4%	76.1	4%	140.0	4%
Too Little to Save	16.1	5%	59.6	5%	84.5	4%	160.3	4%
Moldy or Spoiled	70.5	20%	306.1	24%	334.0	17%	710.6	20%
Doesn't Taste Good	21.6	6%	59.2	5%	85.8	4%	166.7	5%
Inedible Parts	144.7	41%	470.8	36%	978.8	50%	1594.4	44%
Other or Multiple Reasons	18.0	5%	28.7	2%	43.6	2%	90.2	2%
(blank)	9.3	3%	61.0	5%	21.8	1%	92.1	3%
Total	355.4	100%	1291.0	100%	1977.1	100%	3623.5	100%

FOOD WASTED BY MEAL								
	NASHVILLE		DENVER		NYC		TOTAL	
	# LB	%	# LB	%	# LB	%	# LB	%
Breakfast	101.6	29%	286.4	22%	404.7	20%	792.7	22%
Lunch	29.8	8%	133.8	10%	267.0	14%	430.6	12%
Dinner	99.5	28%	431.0	33%	619.2	31%	1149.6	32%
Snacks	31.7	9%	92.3	7%	216.6	11%	340.6	9%
Other & Multiple Meals	90.9	26%	347.6	27%	469.6	24%	908.1	25%
Total	353.6	100%	1291.0	100%	1977.1	100%	3621.6	100%

Appendix F: Survey 1 Data

Q1. WHICH OF THE FOLLOWING BEST DESCRIBES WHO LIVES IN YOUR HOUSEHOLD?								
	# NASHVILLE	% NASHVILLE	# DENVER	% DENVER	# NYC	% NYC	# TOTAL	% TOTAL
FAMILY OR RELATED INDIVIDUALS	48	63%	147	66%	313	73%	508	70%
I LIVE ALONE	16	21%	47	21%	68	16%	131	18%
NON-RELATED INDIVIDUALS (E.G. ROOMMATES)	12	16%	26	12%	45	11%	83	11%
OTHER	0	0%	2	1%	2	<1%	4	1%
TOTAL	76	100%	222	100%	428	100%	726	100%

Q2. HOW MANY PEOPLE LIVE IN YOUR HOUSEHOLD, INCLUDING YOURSELF?								
	# NASHVILLE	% NASHVILLE	# DENVER	% DENVER	# NYC	% NYC	# TOTAL	% TOTAL
1	16	21%	48	22%	71	17%	135	19%
2	26	34%	78	35%	117	27%	221	30%
3	14	18%	48	22%	87	20%	149	21%
4	12	16%	26	12%	94	22%	132	18%
5	3	4%	10	5%	30	7%	43	6%
6	3	4%	7	3%	12	3%	22	3%
7	0	0%	2	1%	7	2%	9	1%
8	0	0%	3	1%	1	0%	4	1%
9	0	0%	0	0%	1	0%	1	0%
10	0	0%	0	0%	1	0%	1	0%
(BLANK)	2	3%	0	0%	7	2%	9	1%
TOTAL	76	100%	222	100%	428	100%	726	100%

Q3. WHAT IS THE AGE OF EACH HOUSEHOLD MEMBER (YEARS)?								
	# NASHVILLE	% NASHVILLE	# DENVER	% DENVER	# NYC	% NYC	# TOTAL	AVG %/AGE
NUMBER OF HOUSEHOLDS WITH CHILDREN (CHILDREN = UNDER 18 YEARS OF AGE)	25	33%	69	31%	155	36%	249	34%
AVERAGE AGE OF OLDEST HOUSEHOLD MEMBER	38.7		46		48.4			46.65
AVERAGE AGE OF ALL PARTICIPANTS OVER 18 YEARS OF AGE	37		44		43.5			42.97

Q4. WHAT IS THE GENDER OF EACH HOUSEHOLD MEMBER?

NASHVILLE	PRIMARY RESPONDENT		ALL HOUSEHOLD MEMBERS	
	#	%	#	%
MALE	19	25%	85	43%
FEMALE	57	75%	111	56%
TRANSGENDER	0	0%	1	1%
NEITHER MALE, FEMALE, OR TRANSGENDER	0	0%	1	1%
(BLANK)	0	0%	0	0%
TOTAL	76	100%	198	100%

DENVER	PRIMARY RESPONDENT		ALL HOUSEHOLD MEMBERS	
	#	%	#	%
MALE	79	36%	274	47%
FEMALE	140	63%	303	52%
TRANSGENDER	1	0%	1	0%
NEITHER MALE, FEMALE, OR TRANSGENDER	0	0%	1	0%
(BLANK)	2	1%	2	0%
TOTAL	222	100%	581	100%

NYC	PRIMARY RESPONDENT		ALL HOUSEHOLD MEMBERS	
	#	%	#	%
MALE	160	37%	516	44%
FEMALE	238	56%	631	54%
TRANSGENDER	2	0%	2	0%
NEITHER MALE, FEMALE, OR TRANSGENDER	1	0%	1	0%
(BLANK)	27	6%	27	2%
TOTAL	428	100%	1177	100%

TOTAL	PRIMARY RESPONDENT		ALL HOUSEHOLD MEMBERS	
	#	%	#	%
MALE	258	36%	875	45%
FEMALE	435	60%	1045	53%
TRANSGENDER	3	0%	4	0%
NEITHER MALE, FEMALE, OR TRANSGENDER	1	0%	3	0%
(BLANK)	29	4%	29	1%
TOTAL	726	100%	1956	100%

Q5. WHAT IS THE EMPLOYMENT OF EACH HOUSEHOLD MEMBER?

NASHVILLE	PRIMARY RESPONDENT		ALL HOUSEHOLD MEMBERS	
	#	%	#	%
FULL-TIME	44	58%	86	52%
PART-TIME	10	13%	19	12%
STUDENT	12	16%	42	26%
RETIRED	2	3%	3	2%
UNEMPLOYED	5	7%	14	9%
(BLANK)	3	4%	0	0%
TOTAL	76	100%	164	100%

DENVER	PRIMARY RESPONDENT		ALL HOUSEHOLD MEMBERS	
	#	%	#	%
FULL-TIME	128	58%	261	49%
PART-TIME	26	12%	53	10%
STUDENT	26	12%	111	21%
RETIRED	5	2%	48	9%
UNEMPLOYED	29	13%	63	12%
(BLANK)	8	4%	2	0%
TOTAL	222	100%	538	100%

NYC	PRIMARY RESPONDENT		ALL HOUSEHOLD MEMBERS	
	#	%	#	%
FULL-TIME	195	46%	458	41%
PART-TIME	51	12%	109	10%
STUDENT	44	10%	298	27%
RETIRED	46	11%	86	8%
UNEMPLOYED	45	11%	120	11%
(BLANK)	47	11%	47	4%
TOTAL	428	100%	1118	100%

TOTAL	PRIMARY RESPONDENT		ALL HOUSEHOLD MEMBERS	
	#	%	#	%
FULL-TIME	367	51%	805	44%
PART-TIME	87	12%	181	10%
STUDENT	82	11%	451	25%
RETIRED	53	7%	137	8%
UNEMPLOYED	79	11%	197	11%
(BLANK)	58	8%	49	3%
TOTAL	726	100%	1820	100%

Q6. WHAT IS THE ETHNICITY/RACE OF EACH HOUSEHOLD MEMBER?								
HOUSEHOLD MAKE-UP BY ETHNICITY/RACE	# NASHVILLE	% NASHVILLE	# DENVER	% DENVER	# NYC	% NYC	# TOTAL	% TOTAL
WHITE (ALL)	52	68%	133	60%	199	46%	384	53%
BLACK OR AFRICAN-AMERICAN (ALL)	8	11%	8	4%	40	9%	56	8%
AMERICAN INDIAN/ALASKAN NATIVE (ALL)	0	0%	1	0%	0	0%	1	0%
HISPANIC/LATINO (ALL)	0	0%	28	13%	15	4%	43	6%
ASIAN OR PACIFIC ISLANDER (ALL)	1	1%	3	1%	46	11%	50	7%
MIXED RACE HOUSEHOLD	11	14%	41	18%	84	20%	136	19%
(BLANK)	4	5%	8	4%	44	10%	56	8%
TOTAL	76	100%	222	100%	428	100%	726	100%

NUMBER OF HOUSEHOLDS WITH AT LEAST ONE MEMBER IDENTIFYING AS THE FOLLOWING	# NASHVILLE	% NASHVILLE	# DENVER	% DENVER	# NYC	% NYC	# TOTAL	% TOTAL
WHITE	62	82%	165	74%	258	60%	485	67%
BLACK OR AFRICAN-AMERICAN	11	14%	20	9%	63	15%	94	13%
AMERICAN INDIAN/ALASKAN NATIVE	2	3%	8	4%	4	1%	14	2%
HISPANIC/LATINO	6	8%	47	21%	32	7%	85	12%
PACIFIC ISLANDER	0	0%	0	0%	4	1%	4	1%
ASIAN	5	7%	11	5%	79	18%	95	13%
OTHER	0	0%	0	0%	27	6%	27	4%

Q7. WHAT IS THE PRIMARY LANGUAGE SPOKEN AT HOME?								
	# NASHVILLE	% NASHVILLE	# DENVER	% DENVER	# NYC	% NYC	# TOTAL	% TOTAL
ENGLISH	66	87%	176	79%	287	67%	529	73%
SPANISH	1	1%	6	3%	3	1%	10	1%
CHINESE	0	0%	0	0%	17	4%	17	2%
MORE THAN ONE LANGUAGE SPOKEN AT HOME	0	0%	6	3%	29	7%	35	5%
OTHER	3	4%	0	0%	21	5%	24	3%
(BLANK)	6	8%	34	15%	71	17%	111	15%
TOTAL	76	100%	222	100%	428	100%	726	100%

Q8. WHAT IS THE COUNTRY OF ORIGIN OF EACH HOUSEHOLD MEMBER?

	# NASHVILLE	% NASHVILLE	# DENVER	% DENVER	# NYC	% NYC	# TOTAL	% TOTAL
HOUSEHOLDS WITH MEMBER BORN OUTSIDE OF UNITED STATES	12	16%	40	18%	160	37%	212	29%
HOUSEHOLDS WITH NO MEMBERS BORN OUTSIDE OF UNITED STATES	53	70%	128	58%	173	40%	354	49%
(BLANK)	11	14%	54	24%	95	22%	160	22%
TOTAL	76	100%	222	100%	428	100%	726	100%

Q9. WHAT IS THE EDUCATION LEVEL OF EACH HOUSEHOLD MEMBER?

HIGHEST LEVEL OF EDUCATION ACHIEVED BY ANY HOUSEHOLD MEMBER	# NASHVILLE	% NASHVILLE	# DENVER	% DENVER	# NYC	% NYC	# TOTAL	% TOTAL
K-12	1	1%	4	2%	4	1%	9	1%
HIGH SCHOOL/GED	3	4%	9	4%	29	7%	41	6%
SOME HIGHER EDUCATION	4	5%	32	14%	44	10%	80	11%
BACHELOR'S DEGREE	31	41%	64	29%	90	21%	185	25%
GRADUATE DEGREE	24	32%	57	26%	148	35%	229	32%
PROFESSIONAL DEGREE	6	8%	27	12%	49	11%	82	11%
(BLANK)	7	9%	29	13%	64	15%	100	14%
TOTAL	76	100%	222	100%	428	100%	726	100%

Q10. WHAT IS YOUR APPROXIMATE ANNUAL HOUSEHOLD INCOME?

	# NASHVILLE	% NASHVILLE	# DENVER	% DENVER	# NYC	% NYC	# TOTAL	% TOTAL
LESS THAN \$25K	5	7%	22	10%	58	14%	85	12%
\$25K-\$35K	10	13%	17	8%	27	6%	54	7%
\$35K-\$45K	9	12%	22	10%	26	6%	57	8%
\$45K-\$55K	4	5%	13	6%	20	5%	37	5%
\$55K-\$65K	10	13%	13	6%	22	5%	45	6%
\$65K-\$75K	9	12%	16	7%	20	5%	45	6%
\$75K-\$85K	6	8%	11	5%	22	5%	39	5%
\$85K-\$95K	3	4%	20	9%	25	6%	48	7%
\$95K AND OVER	20	26%	84	38%	192	45%	296	41%
(BLANK)	0	0%	4	2%	16	4%	20	3%
TOTAL	76	100%	222	100%	428	100%	726	100%

Q11. APPROXIMATELY HOW MUCH MONEY DOES YOUR HOUSEHOLD SPEND ON FOOD AND BEVERAGES EATEN AT HOME EACH WEEK? (DO NOT INCLUDE FOOD EATEN AWAY FROM HOME)

	# NASHVILLE	% NASHVILLE	# DENVER	% DENVER	# NYC	% NYC	# TOTAL	% TOTAL
\$50 OR LESS	10	13%	34	15%	44	10%	88	12%
\$51-\$100	29	38%	65	29%	122	29%	216	30%
\$101-\$150	20	26%	68	31%	107	25%	195	27%
\$151-\$200	9	12%	28	13%	73	17%	110	15%
\$201-\$250	6	8%	14	6%	35	8%	55	8%
\$251-\$300	0	0%	6	3%	26	6%	32	4%
MORE THAN \$301	1	1%	6	3%	11	3%	18	2%
(BLANK)	1	1%	1	0%	10	2%	12	2%
TOTAL	76	100%	222	100%	428	100%	726	100%

Q12. APPROXIMATELY HOW MUCH MONEY DOES YOUR HOUSEHOLD SPEND ON FOOD AND BEVERAGES EATEN AWAY FROM HOME EACH WEEK? (DO NOT INCLUDE FOOD EATEN AT HOME)

	# NASHVILLE	% NASHVILLE	# DENVER	% DENVER	# NYC	% NYC	# TOTAL	% TOTAL
\$50 OR LESS	31	41%	96	43%	151	35%	278	38%
\$51-\$100	30	39%	76	34%	126	29%	232	32%
\$101-\$150	9	12%	26	12%	69	16%	104	14%
\$151-\$200	2	3%	12	5%	31	7%	45	6%
\$201-\$250	1	1%	7	3%	25	6%	33	5%
\$251-\$300	0	0%	1	0%	7	2%	8	1%
MORE THAN \$301	0	0%	1	0%	7	2%	8	1%
(BLANK)	3	4%	3	1%	12	3%	18	2%
TOTAL	76	100%	222	100%	428	100%	726	100%

Q13. ARE YOU FAMILIAR WITH THE ISSUES RELATED TO WASTED FOOD? IF YES, HOW DID YOU LEARN ABOUT IT?

FAMILIAR WITH ISSUES RELATED TO WASTED FOOD?	# NASHVILLE	% NASHVILLE	# DENVER	% DENVER	# NYC	% NYC	# TOTAL	% TOTAL
YES	53	70%	158	71%	315	74%	526	72%
NO	21	28%	60	27%	105	25%	186	26%
(BLANK)	2	3%	4	2%	8	2%	14	2%
TOTAL	76	100%	222	100%	428	100%	726	100%

Q13. ARE YOU FAMILIAR WITH THE ISSUES RELATED TO WASTED FOOD? IF YES, HOW DID YOU LEARN ABOUT IT? (CONTINUED)

HOW DID HOUSEHOLDS LEARN ABOUT WASTED FOOD?	# NASHVILLE	% NASHVILLE	# DENVER	% DENVER	# NYC	% NYC	# TOTAL	% TOTAL
SOCIAL MEDIA	24	32%	73	33%	152	36%	249	34%
ONLINE AD	6	8%	8	4%	30	7%	44	6%
BILLBOARD	0	0%	1	0%	11	3%	12	2%
RADIO	12	16%	35	16%	63	15%	110	15%
WORD OF MOUTH	22	29%	61	27%	146	34%	229	32%
DIRECT EMAIL	7	9%	4	2%	20	5%	31	4%
DOCUMENTARY	21	28%	63	28%	124	29%	208	29%
TELEVISION	15	20%	68	31%	144	34%	227	31%
BOOK	10	13%	18	8%	67	16%	95	13%
CLASS/SCHOOLING	9	12%	42	19%	94	22%	145	20%
SHOWING OF "JUST EAT IT" IN NASHVILLE	9	12%	N/A	N/A	N/A	N/A	9	1%
OTHER	11	14%	46	21%	93	22%	150	21%

Q14. WHERE, HOW FREQUENTLY, AND USING WHAT MODE OF TRANSPORTATION DOES YOUR HOUSEHOLD NORMALLY PURCHASE FOOD?

NASHVILLE	LESS THAN ONCE PER WEEK	1-2 TIMES PER WEEK	3 OR MORE TIMES PER WEEK	TOTAL NASHVILLE	
	#	#	#	#	% OF HH
SUPERSTORE	25	3	2	30	39%
GROCERY STORE	10	50	15	75	99%
CORNER STORE/CONVENIENCE STORE	15	4	4	23	30%
FARMERS' MARKET	42	8	1	51	67%
FOOD PANTRY	0	0	0	0	0%
BACKYARD GARDEN	11	8	6	25	33%
LOCAL GARDEN (NOT AT YOUR HOUSEHOLD)	6	0	1	7	9%
COMMUNITY SUPPORTED AGRICULTURE	5	1	0	6	8%
ONLINE DELIVERY SERVICE	7	1	0	8	11%

Q14. WHERE, HOW FREQUENTLY, AND USING WHAT MODE OF TRANSPORTATION DOES YOUR HOUSEHOLD NORMALLY PURCHASE FOOD? (CONTINUED)

DENVER	LESS THAN ONCE PER WEEK	1-2 TIMES PER WEEK	3 OR MORE TIMES PER WEEK	TOTAL DENVER	
	#	#	#	#	% OF HH
SUPERSTORE	97	36	2	135	61%
GROCERY STORE	27	131	53	211	95%
CORNER STORE/CONVENIENCE STORE	55	28	4	87	39%
FARMERS' MARKET	73	13	2	88	40%
FOOD PANTRY	26	5	2	33	15%
BACKYARD GARDEN	24	29	24	77	35%
LOCAL GARDEN (NOT AT YOUR HOUSEHOLD)	25	4	1	30	14%
COMMUNITY SUPPORTED AGRICULTURE	19	5	2	26	12%
ONLINE DELIVERY SERVICE	39	11	0	50	23%

NYC	LESS THAN ONCE PER WEEK	1-2 TIMES PER WEEK	3 OR MORE TIMES PER WEEK	TOTAL NYC	
	#	#	#	#	% OF HH
SUPERSTORE	120	41	23	184	43%
GROCERY STORE	52	175	147	374	87%
CORNER STORE/CONVENIENCE STORE	93	96	54	243	57%
FARMERS' MARKET	120	41	13	174	41%
FOOD PANTRY	21	4	5	30	7%
BACKYARD GARDEN	31	5	13	49	11%
LOCAL GARDEN (NOT AT YOUR HOUSEHOLD)	26	3	2	31	7%
COMMUNITY SUPPORTED AGRICULTURE	28	6	3	37	9%
ONLINE DELIVERY SERVICE	66	32	11	109	25%

TOTAL	LESS THAN ONCE PER WEEK	1-2 TIMES PER WEEK	3 OR MORE TIMES PER WEEK	TOTAL ALL CITIES	
	#	#	#	#	% OF HH
SUPERSTORE	242	80	27	349	48%
GROCERY STORE	89	356	215	660	91%
CORNER STORE/CONVENIENCE STORE	163	128	62	353	49%
FARMERS' MARKET	235	62	16	313	43%
FOOD PANTRY	47	9	7	63	9%
BACKYARD GARDEN	66	42	43	151	21%
LOCAL GARDEN (NOT AT YOUR HOUSEHOLD)	57	7	4	68	9%
COMMUNITY SUPPORTED AGRICULTURE	52	12	5	69	10%
ONLINE DELIVERY SERVICE	112	44	11	167	23%

Q14. WHERE, HOW FREQUENTLY, AND USING WHAT MODE OF TRANSPORTATION DOES YOUR HOUSEHOLD NORMALLY PURCHASE FOOD? (CONTINUED)

NUMBER/PERCENTAGE SHOPPING AT LOCATION AT LEAST ONCE PER WEEK	# NASHVILLE	% NASHVILLE	# DENVER	% DENVER	# NYC	% NYC	# TOTAL	% TOTAL
SUPERSTORE	5	7%	38	17%	64	15%	107	15%
GROCERY STORE	65	86%	184	83%	322	75%	571	79%
CORNER STORE/ CONVENIENCE STORE	8	11%	32	14%	150	35%	190	26%
FARMERS' MARKET	9	12%	15	7%	54	13%	78	11%
FOOD PANTRY	0	0%	7	3%	9	2%	16	2%
BACKYARD GARDEN	14	18%	53	24%	18	4%	85	12%
LOCAL GARDEN (NOT AT YOUR HOUSEHOLD)	1	1%	5	2%	5	1%	11	2%
COMMUNITY SUPPORTED AGRICULTURE	1	1%	7	3%	9	2%	17	2%
ONLINE DELIVERY SERVICE	1	1%	11	5%	43	10%	55	8%

NUMBER OF HOUSEHOLDS USING MODE OF TRANSPORTATION FOR FOOD SHOPPING	# NASHVILLE	% NASHVILLE	# DENVER	% DENVER	# NYC	% NYC	# TOTAL	% TOTAL
OWNED CAR	73	96%	209	94%	179	42%	461	63%
BORROWED CAR	4	5%	19	9%	60	14%	83	11%
PUBLIC TRANSPORTATION	2	3%	4	2%	97	23%	103	14%
BICYCLING	7	9%	28	13%	37	9%	72	10%
WALKING	21	28%	80	36%	335	78%	436	60%
DELIVERY	10	13%	10	5%	101	24%	121	17%

Q15. ON AVERAGE, HOW FREQUENTLY DOES YOUR HOUSEHOLD PREPARE OR COOK (NOT NECESSARILY EAT) THE FOLLOWING MEALS AT HOME DURING AN AVERAGE WEEK?

NASHVILLE	EVERY DAY		AT LEAST 5 DAYS		BETWEEN 2 - 4 DAYS		BETWEEN 1 - 2 DAYS		LESS THAN ONCE		(BLANK)	
	#	%	#	%	#	%	#	%	#	%	#	%
BREAKFAST	38	50%	15	20%	9	12%	6	8%	7	9%	1	1%
LUNCH	14	18%	25	33%	16	21%	15	20%	5	7%	1	1%
DINNER	13	17%	38	50%	17	22%	5	7%	2	3%	1	1%
SNACKS	22	29%	21	28%	10	13%	14	18%	7	9%	2	3%

DENVER	EVERY DAY		AT LEAST 5 DAYS		BETWEEN 2 - 4 DAYS		BETWEEN 1 - 2 DAYS		LESS THAN ONCE		(BLANK)	
	#	%	#	%	#	%	#	%	#	%	#	%
BREAKFAST	109	49%	45	20%	31	14%	24	11%	10	5%	3	1%
LUNCH	42	19%	72	32%	53	24%	38	17%	10	5%	7	3%
DINNER	48	22%	100	45%	65	29%	7	3%	1	0%	1	0%
SNACKS	89	40%	43	19%	32	14%	22	10%	23	10%	12	5%

NYC	EVERY DAY		AT LEAST 5 DAYS		BETWEEN 2 - 4 DAYS		BETWEEN 1 - 2 DAYS		LESS THAN ONCE		(BLANK)	
	#	%	#	%	#	%	#	%	#	%	#	%
BREAKFAST	217	51%	70	16%	53	12%	45	11%	25	6%	18	4%
LUNCH	86	20%	85	20%	111	26%	80	20%	42	10%	24	6%
DINNER	115	27%	159	37%	100	23%	24	6%	11	3%	19	4%
SNACKS	149	35%	72	17%	66	15%	43	11%	56	13%	42	10%

TOTAL	EVERY DAY		AT LEAST 5 DAYS		BETWEEN 2 - 4 DAYS		BETWEEN 1 - 2 DAYS		LESS THAN ONCE		(BLANK)	
	#	%	#	%	#	%	#	%	#	%	#	%
BREAKFAST	364	50%	130	18%	93	13%	75	10%	42	6%	22	3%
LUNCH	142	20%	182	25%	180	25%	133	18%	57	8%	32	4%
DINNER	176	24%	297	41%	182	25%	36	5%	14	2%	21	3%
SNACKS	260	36%	136	19%	108	15%	79	11%	86	12%	56	8%

NUMBER/PERCENTAGE WHO RESPONDED THEY PREPARE OR COOK THE FOLLOWING MEALS AT HOME BETWEEN 2-4 DAYS/WEEK OR MORE:

	# NASHVILLE	% NASHVILLE	# DENVER	% DENVER	# NYC	% NYC	# TOTAL	% TOTAL
BREAKFAST	62	82%	185	83%	340	79%	587	81%
LUNCH	55	72%	167	75%	282	66%	504	69%
DINNER	68	89%	213	96%	374	87%	655	90%
SNACKS	53	70%	164	74%	287	67%	504	69%

NUMBER/PERCENTAGE WHO RESPONDED THEY PREPARE OR COOK THE FOLLOWING MEALS AT HOME BETWEEN 1-2 DAYS/WEEK OR LESS:

	# NASHVILLE	% NASHVILLE	# DENVER	% DENVER	# NYC	% NYC	# TOTAL	% TOTAL
BREAKFAST	13	17%	34	15%	70	16%	117	16%
LUNCH	20	26%	48	22%	122	29%	190	26%
DINNER	7	9%	8	4%	35	8%	50	7%
SNACKS	21	28%	45	20%	99	24%	165	23%

Q16. ON AVERAGE, HOW FREQUENTLY DOES YOUR HOUSEHOLD EAT (NOT NECESSARILY PREPARE OR COOK) THE FOLLOWING MEALS AT HOME DURING AN AVERAGE WEEK?

NASHVILLE	EVERY DAY		AT LEAST 5 DAYS		BETWEEN 2 - 4 DAYS		BETWEEN 1 - 2 DAYS		LESS THAN ONCE		(BLANK)	
	#	%	#	%	#	%	#	%	#	%	#	%
BREAKFAST	38	50%	16	21%	8	11%	8	11%	5	7%	1	1%
LUNCH	11	14%	10	13%	18	24%	30	39%	6	8%	1	1%
DINNER	17	22%	36	47%	13	17%	6	8%	2	3%	2	3%
SNACKS	22	29%	20	26%	18	24%	11	14%	4	5%	1	1%

DENVER	EVERY DAY		AT LEAST 5 DAYS		BETWEEN 2 - 4 DAYS		BETWEEN 1 - 2 DAYS		LESS THAN ONCE		(BLANK)	
	#	%	#	%	#	%	#	%	#	%	#	%
BREAKFAST	99	45%	36	16%	28	13%	28	13%	19	9%	12	5%
LUNCH	29	13%	54	24%	47	21%	56	25%	24	11%	12	5%
DINNER	55	25%	93	42%	50	23%	11	5%	8	4%	5	2%
SNACKS	85	38%	42	19%	36	16%	22	10%	21	9%	16	7%

NYC	EVERY DAY		AT LEAST 5 DAYS		BETWEEN 2 - 4 DAYS		BETWEEN 1 - 2 DAYS		LESS THAN ONCE		(BLANK)	
	#	%	#	%	#	%	#	%	#	%	#	%
BREAKFAST	206	48%	70	16%	48	11%	44	10%	35	8%	25	6%
LUNCH	72	17%	68	16%	109	25%	92	21%	55	13%	32	7%
DINNER	124	29%	166	39%	79	18%	24	6%	12	3%	23	5%
SNACKS	150	35%	78	18%	74	17%	50	12%	32	7%	44	10%

TOTAL	EVERY DAY		AT LEAST 5 DAYS		BETWEEN 2 - 4 DAYS		BETWEEN 1 - 2 DAYS		LESS THAN ONCE		(BLANK)	
	#	%	#	%	#	%	#	%	#	%	#	%
BREAKFAST	343	47%	122	17%	84	12%	80	11%	59	8%	38	5%
LUNCH	112	15%	132	18%	174	24%	178	25%	85	12%	45	6%
DINNER	196	27%	295	41%	142	20%	41	6%	22	3%	30	4%
SNACKS	257	35%	140	19%	128	18%	83	11%	57	8%	61	8%

NUMBER/PERCENTAGE WHO RESPONDED THEY EAT THE FOLLOWING MEALS AT HOME BETWEEN 2-4 DAYS/WEEK OR MORE:

	# NASHVILLE	% NASHVILLE	# DENVER	% DENVER	# NYC	% NYC	# TOTAL	% TOTAL
BREAKFAST	62	82%	163	73%	324	76%	549	76%
LUNCH	39	51%	130	59%	249	58%	418	58%
DINNER	66	87%	198	89%	369	86%	633	87%
SNACKS	60	79%	163	73%	302	71%	525	72%

NUMBER/PERCENTAGE WHO RESPONDED THEY EAT THE FOLLOWING MEALS AT HOME BETWEEN 1-2 DAYS/WEEK OR LESS:

	# NASHVILLE	% NASHVILLE	# DENVER	% DENVER	# NYC	% NYC	# TOTAL	% TOTAL
BREAKFAST	13	17%	47	21%	79	18%	139	19%
LUNCH	36	47%	80	36%	147	34%	263	36%
DINNER	8	11%	19	9%	36	8%	63	9%
SNACKS	15	20%	43	19%	82	19%	140	19%

Q17. IS YOUR PRIMARY REFRIGERATOR GENERALLY...

	# NASHVILLE	% NASHVILLE	# DENVER	% DENVER	# NYC	% NYC	# TOTAL	% TOTAL
MOSTLY FULL	29	38%	102	46%	219	51%	350	48%
HALF FULL	39	51%	98	44%	164	38%	301	41%
FAIRLY EMPTY	7	9%	21	9%	29	7%	57	8%
DON'T HAVE ONE	0	0%	0	0%	1	0%	1	0%
(BLANK)	1	1%	1	0%	15	4%	17	2%
TOTAL	76	100%	222	100%	428	100%	726	100%

Q18. IS YOUR SECONDARY REFRIGERATOR OR FREEZER GENERALLY...

	# NASHVILLE	% NASHVILLE	# DENVER	% DENVER	# NYC	% NYC	# TOTAL	% TOTAL
MOSTLY FULL	14	18%	28	13%	55	13%	97	13%
HALF FULL	8	11%	37	17%	62	14%	107	15%
FAIRLY EMPTY	5	7%	23	10%	25	6%	53	7%
DON'T HAVE ONE	47	62%	132	59%	269	63%	448	62%
(BLANK)	2	3%	2	1%	17	4%	21	3%
TOTAL	76	100%	222	100%	428	100%	726	100%

Q19. WHICH OF THE FOLLOWING BEST DESCRIBES YOUR THOUGHTS ABOUT YOUR REFRIGERATOR?

	# NASHVILLE	% NASHVILLE	# DENVER	% DENVER	# NYC	% NYC	# TOTAL	% TOTAL
IT MAKES ME UNCOMFORTABLE OR NERVOUS IF MY REFRIGERATOR IS TOO EMPTY	21	28%	46	21%	100	23%	167	23%
IT MAKES ME UNCOMFORTABLE OR NERVOUS IF MY REFRIGERATOR IS TOO FULL	18	24%	48	22%	81	19%	147	20%
I DON'T CARE OR DON'T THINK ABOUT HOW FULL MY REFRIGERATOR IS	36	47%	127	57%	231	54%	394	54%
(BLANK)	1	1%	1	0%	16	4%	18	2%
TOTAL	76	100%	222	100%	428	100%	726	100%

Q20. WHEN PLANNING A VISIT TO THE GROCERY STORE OR WHEN SHOPPING FOR FOOD, HOW OFTEN DOES YOUR HOUSEHOLD DO THE FOLLOWING...

NASHVILLE	NEVER		RARELY		SOMETIMES		OFTEN		ALWAYS		N/A		(BLANK)	
	#	%	#	%	#	%	#	%	#	%	#	%	#	%
MAKE A SHOPPING LIST	2	3%	7	9%	14	18%	22	29%	30	39%	0	0%	1	1%
CHECK TO SEE WHAT IS IN YOUR REFRIGERATOR/FREEZER AND CUPBOARDS BEFORE YOU GO SHOPPING	2	3%	5	7%	12	16%	36	47%	20	26%	0	0%	1	1%
PLAN YOUR MEALS BEFORE SHOPPING	2	3%	13	17%	25	33%	25	33%	10	13%	0	0%	1	1%
ESTIMATE HOW MUCH OF EACH ITEM YOU NEED TO BUY BEFORE GOING SHOPPING	3	4%	8	11%	14	18%	30	39%	20	26%	0	0%	1	1%
BUY ONLY ITEMS ON YOUR SHOPPING LIST IN THE STORE	4	5%	17	22%	20	26%	29	38%	3	4%	2	3%	1	1%
BUY FOOD IN LARGER QUANTITIES THAN DESIRED DUE TO THE WAY FOOD IS PACKAGED	1	1%	20	26%	43	57%	10	13%	1	1%	0	0%	1	1%
PURCHASE MORE OF A PRODUCT THAN YOU NEED BECAUSE IT IS ON SALE	2	3%	17	22%	43	57%	12	16%	1	1%	0	0%	1	1%
PURCHASE MORE OF A PRODUCT THAN YOU NEED BECAUSE IT IS CHEAPER TO BUY IN LARGER PACKAGES OR QUANTITIES	4	5%	18	24%	36	47%	16	21%	1	1%	0	0%	1	1%
PURCHASE SOMETHING UNPLANNED BECAUSE IT LOOKS GOOD AT THE TIME	0	0%	8	11%	42	55%	24	32%	1	1%	0	0%	1	1%

DENVER	NEVER		RARELY		SOMETIMES		OFTEN		ALWAYS		N/A		(BLANK)	
	#	%	#	%	#	%	#	%	#	%	#	%	#	%
MAKE A SHOPPING LIST	10	5%	22	10%	37	17%	63	28%	88	40%	0	0%	2	1%
CHECK TO SEE WHAT IS IN YOUR REFRIGERATOR/FREEZER AND CUPBOARDS BEFORE YOU GO SHOPPING	7	3%	16	7%	37	17%	84	38%	76	34%	0	0%	2	1%
PLAN YOUR MEALS BEFORE SHOPPING	9	4%	28	13%	73	33%	75	34%	34	15%	0	0%	3	1%
ESTIMATE HOW MUCH OF EACH ITEM YOU NEED TO BUY BEFORE GOING SHOPPING	10	5%	28	13%	47	21%	73	33%	62	28%	1	0%	1	0%
BUY ONLY ITEMS ON YOUR SHOPPING LIST IN THE STORE	23	10%	52	23%	53	24%	76	34%	12	5%	5	2%	1	0%
BUY FOOD IN LARGER QUANTITIES THAN DESIRED DUE TO THE WAY FOOD IS PACKAGED	9	4%	59	27%	95	43%	52	23%	5	2%	1	0%	1	0%
PURCHASE MORE OF A PRODUCT THAN YOU NEED BECAUSE IT IS ON SALE	10	5%	62	28%	96	43%	46	21%	5	2%	2	1%	1	0%
PURCHASE MORE OF A PRODUCT THAN YOU NEED BECAUSE IT IS CHEAPER TO BUY IN LARGER PACKAGES OR QUANTITIES	14	6%	55	25%	82	37%	58	26%	9	4%	2	1%	2	1%
PURCHASE SOMETHING UNPLANNED BECAUSE IT LOOKS GOOD AT THE TIME	2	1%	31	14%	120	54%	55	25%	10	5%	1	0%	3	1%

Q20. WHEN PLANNING A VISIT TO THE GROCERY STORE OR WHEN SHOPPING FOR FOOD, HOW OFTEN DOES YOUR HOUSEHOLD DO THE FOLLOWING... (CONT.)

NYC	NEVER		RARELY		SOMETIMES		OFTEN		ALWAYS		N/A		(BLANK)	
	#	%	#	%	#	%	#	%	#	%	#	%	#	%
MAKE A SHOPPING LIST	41	10%	44	10%	90	21%	127	30%	107	25%	4	1%	15	4%
CHECK TO SEE WHAT IS IN YOUR REFRIGERATOR/FREEZER AND CUPBOARDS BEFORE YOU GO SHOPPING	10	2%	30	7%	90	21%	152	36%	127	30%	3	1%	16	4%
PLAN YOUR MEALS BEFORE SHOPPING	25	6%	48	11%	144	34%	118	28%	76	18%	4	1%	13	3%
ESTIMATE HOW MUCH OF EACH ITEM YOU NEED TO BUY BEFORE GOING SHOPPING	20	5%	34	8%	116	27%	135	32%	104	24%	3	1%	16	4%
BUY ONLY ITEMS ON YOUR SHOPPING LIST IN THE STORE	49	11%	89	21%	117	27%	109	25%	24	6%	25	6%	15	4%
BUY FOOD IN LARGER QUANTITIES THAN DESIRED DUE TO THE WAY FOOD IS PACKAGED	23	5%	111	26%	190	44%	73	17%	11	3%	3	1%	17	4%
PURCHASE MORE OF A PRODUCT THAN YOU NEED BECAUSE IT IS ON SALE	37	9%	92	21%	199	46%	64	15%	19	4%	2	0%	15	4%
PURCHASE MORE OF A PRODUCT THAN YOU NEED BECAUSE IT IS CHEAPER TO BUY IN LARGER PACKAGES OR QUANTITIES	42	10%	88	21%	178	42%	84	20%	17	4%	3	1%	16	4%
PURCHASE SOMETHING UNPLANNED BECAUSE IT LOOKS GOOD AT THE TIME	16	4%	52	12%	213	50%	113	26%	20	5%	1	0%	13	3%

TOTAL	NEVER		RARELY		SOMETIMES		OFTEN		ALWAYS		N/A		(BLANK)	
	#	%	#	%	#	%	#	%	#	%	#	%	#	%
MAKE A SHOPPING LIST	53	7%	73	10%	141	19%	212	29%	225	31%	4	1%	18	2%
CHECK TO SEE WHAT IS IN YOUR REFRIGERATOR/FREEZER AND CUPBOARDS BEFORE YOU GO SHOPPING	19	3%	51	7%	139	19%	272	37%	223	31%	3	0%	19	3%
PLAN YOUR MEALS BEFORE SHOPPING	36	5%	89	12%	242	33%	218	30%	120	17%	4	1%	17	2%
ESTIMATE HOW MUCH OF EACH ITEM YOU NEED TO BUY BEFORE GOING SHOPPING	33	5%	70	10%	177	24%	238	33%	186	26%	4	1%	18	2%
BUY ONLY ITEMS ON YOUR SHOPPING LIST IN THE STORE	76	10%	158	22%	190	26%	214	29%	39	5%	32	4%	17	2%
BUY FOOD IN LARGER QUANTITIES THAN DESIRED DUE TO THE WAY FOOD IS PACKAGED	33	5%	190	26%	328	45%	135	19%	17	2%	4	1%	19	3%
PURCHASE MORE OF A PRODUCT THAN YOU NEED BECAUSE IT IS ON SALE	49	7%	171	24%	338	47%	122	17%	25	3%	4	1%	17	2%
PURCHASE MORE OF A PRODUCT THAN YOU NEED BECAUSE IT IS CHEAPER TO BUY IN LARGER PACKAGES OR QUANTITIES	60	8%	161	22%	296	41%	158	22%	27	4%	5	1%	19	3%
PURCHASE SOMETHING UNPLANNED BECAUSE IT LOOKS GOOD AT THE TIME	18	2%	91	13%	375	52%	192	26%	31	4%	2	0%	17	2%

Q20. WHEN PLANNING A VISIT TO THE GROCERY STORE OR WHEN SHOPPING FOR FOOD, HOW OFTEN DOES YOUR HOUSEHOLD DO THE FOLLOWING... (CONT.)
NUMBER/PERCENTAGE WHO "ALWAYS" OR "OFTEN" DO THE FOLLOWING BEFORE OR DURING SHOPPING FOR FOOD:

	# NASHVILLE	% NASHVILLE	# DENVER	% DENVER	# NYC	% NYC	# TOTAL	% TOTAL
MAKE A SHOPPING LIST	52	68%	151	68%	234	55%	437	60%
CHECK TO SEE WHAT IS IN YOUR REFRIGERATOR/FREEZER AND CUPBOARDS BEFORE YOU GO SHOPPING	56	74%	160	72%	279	65%	495	68%
PLAN YOUR MEALS BEFORE SHOPPING	35	46%	109	49%	194	45%	338	47%
ESTIMATE HOW MUCH OF EACH ITEM YOU NEED TO BUY BEFORE GOING SHOPPING	50	66%	135	61%	239	56%	424	58%
BUY ONLY ITEMS ON YOUR SHOPPING LIST IN THE STORE	32	42%	88	40%	133	31%	253	35%
BUY FOOD IN LARGER QUANTITIES THAN DESIRED DUE TO THE WAY FOOD IS PACKAGED	11	14%	57	26%	84	20%	152	21%
PURCHASE MORE OF A PRODUCT THAN YOU NEED BECAUSE IT IS ON SALE	13	17%	51	23%	83	19%	147	20%
PURCHASE MORE OF A PRODUCT THAN YOU NEED BECAUSE IT IS CHEAPER TO BUY IN LARGER PACKAGES OR QUANTITIES	17	22%	67	30%	101	24%	185	25%
PURCHASE SOMETHING UNPLANNED BECAUSE IT LOOKS GOOD AT THE TIME	25	33%	65	29%	133	31%	223	31%

Q20. WHEN PLANNING A VISIT TO THE GROCERY STORE OR WHEN SHOPPING FOR FOOD, HOW OFTEN DOES YOUR HOUSEHOLD DO THE FOLLOWING... (CONT.)

NUMBER/PERCENTAGE WHO "RARELY" OR "NEVER" DO THE FOLLOWING BEFORE OR DURING SHOPPING FOR FOOD:

	# NASHVILLE	% NASHVILLE	# DENVER	% DENVER	# NYC	% NYC	# TOTAL	% TOTAL
MAKE A SHOPPING LIST	9	12%	32	14%	85	20%	126	17%
CHECK TO SEE WHAT IS IN YOUR REFRIGERATOR/FREEZER AND CUPBOARDS BEFORE YOU GO SHOPPING	7	9%	23	10%	40	9%	70	10%
PLAN YOUR MEALS BEFORE SHOPPING	15	20%	37	17%	73	17%	125	17%
ESTIMATE HOW MUCH OF EACH ITEM YOU NEED TO BUY BEFORE GOING SHOPPING	11	14%	38	17%	54	13%	103	14%
BUY ONLY ITEMS ON YOUR SHOPPING LIST IN THE STORE	21	28%	75	34%	138	32%	234	32%
BUY FOOD IN LARGER QUANTITIES THAN DESIRED DUE TO THE WAY FOOD IS PACKAGED	21	28%	68	31%	134	31%	223	31%
PURCHASE MORE OF A PRODUCT THAN YOU NEED BECAUSE IT IS ON SALE	19	25%	72	32%	129	30%	220	30%
PURCHASE MORE OF A PRODUCT THAN YOU NEED BECAUSE IT IS CHEAPER TO BUY IN LARGER PACKAGES OR QUANTITIES	22	29%	69	31%	130	30%	221	30%
PURCHASE SOMETHING UNPLANNED BECAUSE IT LOOKS GOOD AT THE TIME	8	11%	33	15%	68	16%	109	15%

Q21. FOR THIS QUESTION, PLEASE CONSIDER THE PERSON IN YOUR HOUSEHOLD WHO MOST FREQUENTLY PREPARES MEALS (IF THERE ISN'T ONE PARTICULAR PERSON THAT APPLIES TO, THEN CONSIDER YOURSELF FOR THIS QUESTION). HOW STRONGLY DO YOU AGREE OR DISAGREE WITH THE FOLLOWING STATEMENTS?

NASHVILLE	AGREE		SOMEWHAT AGREE		NEITHER AGREE NOR DISAGREE		SOMEWHAT DISAGREE		DISAGREE		(BLANK)	
	#	%	#	%	#	%	#	%	#	%	#	%
THIS PERSON USUALLY FOLLOWS RECIPES WHEN COOKING	15	20%	26	34%	11	14%	10	13%	13	17%	1	1%
THIS PERSON IMPROVISES MEALS BASED ON WHAT FOOD IS AVAILABLE	40	53%	26	34%	1	1%	7	9%	1	1%	1	1%
THIS PERSON FREQUENTLY MAKES TOO MUCH FOOD	2	3%	14	18%	13	17%	22	29%	23	30%	2	3%

Q2I. FOR THIS QUESTION, PLEASE CONSIDER THE PERSON IN YOUR HOUSEHOLD WHO MOST FREQUENTLY PREPARES MEALS (IF THERE ISN'T ONE PARTICULAR PERSON THAT APPLIES TO, THEN CONSIDER YOURSELF FOR THIS QUESTION). HOW STRONGLY DO YOU AGREE OR DISAGREE WITH THE FOLLOWING STATEMENTS? (CONT.)

DENVER	AGREE		SOMEWHAT AGREE		NEITHER AGREE NOR DISAGREE		SOMEWHAT DISAGREE		DISAGREE		(BLANK)	
	#	%	#	%	#	%	#	%	#	%	#	%
THIS PERSON USUALLY FOLLOWS RECIPES WHEN COOKING	52	23%	67	30%	35	16%	42	19%	23	10%	3	1%
THIS PERSON IMPROVISES MEALS BASED ON WHAT FOOD IS AVAILABLE	83	37%	99	45%	17	8%	13	6%	9	4%	1	0%
THIS PERSON FREQUENTLY MAKES TOO MUCH FOOD	19	9%	47	21%	57	26%	63	28%	35	16%	1	0%

NYC	AGREE		SOMEWHAT AGREE		NEITHER AGREE NOR DISAGREE		SOMEWHAT DISAGREE		DISAGREE		(BLANK)	
	#	%	#	%	#	%	#	%	#	%	#	%
THIS PERSON USUALLY FOLLOWS RECIPES WHEN COOKING	71	17%	138	32%	73	17%	62	14%	66	15%	18	4%
THIS PERSON IMPROVISES MEALS BASED ON WHAT FOOD IS AVAILABLE	157	37%	185	43%	42	10%	19	4%	8	2%	17	4%
THIS PERSON FREQUENTLY MAKES TOO MUCH FOOD	41	10%	77	18%	85	20%	87	20%	119	28%	19	4%

TOTAL	AGREE		SOMEWHAT AGREE		NEITHER AGREE NOR DISAGREE		SOMEWHAT DISAGREE		DISAGREE		(BLANK)	
	#	%	#	%	#	%	#	%	#	%	#	%
THIS PERSON USUALLY FOLLOWS RECIPES WHEN COOKING	138	19%	231	32%	119	16%	114	16%	102	14%	22	3%
THIS PERSON IMPROVISES MEALS BASED ON WHAT FOOD IS AVAILABLE	280	39%	310	43%	60	8%	39	5%	18	2%	19	3%
THIS PERSON FREQUENTLY MAKES TOO MUCH FOOD	62	9%	138	19%	155	21%	172	24%	177	24%	22	3%

Q2I. FOR THIS QUESTION, PLEASE CONSIDER THE PERSON IN YOUR HOUSEHOLD WHO MOST FREQUENTLY PREPARES MEALS (IF THERE ISN'T ONE PARTICULAR PERSON THAT APPLIES TO, THEN CONSIDER YOURSELF FOR THIS QUESTION). HOW STRONGLY DO YOU AGREE OR DISAGREE WITH THE FOLLOWING STATEMENTS? (CONT.)

NUMBER/PERCENTAGE WHO RESPONDED "AGREE" OR "SOMEWHAT AGREE" TO THE FOLLOWING STATEMENTS:

	# NASHVILLE	% NASHVILLE	# DENVER	% DENVER	# NYC	% NYC	# TOTAL	% TOTAL
THE PERSON IN THE HOUSEHOLD WHO MOST FREQUENTLY PREPARES MEALS USUALLY FOLLOWS RECIPES WHEN COOKING	41	54%	119	54%	209	49%	369	51%
THE PERSON IN THE HOUSEHOLD WHO MOST FREQUENTLY PREPARES MEALS IMPROVISES MEALS BASED ON WHAT FOOD IS AVAILABLE	66	87%	182	82%	342	80%	590	81%
THE PERSON IN THE HOUSEHOLD WHO MOST FREQUENTLY PREPARES MEALS FREQUENTLY MAKES TOO MUCH FOOD	16	21%	66	30%	118	28%	200	28%

NUMBER/PERCENTAGE WHO RESPONDED "DISAGREE" OR "SOMEWHAT DISAGREE" TO THE FOLLOWING STATEMENTS:

	# NASHVILLE	% NASHVILLE	# DENVER	% DENVER	# NYC	% NYC	# TOTAL	% TOTAL
THE PERSON IN THE HOUSEHOLD WHO MOST FREQUENTLY PREPARES MEALS USUALLY FOLLOWS RECIPES WHEN COOKING	23	30%	65	29%	128	30%	216	30%
THE PERSON IN THE HOUSEHOLD WHO MOST FREQUENTLY PREPARES MEALS IMPROVISES MEALS BASED ON WHAT FOOD IS AVAILABLE	8	11%	22	10%	27	6%	57	8%
THE PERSON IN THE HOUSEHOLD WHO MOST FREQUENTLY PREPARES MEALS FREQUENTLY MAKES TOO MUCH FOOD	45	59%	98	44%	206	48%	349	48%

Q22. MANY FOODS YOU PURCHASE ARE MARKED WITH A "USE BY," "SELL BY," OR "BEST BY" DATE. BY FOOD TYPE, WHAT DO YOU GENERALLY DO WITH FOODS AFTER THE DATE PROVIDED ON THE PACKAGING HAS PASSED?

NASHVILLE	DON'T PAY ATTENTION TO DATE LABELS		THROW IT AWAY		SMELL OR LOOK AT IT TO DETERMINE IF IT IS STILL GOOD		EVERYTHING IS EATEN OR FROZEN BEFORE DATE ON PACKAGE		I DON'T CONSUME THIS TYPE OF FOOD		(BLANK)	
	#	%	#	%	#	%	#	%	#	%	#	%
MEAT & FISH	1	1%	15	20%	27	36%	26	34%	6	8%	1	1%
EGGS	19	25%	4	5%	31	41%	17	22%	3	4%	2	3%
MILK	0	0%	10	13%	48	63%	12	16%	5	7%	1	1%
BREAD	7	9%	5	7%	48	63%	10	13%	4	5%	2	3%
CHEESES	7	9%	7	9%	50	66%	7	9%	4	5%	1	1%
YOGURT & SOUR CREAM	3	4%	11	14%	51	67%	4	5%	6	8%	1	1%
FRUITS & VEGETABLES	7	9%	6	8%	59	78%	2	3%	0	0%	2	3%

DENVER	DON'T PAY ATTENTION TO DATE LABELS		THROW IT AWAY		SMELL OR LOOK AT IT TO DETERMINE IF IT IS STILL GOOD		EVERYTHING IS EATEN OR FROZEN BEFORE DATE ON PACKAGE		I DON'T CONSUME THIS TYPE OF FOOD		(BLANK)	
	#	%	#	%	#	%	#	%	#	%	#	%
MEAT & FISH	8	4%	44	20%	75	34%	81	36%	11	5%	3	1%
EGGS	46	21%	39	18%	69	31%	55	25%	10	5%	3	1%
MILK	3	1%	39	18%	121	55%	34	15%	24	11%	1	0%
BREAD	15	7%	27	12%	129	58%	37	17%	12	5%	2	1%
CHEESES	18	8%	30	14%	130	59%	34	15%	8	4%	2	1%
YOGURT & SOUR CREAM	7	3%	58	26%	113	51%	28	13%	14	6%	2	1%
FRUITS & VEGETABLES	14	6%	30	14%	149	67%	26	12%	0	0%	3	1%

NYC	DON'T PAY ATTENTION TO DATE LABELS		THROW IT AWAY		SMELL OR LOOK AT IT TO DETERMINE IF IT IS STILL GOOD		EVERYTHING IS EATEN OR FROZEN BEFORE DATE ON PACKAGE		I DON'T CONSUME THIS TYPE OF FOOD		(BLANK)	
	#	%	#	%	#	%	#	%	#	%	#	%
MEAT & FISH	9	2%	118	28%	138	32%	115	27%	33	8%	15	4%
EGGS	60	14%	103	24%	130	30%	106	25%	15	4%	14	3%
MILK	8	2%	109	25%	211	49%	61	14%	25	6%	14	3%
BREAD	33	8%	69	16%	219	51%	85	20%	9	2%	13	3%
CHEESES	27	6%	86	20%	218	51%	60	14%	23	5%	14	3%
YOGURT & SOUR CREAM	12	3%	124	29%	199	46%	51	12%	28	7%	14	3%
FRUITS & VEGETABLES	32	7%	68	16%	256	60%	56	13%	2	0%	14	3%

Q22. MANY FOODS YOU PURCHASE ARE MARKED WITH A "USE BY," "SELL BY," OR "BEST BY" DATE. BY FOOD TYPE, WHAT DO YOU GENERALLY DO WITH FOODS AFTER THE DATE PROVIDED ON THE PACKAGING HAS PASSED? (CONT.)

TOTAL	DON'T PAY ATTENTION TO DATE LABELS		THROW IT AWAY		SMELL OR LOOK AT IT TO DETERMINE IF IT IS STILL GOOD		EVERYTHING IS EATEN OR FROZEN BEFORE DATE ON PACKAGE		I DON'T CONSUME THIS TYPE OF FOOD		(BLANK)	
	#	%	#	%	#	%	#	%	#	%	#	%
MEAT & FISH	18	2%	177	24%	240	33%	222	31%	50	7%	19	3%
EGGS	125	17%	146	20%	230	32%	178	25%	28	4%	19	3%
MILK	11	2%	158	22%	380	52%	107	15%	54	7%	16	2%
BREAD	55	8%	101	14%	396	55%	132	18%	25	3%	17	2%
CHEESES	52	7%	123	17%	398	55%	101	14%	35	5%	17	2%
YOGURT & SOUR CREAM	22	3%	193	27%	363	50%	83	11%	48	7%	17	2%
FRUITS & VEGETABLES	53	7%	104	14%	464	64%	84	12%	2	0%	19	3%

Q23. HOW STRONGLY DO YOU AGREE OR DISAGREE WITH THE FOLLOWING STATEMENTS?

NASHVILLE	AGREE		SOMEWHAT AGREE		NEITHER AGREE NOR DISAGREE		SOMEWHAT DISAGREE		DISAGREE		(BLANK)	
	#	%	#	%	#	%	#	%	#	%	#	%
WE ARE VERY CAUTIOUS ABOUT AVOIDING FOOD POISONING	22	29%	13	17%	16	21%	17	22%	7	9%	1	1%
DATE LABELS ARE THE MAIN SOURCE OF INFORMATION WE USE WHEN DECIDING WHETHER TO THROW AWAY FOOD	7	9%	15	20%	8	11%	22	29%	23	30%	1	1%
WE FREQUENTLY USE SIGHT, TASTE, OR SMELL TO DETERMINE IF FOOD IS SAFE TO EAT	48	63%	22	29%	2	3%	1	1%	2	3%	1	1%
WE FREQUENTLY PUT FOODS THAT NEED TO BE USED SOON IN A CERTAIN PART OF THE REFRIGERATOR	17	22%	13	17%	7	9%	15	20%	21	28%	3	4%
I WOULD LIKE TO HAVE MORE TIME TO SPEND ON PREPARING AND COOKING FOOD	29	38%	24	32%	9	12%	10	13%	3	4%	1	1%
WE FREQUENTLY PREPARE MEALS A DAY OR MORE IN ADVANCE	13	17%	17	22%	12	16%	19	25%	13	17%	2	3%
WE FREQUENTLY EAT PREPARED OR FROZEN MEALS TO SAVE TIME	8	11%	15	20%	8	11%	20	26%	24	32%	1	1%
I FEEL LESS GUILTY ABOUT WASTING FOOD THAT HAS BEEN IN THE REFRIGERATOR FOR A LONG TIME	13	17%	21	28%	15	20%	8	11%	18	24%	1	1%
I FEEL LESS GUILTY ABOUT WASTING FOOD IF IT IS COMPOSTED	31	41%	19	25%	15	20%	4	5%	6	8%	1	1%
I PREFER FRUITS AND VEGETABLES WITH NO BLEMISHES	13	17%	23	30%	12	16%	14	18%	11	14%	3	4%
AT LEAST ONE PERSON IN THE HOUSEHOLD IS A SKILLED COOK	40	53%	16	21%	8	11%	5	7%	6	8%	1	1%
HAVING REGULAR FAMILY OR HOUSEHOLD MEALS IS IMPORTANT	52	68%	12	16%	9	12%	1	1%	1	1%	1	1%
GENERALLY, PREPARING FOOD FOR FRIENDS AND/OR FAMILY MAKES ME FEEL GOOD	54	71%	13	17%	5	7%	0	0%	3	4%	1	1%
WHEN HOUSEHOLD MEMBERS EAT OUT IT IS USUALLY SPUR OF THE MOMENT, OR PLANNED WITH LESS THAN 48 HOURS' NOTICE	38	50%	17	22%	10	13%	7	9%	2	3%	2	3%
WE CLEAN OUT OUR REFRIGERATOR REGULARLY (AT LEAST EVERY OTHER WEEK)	11	14%	19	25%	6	8%	19	25%	20	26%	1	1%
IT IS IMPORTANT THAT WE FINISH ALL FOOD THAT IS PUT ON OUR PLATES FOR A MEAL	19	25%	31	41%	11	14%	7	9%	7	9%	1	1%

Q23. HOW STRONGLY DO YOU AGREE OR DISAGREE WITH THE FOLLOWING STATEMENTS? (CONT.)

DENVER	AGREE		SOMEWHAT AGREE		NEITHER AGREE NOR DISAGREE		SOMEWHAT DISAGREE		DISAGREE		(BLANK)	
	#	%	#	%	#	%	#	%	#	%	#	%
WE ARE VERY CAUTIOUS ABOUT AVOIDING FOOD POISONING	89	40%	70	32%	30	14%	30	14%	2	1%	1	0%
DATE LABELS ARE THE MAIN SOURCE OF INFORMATION WE USE WHEN DECIDING WHETHER TO THROW AWAY FOOD	29	13%	68	31%	32	14%	52	23%	40	18%	1	0%
WE FREQUENTLY USE SIGHT, TASTE, OR SMELL TO DETERMINE IF FOOD IS SAFE TO EAT	116	52%	81	36%	15	7%	8	4%	1	0%	1	0%
WE FREQUENTLY PUT FOODS THAT NEED TO BE USED SOON IN A CERTAIN PART OF THE REFRIGERATOR	52	23%	43	19%	35	16%	37	17%	54	24%	1	0%
I WOULD LIKE TO HAVE MORE TIME TO SPEND ON PREPARING AND COOKING FOOD	69	31%	59	27%	49	22%	17	8%	26	12%	2	1%
WE FREQUENTLY PREPARE MEALS A DAY OR MORE IN ADVANCE	40	18%	49	22%	29	13%	58	26%	44	20%	2	1%
WE FREQUENTLY EAT PREPARED OR FROZEN MEALS TO SAVE TIME	12	5%	51	23%	19	9%	65	29%	74	33%	1	0%
I FEEL LESS GUILTY ABOUT WASTING FOOD THAT HAS BEEN IN THE REFRIGERATOR FOR A LONG TIME	51	23%	51	23%	38	17%	38	17%	43	19%	1	0%
I FEEL LESS GUILTY ABOUT WASTING FOOD IF IT IS COMPOSTED	64	29%	60	27%	63	28%	13	6%	20	9%	2	1%
I PREFER FRUITS AND VEGETABLES WITH NO BLEMISHES	44	20%	77	35%	49	22%	34	15%	17	8%	1	0%
AT LEAST ONE PERSON IN THE HOUSEHOLD IS A SKILLED COOK	112	50%	52	23%	33	15%	9	4%	15	7%	1	0%
HAVING REGULAR FAMILY OR HOUSEHOLD MEALS IS IMPORTANT	144	65%	46	21%	23	10%	2	1%	5	2%	2	1%
GENERALLY, PREPARING FOOD FOR FRIENDS AND/OR FAMILY MAKES ME FEEL GOOD	150	68%	43	19%	19	9%	6	3%	2	1%	2	1%
WHEN HOUSEHOLD MEMBERS EAT OUT IT IS USUALLY SPUR OF THE MOMENT, OR PLANNED WITH LESS THAN 48 HOURS' NOTICE	96	43%	74	33%	18	8%	21	9%	12	5%	1	0%
WE CLEAN OUT OUR REFRIGERATOR REGULARLY (AT LEAST EVERY OTHER WEEK)	58	26%	56	25%	33	15%	41	18%	32	14%	2	1%
IT IS IMPORTANT THAT WE FINISH ALL FOOD THAT IS PUT ON OUR PLATES FOR A MEAL	57	26%	74	33%	42	19%	31	14%	15	7%	3	1%

Q23. HOW STRONGLY DO YOU AGREE OR DISAGREE WITH THE FOLLOWING STATEMENTS? (CONT.)

NYC	AGREE		SOMEWHAT AGREE		NEITHER AGREE NOR DISAGREE		SOMEWHAT DISAGREE		DISAGREE		(BLANK)	
	#	%	#	%	#	%	#	%	#	%	#	%
WE ARE VERY CAUTIOUS ABOUT AVOIDING FOOD POISONING	200	47%	94	22%	71	17%	35	8%	13	3%	15	4%
DATE LABELS ARE THE MAIN SOURCE OF INFORMATION WE USE WHEN DECIDING WHETHER TO THROW AWAY FOOD	97	23%	115	27%	58	14%	95	22%	49	11%	14	3%
WE FREQUENTLY USE SIGHT, TASTE, OR SMELL TO DETERMINE IF FOOD IS SAFE TO EAT	216	50%	152	36%	21	5%	18	4%	6	1%	15	4%
WE FREQUENTLY PUT FOODS THAT NEED TO BE USED SOON IN A CERTAIN PART OF THE REFRIGERATOR	116	27%	86	20%	58	14%	55	13%	99	23%	14	3%
I WOULD LIKE TO HAVE MORE TIME TO SPEND ON PREPARING AND COOKING FOOD	145	34%	114	27%	72	17%	36	8%	46	11%	15	4%
WE FREQUENTLY PREPARE MEALS A DAY OR MORE IN ADVANCE	70	16%	110	26%	61	14%	76	18%	95	22%	16	4%
WE FREQUENTLY EAT PREPARED OR FROZEN MEALS TO SAVE TIME	40	9%	80	19%	45	11%	89	21%	156	36%	18	4%
I FEEL LESS GUILTY ABOUT WASTING FOOD THAT HAS BEEN IN THE REFRIGERATOR FOR A LONG TIME	86	20%	106	25%	58	14%	53	12%	108	25%	17	4%
I FEEL LESS GUILTY ABOUT WASTING FOOD IF IT IS COMPOSTED	134	31%	115	27%	87	20%	24	6%	50	12%	18	4%
I PREFER FRUITS AND VEGETABLES WITH NO BLEMISHES	119	28%	153	36%	64	15%	47	11%	27	6%	18	4%
AT LEAST ONE PERSON IN THE HOUSEHOLD IS A SKILLED COOK	226	53%	93	22%	42	10%	17	4%	32	7%	18	4%
HAVING REGULAR FAMILY OR HOUSEHOLD MEALS IS IMPORTANT	296	69%	65	15%	35	8%	10	2%	5	1%	17	4%
GENERALLY, PREPARING FOOD FOR FRIENDS AND/OR FAMILY MAKES ME FEEL GOOD	260	61%	94	22%	35	8%	15	4%	5	1%	19	4%
WHEN HOUSEHOLD MEMBERS EAT OUT IT IS USUALLY SPUR OF THE MOMENT, OR PLANNED WITH LESS THAN 48 HOURS' NOTICE	158	37%	132	31%	57	13%	40	9%	22	5%	19	4%
WE CLEAN OUT OUR REFRIGERATOR REGULARLY (AT LEAST EVERY OTHER WEEK)	90	21%	85	20%	66	15%	77	18%	92	21%	18	4%
IT IS IMPORTANT THAT WE FINISH ALL FOOD THAT IS PUT ON OUR PLATES FOR A MEAL	140	33%	140	33%	51	12%	42	10%	37	9%	18	4%

Q23. HOW STRONGLY DO YOU AGREE OR DISAGREE WITH THE FOLLOWING STATEMENTS? (CONT.)

TOTAL	AGREE		SOMEWHAT AGREE		NEITHER AGREE NOR DISAGREE		SOMEWHAT DISAGREE		DISAGREE		(BLANK)	
	#	%	#	%	#	%	#	%	#	%	#	%
WE ARE VERY CAUTIOUS ABOUT AVOIDING FOOD POISONING	311	43%	177	24%	117	16%	82	11%	22	3%	17	2%
DATE LABELS ARE THE MAIN SOURCE OF INFORMATION WE USE WHEN DECIDING WHETHER TO THROW AWAY FOOD	133	18%	198	27%	98	13%	169	23%	112	15%	16	2%
WE FREQUENTLY USE SIGHT, TASTE, OR SMELL TO DETERMINE IF FOOD IS SAFE TO EAT	380	52%	255	35%	38	5%	27	4%	9	1%	17	2%
WE FREQUENTLY PUT FOODS THAT NEED TO BE USED SOON IN A CERTAIN PART OF THE REFRIGERATOR	185	25%	142	20%	100	14%	107	15%	174	24%	18	2%
I WOULD LIKE TO HAVE MORE TIME TO SPEND ON PREPARING AND COOKING FOOD	243	33%	197	27%	130	18%	63	9%	75	10%	18	2%
WE FREQUENTLY PREPARE MEALS A DAY OR MORE IN ADVANCE	123	17%	176	24%	102	14%	153	21%	152	21%	20	3%
WE FREQUENTLY EAT PREPARED OR FROZEN MEALS TO SAVE TIME	60	8%	146	20%	72	10%	174	24%	254	35%	20	3%
I FEEL LESS GUILTY ABOUT WASTING FOOD THAT HAS BEEN IN THE REFRIGERATOR FOR A LONG TIME	150	21%	178	25%	111	15%	99	14%	169	23%	19	3%
I FEEL LESS GUILTY ABOUT WASTING FOOD IF IT IS COMPOSTED	229	32%	194	27%	165	23%	41	6%	76	10%	21	3%
I PREFER FRUITS AND VEGETABLES WITH NO BLEMISHES	176	24%	253	35%	125	17%	95	13%	55	8%	22	3%
AT LEAST ONE PERSON IN THE HOUSEHOLD IS A SKILLED COOK	378	52%	161	22%	83	11%	31	4%	53	7%	20	3%
HAVING REGULAR FAMILY OR HOUSEHOLD MEALS IS IMPORTANT	492	68%	123	17%	67	9%	13	2%	11	2%	20	3%
GENERALLY, PREPARING FOOD FOR FRIENDS AND/OR FAMILY MAKES ME FEEL GOOD	464	64%	150	21%	59	8%	21	3%	10	1%	22	3%
WHEN HOUSEHOLD MEMBERS EAT OUT IT IS USUALLY SPUR OF THE MOMENT, OR PLANNED WITH LESS THAN 48 HOURS' NOTICE	292	40%	223	31%	85	12%	68	9%	36	5%	22	3%
WE CLEAN OUT OUR REFRIGERATOR REGULARLY (AT LEAST EVERY OTHER WEEK)	159	22%	160	22%	105	14%	137	19%	144	20%	21	3%
IT IS IMPORTANT THAT WE FINISH ALL FOOD THAT IS PUT ON OUR PLATES FOR A MEAL	216	30%	245	34%	104	14%	80	11%	59	8%	22	3%

Q23. HOW STRONGLY DO YOU AGREE OR DISAGREE WITH THE FOLLOWING STATEMENTS? (CONT.)
NUMBER/PERCENTAGE WHO RESPONDED "AGREE" OR "SOMEWHAT AGREE" TO THE FOLLOWING STATEMENTS:

	# NASHVILLE	% NASHVILLE	# DENVER	% DENVER	# NYC	% NYC	# TOTAL	% TOTAL
WE ARE VERY CAUTIOUS ABOUT AVOIDING FOOD POISONING	35	46%	159	72%	294	69%	488	67%
DATE LABELS ARE THE MAIN SOURCE OF INFORMATION WE USE WHEN DECIDING WHETHER TO THROW AWAY FOOD	22	29%	97	44%	212	50%	331	46%
WE FREQUENTLY USE SIGHT, TASTE, OR SMELL TO DETERMINE IF FOOD IS SAFE TO EAT	70	92%	197	89%	368	86%	635	87%
WE FREQUENTLY PUT FOODS THAT NEED TO BE USED SOON IN A CERTAIN PART OF THE REFRIGERATOR	30	39%	95	43%	202	47%	327	45%
I WOULD LIKE TO HAVE MORE TIME TO SPEND ON PREPARING AND COOKING FOOD	53	70%	128	58%	259	61%	440	61%
WE FREQUENTLY PREPARE MEALS A DAY OR MORE IN ADVANCE	30	39%	89	40%	180	42%	299	41%
WE FREQUENTLY EAT PREPARED OR FROZEN MEALS TO SAVE TIME	23	30%	63	28%	120	28%	206	28%
I FEEL LESS GUILTY ABOUT WASTING FOOD THAT HAS BEEN IN THE REFRIGERATOR FOR A LONG TIME	34	45%	102	46%	192	45%	328	45%
I FEEL LESS GUILTY ABOUT WASTING FOOD IF IT IS COMPOSTED	50	66%	124	56%	249	58%	423	58%
I PREFER FRUITS AND VEGETABLES WITH NO BLEMISHES	36	47%	121	55%	272	64%	429	59%
AT LEAST ONE PERSON IN THE HOUSEHOLD IS A SKILLED COOK	56	74%	164	74%	319	75%	539	74%
HAVING REGULAR FAMILY OR HOUSEHOLD MEALS IS IMPORTANT	64	84%	190	86%	361	84%	615	85%
GENERALLY, PREPARING FOOD FOR FRIENDS AND/OR FAMILY MAKES ME FEEL GOOD	67	88%	193	87%	354	83%	614	85%
WHEN HOUSEHOLD MEMBERS EAT OUT IT IS USUALLY SPUR OF THE MOMENT, OR PLANNED WITH LESS THAN 48 HOURS' NOTICE	55	72%	170	77%	290	68%	515	71%
WE CLEAN OUT OUR REFRIGERATOR REGULARLY (AT LEAST EVERY OTHER WEEK)	30	39%	114	51%	175	41%	319	44%
IT IS IMPORTANT THAT WE FINISH ALL FOOD THAT IS PUT ON OUR PLATES FOR A MEAL	50	66%	131	59%	280	65%	461	63%

Q23. HOW STRONGLY DO YOU AGREE OR DISAGREE WITH THE FOLLOWING STATEMENTS? (CONT.)
NUMBER/PERCENTAGE WHO RESPONDED "DISAGREE" OR "SOMEWHAT DISAGREE" TO THE FOLLOWING STATEMENTS:

	# NASHVILLE	% NASHVILLE	# DENVER	% DENVER	# NYC	% NYC	# TOTAL	% TOTAL
WE ARE VERY CAUTIOUS ABOUT AVOIDING FOOD POISONING	24	32%	32	14%	48	11%	104	14%
DATE LABELS ARE THE MAIN SOURCE OF INFORMATION WE USE WHEN DECIDING WHETHER TO THROW AWAY FOOD	45	59%	92	41%	144	34%	281	39%
WE FREQUENTLY USE SIGHT, TASTE, OR SMELL TO DETERMINE IF FOOD IS SAFE TO EAT	3	4%	9	4%	24	6%	36	5%
WE FREQUENTLY PUT FOODS THAT NEED TO BE USED SOON IN A CERTAIN PART OF THE REFRIGERATOR	36	47%	91	41%	154	36%	281	39%
I WOULD LIKE TO HAVE MORE TIME TO SPEND ON PREPARING AND COOKING FOOD	13	17%	43	19%	82	19%	138	19%
WE FREQUENTLY PREPARE MEALS A DAY OR MORE IN ADVANCE	32	42%	102	46%	171	40%	305	42%
WE FREQUENTLY EAT PREPARED OR FROZEN MEALS TO SAVE TIME	44	58%	139	63%	245	57%	428	59%
I FEEL LESS GUILTY ABOUT WASTING FOOD THAT HAS BEEN IN THE REFRIGERATOR FOR A LONG TIME	26	34%	81	36%	161	38%	268	37%
I FEEL LESS GUILTY ABOUT WASTING FOOD IF IT IS COMPOSTED	10	13%	33	15%	74	17%	117	16%
I PREFER FRUITS AND VEGETABLES WITH NO BLEMISHES	25	33%	51	23%	74	17%	150	21%
AT LEAST ONE PERSON IN THE HOUSEHOLD IS A SKILLED COOK	11	14%	24	11%	49	11%	84	12%
HAVING REGULAR FAMILY OR HOUSEHOLD MEALS IS IMPORTANT	2	3%	7	3%	15	4%	24	3%
GENERALLY, PREPARING FOOD FOR FRIENDS AND/OR FAMILY MAKES ME FEEL GOOD	3	4%	8	4%	20	5%	31	4%
WHEN HOUSEHOLD MEMBERS EAT OUT IT IS USUALLY SPUR OF THE MOMENT, OR PLANNED WITH LESS THAN 48 HOURS' NOTICE	9	12%	33	15%	62	14%	104	14%
WE CLEAN OUT OUR REFRIGERATOR REGULARLY (AT LEAST EVERY OTHER WEEK)	39	51%	73	33%	169	39%	281	39%
IT IS IMPORTANT THAT WE FINISH ALL FOOD THAT IS PUT ON OUR PLATES FOR A MEAL	14	18%	46	21%	79	18%	139	19%

Q24. CONSIDERING THE FOOD THROWN AWAY IN YOUR HOUSEHOLD IN THE AVERAGE WEEK, HOW MUCH OF THAT FOOD DISPOSAL DO YOU THINK COULD BE AVOIDED (E.G. THROUGH PLANNING MEALS AHEAD OF TIME, CHANGING FOOD SHOPPING HABITS)?

	# NASHVILLE	% NASHVILLE	# DENVER	% DENVER	# NYC	% NYC	# TOTAL	% TOTAL
NONE	7	9%	22	10%	45	11%	74	10%
A LITTLE	52	68%	139	63%	243	57%	434	60%
A FAIR AMOUNT	12	16%	47	21%	104	24%	163	22%
A LOT	4	5%	13	6%	23	5%	40	6%
(BLANK)	1	1%	1	0%	13	3%	15	2%
TOTAL	76	100%	222	100%	428	100%	726	100%

Q25. DO YOU THINK THE AMOUNT OF EDIBLE FOOD YOU THROW OUT IS MORE THAN, THE SAME AS, OR LESS THAN THE AVERAGE AMERICAN?

	# NASHVILLE	% NASHVILLE	# DENVER	% DENVER	# NYC	% NYC	# TOTAL	% TOTAL
A LOT LESS	33	43%	90	41%	179	42%	302	42%
A LITTLE BIT LESS	25	33%	77	35%	147	34%	249	34%
THE SAME	12	16%	38	17%	63	15%	113	16%
A LITTLE BIT MORE	4	5%	10	5%	20	5%	34	5%
A LOT MORE	1	1%	6	3%	6	1%	13	2%
(BLANK)	1	1%	1	0%	13	3%	15	2%
TOTAL	76	100%	222	100%	428	100%	726	100%

Q26. DOES YOUR HOUSEHOLD CURRENTLY COMPOST FOOD?

	# NASHVILLE	% NASHVILLE	# DENVER	% DENVER	# NYC	% NYC	# TOTAL	% TOTAL
NO	49	64%	149	67%	236	55%	434	58%
YES, WE COMPOST AT OUR HOME	23	30%	38	17%	47	11%	108	14%
YES, WE CONTRIBUTE TO COMMUNITY OR OTHER TYPE OF COMPOSTING	2	3%	7	3%	52	12%	61	8%
YES, WE SUBSCRIBE TO A COMPOSTING SERVICE	1	1%	32	14%	100	23%	133	18%
(BLANK)	1	1%	1	0%	15	4%	17	2%
TOTAL	76	100%	227	102%	450	105%	753	100%

Note that some respondents compost in more than one way, which is why individual city totals may add up to >100%.

Q27. HOW OFTEN DO YOU AND OTHER HOUSEHOLD MEMBERS TAKE THE FOLLOWING ACTIONS DURING THE AVERAGE WEEK?

NASHVILLE	NEVER		RARELY		SOMETIMES		MOST OF THE TIME		ALWAYS		(BLANK)	
	#	%	#	%	#	%	#	%	#	%	#	%
REMOVE AND DISCARD ONLY THE BRUISED PARTS OF FRUITS AND VEGETABLES INSTEAD OF THROWING AWAY THE ENTIRE FOOD	4	5%	7	9%	15	20%	27	36%	22	29%	1	1%
TRY TO USE ALL PARTS OF FOOD ITEMS (E.G. BROCCOLI STALKS, BONES FOR SOUPS, ETC.)	5	7%	15	20%	22	29%	20	26%	13	17%	1	1%
PRIORITIZE EATING LEFTOVERS	0	0%	4	5%	11	14%	34	45%	26	34%	1	1%
FREEZE FOOD IF YOU THINK YOU WILL NOT BE ABLE TO EAT IT IN TIME	3	4%	11	14%	15	20%	25	33%	20	26%	2	3%

DENVER	NEVER		RARELY		SOMETIMES		MOST OF THE TIME		ALWAYS		(BLANK)	
	#	%	#	%	#	%	#	%	#	%	#	%
REMOVE AND DISCARD ONLY THE BRUISED PARTS OF FRUITS AND VEGETABLES INSTEAD OF THROWING AWAY THE ENTIRE FOOD	6	3%	22	10%	62	28%	84	38%	47	21%	1	0%
TRY TO USE ALL PARTS OF FOOD ITEMS (E.G. BROCCOLI STALKS, BONES FOR SOUPS, ETC.)	19	9%	53	24%	71	32%	50	23%	27	12%	2	1%
PRIORITIZE EATING LEFTOVERS	5	2%	12	5%	44	20%	105	47%	53	24%	3	1%
FREEZE FOOD IF YOU THINK YOU WILL NOT BE ABLE TO EAT IT IN TIME	12	5%	17	8%	51	23%	76	34%	65	29%	1	0%

NYC	NEVER		RARELY		SOMETIMES		MOST OF THE TIME		ALWAYS		(BLANK)	
	#	%	#	%	#	%	#	%	#	%	#	%
REMOVE AND DISCARD ONLY THE BRUISED PARTS OF FRUITS AND VEGETABLES INSTEAD OF THROWING AWAY THE ENTIRE FOOD	19	4%	41	10%	107	25%	125	29%	116	27%	20	5%
TRY TO USE ALL PARTS OF FOOD ITEMS (E.G. BROCCOLI STALKS, BONES FOR SOUPS, ETC.)	29	7%	59	14%	137	32%	120	28%	64	15%	19	4%
PRIORITIZE EATING LEFTOVERS	8	2%	18	4%	103	24%	149	35%	130	30%	20	5%
FREEZE FOOD IF YOU THINK YOU WILL NOT BE ABLE TO EAT IT IN TIME	19	4%	39	9%	81	19%	150	35%	119	28%	20	5%

TOTAL	NEVER		RARELY		SOMETIMES		MOST OF THE TIME		ALWAYS		(BLANK)	
	#	%	#	%	#	%	#	%	#	%	#	%
REMOVE AND DISCARD ONLY THE BRUISED PARTS OF FRUITS AND VEGETABLES INSTEAD OF THROWING AWAY THE ENTIRE FOOD	29	4%	70	10%	184	25%	236	33%	185	25%	22	3%
TRY TO USE ALL PARTS OF FOOD ITEMS (E.G. BROCCOLI STALKS, BONES FOR SOUPS, ETC.)	53	7%	127	17%	230	32%	190	26%	104	14%	22	3%
PRIORITIZE EATING LEFTOVERS	13	2%	34	5%	158	22%	288	40%	209	29%	24	3%
FREEZE FOOD IF YOU THINK YOU WILL NOT BE ABLE TO EAT IT IN TIME	34	5%	67	9%	147	20%	251	35%	204	28%	23	3%

Q27. HOW OFTEN DO YOU AND OTHER HOUSEHOLD MEMBERS TAKE THE FOLLOWING ACTIONS DURING THE AVERAGE WEEK? (CONT.)
NUMBER/PERCENTAGE WHO "ALWAYS" OR "MOST OF THE TIME" TAKE THE FOLLOWING ACTIONS DURING THE AVERAGE WEEK:

	# NASHVILLE	% NASHVILLE	# DENVER	% DENVER	# NYC	% NYC	# TOTAL	% TOTAL
REMOVE AND DISCARD ONLY THE BRUISED PARTS OF FRUITS AND VEGETABLES INSTEAD OF THROWING AWAY THE ENTIRE FOOD	49	64%	131	59%	241	56%	421	58%
TRY TO USE ALL PARTS OF FOOD ITEMS (E.G. BROCCOLI STALKS, BONES FOR SOUPS, ETC.)	33	43%	77	35%	184	43%	294	40%
PRIORITIZE EATING LEFTOVERS	60	79%	158	71%	279	65%	497	68%
FREEZE FOOD IF YOU THINK YOU WILL NOT BE ABLE TO EAT IT IN TIME	45	59%	141	64%	269	63%	455	63%

NUMBER/PERCENTAGE WHO "RARELY" OR "NEVER" TAKE THE FOLLOWING ACTIONS DURING THE AVERAGE WEEK:

	# NASHVILLE	% NASHVILLE	# DENVER	% DENVER	# NYC	% NYC	# TOTAL	% TOTAL
REMOVE AND DISCARD ONLY THE BRUISED PARTS OF FRUITS AND VEGETABLES INSTEAD OF THROWING AWAY THE ENTIRE FOOD	11	14%	28	13%	60	14%	99	14%
TRY TO USE ALL PARTS OF FOOD ITEMS (E.G. BROCCOLI STALKS, BONES FOR SOUPS, ETC.)	20	26%	72	32%	88	21%	180	25%
PRIORITIZE EATING LEFTOVERS	4	5%	17	8%	26	6%	47	6%
FREEZE FOOD IF YOU THINK YOU WILL NOT BE ABLE TO EAT IT IN TIME	14	18%	29	13%	58	14%	101	14%

Q28. IN GENERAL, WHAT HAPPENS TO LEFTOVERS IN YOUR HOUSEHOLD? (SELECT ALL THAT APPLY)

	# NASHVILLE	% NASHVILLE	# DENVER	% DENVER	# NYC	% NYC	# TOTAL	% TOTAL
LEFTOVERS ARE EATEN AS ANOTHER MEAL WITHOUT ALTERATION	59	78%	169	76%	308	72%	536	74%
LEFTOVERS ARE USED AS PART OF ANOTHER MEAL (OTHER FOOD IS ADDED)	46	61%	124	56%	258	60%	428	59%
LEFTOVERS ARE COMPOSTED	10	13%	20	9%	56	13%	86	12%
LEFTOVERS ARE THROWN IN THE GARBAGE	18	24%	44	20%	77	18%	139	19%
LEFTOVERS GET FED TO ANIMALS	9	12%	36	16%	31	7%	76	10%
WE DON'T HAVE LEFTOVERS	3	4%	12	5%	22	5%	37	5%
(BLANK)	0	0%	0	0%	8	2%	8	1%

Q29. HOW STRONGLY DO YOU AGREE OR DISAGREE WITH THE FOLLOWING STATEMENTS AS THEY RELATE TO YOUR HOUSEHOLD?

NASHVILLE	NEVER		RARELY		SOMETIMES		MOST OF THE TIME		ALWAYS		(BLANK)	
	#	%	#	%	#	%	#	%	#	%	#	%
WE ARE MORE LIKELY TO EAT LEFTOVERS FROM A RESTAURANT COMPARED TO LEFTOVERS FROM MEALS MADE AT HOME	5	7%	2	3%	21	28%	18	24%	29	38%	1	1%
WE SOMETIMES SAVE LEFTOVERS EVEN IF WE THINK THAT WE MIGHT NOT EAT THEM	22	29%	32	42%	4	5%	7	9%	10	13%	1	1%
SAVING LEFTOVERS MAKES ME FEEL LESS GUILTY THAN THROWING THE FOOD AWAY	42	55%	17	22%	9	12%	1	1%	6	8%	1	1%
GENERALLY, WE DO NOT LIKE LEFTOVERS	2	3%	6	8%	3	4%	15	20%	49	64%	1	1%

DENVER	NEVER		RARELY		SOMETIMES		MOST OF THE TIME		ALWAYS		(BLANK)	
	#	%	#	%	#	%	#	%	#	%	#	%
WE ARE MORE LIKELY TO EAT LEFTOVERS FROM A RESTAURANT COMPARED TO LEFTOVERS FROM MEALS MADE AT HOME	14	6%	13	6%	66	30%	52	23%	75	34%	2	1%
WE SOMETIMES SAVE LEFTOVERS EVEN IF WE THINK THAT WE MIGHT NOT EAT THEM	72	32%	84	38%	22	10%	22	10%	21	9%	1	0%
SAVING LEFTOVERS MAKES ME FEEL LESS GUILTY THAN THROWING THE FOOD AWAY	111	50%	55	25%	32	14%	6	3%	16	7%	2	1%
GENERALLY, WE DO NOT LIKE LEFTOVERS	7	3%	16	7%	30	14%	47	21%	121	55%	1	0%

NYC	NEVER		RARELY		SOMETIMES		MOST OF THE TIME		ALWAYS		(BLANK)	
	#	%	#	%	#	%	#	%	#	%	#	%
WE ARE MORE LIKELY TO EAT LEFTOVERS FROM A RESTAURANT COMPARED TO LEFTOVERS FROM MEALS MADE AT HOME	20	5%	43	10%	99	23%	80	19%	164	38%	22	5%
WE SOMETIMES SAVE LEFTOVERS EVEN IF WE THINK THAT WE MIGHT NOT EAT THEM	142	33%	157	37%	51	12%	27	6%	30	7%	21	5%
SAVING LEFTOVERS MAKES ME FEEL LESS GUILTY THAN THROWING THE FOOD AWAY	201	47%	122	29%	47	11%	13	3%	23	5%	22	5%
GENERALLY, WE DO NOT LIKE LEFTOVERS	19	4%	46	11%	58	14%	80	19%	202	47%	23	5%

TOTAL	NEVER		RARELY		SOMETIMES		MOST OF THE TIME		ALWAYS		(BLANK)	
	#	%	#	%	#	%	#	%	#	%	#	%
WE ARE MORE LIKELY TO EAT LEFTOVERS FROM A RESTAURANT COMPARED TO LEFTOVERS FROM MEALS MADE AT HOME	39	5%	58	8%	186	26%	150	21%	268	37%	25	3%
WE SOMETIMES SAVE LEFTOVERS EVEN IF WE THINK THAT WE MIGHT NOT EAT THEM	236	33%	273	38%	77	11%	56	8%	61	8%	23	3%
SAVING LEFTOVERS MAKES ME FEEL LESS GUILTY THAN THROWING THE FOOD AWAY	354	49%	194	27%	88	12%	20	3%	45	6%	25	3%
GENERALLY, WE DO NOT LIKE LEFTOVERS	28	4%	68	9%	91	13%	142	20%	372	51%	25	3%

Q29. HOW STRONGLY DO YOU AGREE OR DISAGREE WITH THE FOLLOWING STATEMENTS AS THEY RELATE TO YOUR HOUSEHOLD? (CONT.)
NUMBER/PERCENTAGE WHO RESPONDED "AGREE" OR "SOMEWHAT AGREE" TO THE FOLLOWING STATEMENTS:

	# NASHVILLE	% NASHVILLE	# DENVER	% DENVER	# NYC	% NYC	# TOTAL	% TOTAL
WE ARE MORE LIKELY TO EAT LEFTOVERS FROM A RESTAURANT COMPARED TO LEFTOVERS FROM MEALS MADE AT HOME	7	9%	27	12%	63	15%	97	13%
WE SOMETIMES SAVE LEFTOVERS EVEN IF WE THINK THAT WE MIGHT NOT EAT THEM	54	71%	156	70%	299	70%	509	70%
SAVING LEFTOVERS MAKES ME FEEL LESS GUILTY THAN THROWING THE FOOD AWAY	59	78%	166	75%	323	75%	548	75%
GENERALLY, WE DO NOT LIKE LEFTOVERS	8	11%	23	10%	65	15%	96	13%

NUMBER/PERCENTAGE WHO RESPONDED "DISAGREE" OR "SOMEWHAT DISAGREE" TO THE FOLLOWING STATEMENTS:

	# NASHVILLE	% NASHVILLE	# DENVER	% DENVER	# NYC	% NYC	# TOTAL	% TOTAL
WE ARE MORE LIKELY TO EAT LEFTOVERS FROM A RESTAURANT COMPARED TO LEFTOVERS FROM MEALS MADE AT HOME	47	62%	127	57%	244	57%	418	58%
WE SOMETIMES SAVE LEFTOVERS EVEN IF WE THINK THAT WE MIGHT NOT EAT THEM	17	22%	43	19%	57	13%	117	16%
SAVING LEFTOVERS MAKES ME FEEL LESS GUILTY THAN THROWING THE FOOD AWAY	7	9%	22	10%	36	8%	65	9%
GENERALLY, WE DO NOT LIKE LEFTOVERS	64	84%	168	76%	282	66%	514	71%

Q30. HOW STRONGLY DO YOU AGREE OR DISAGREE WITH THE FOLLOWING STATEMENTS AS THEY RELATE TO YOUR HOUSEHOLD?

NASHVILLE	AGREE		SOMEWHAT AGREE		NEITHER AGREE NOR DISAGREE		SOMEWHAT DISAGREE		DISAGREE		(BLANK)	
	#	%	#	%	#	%	#	%	#	%	#	%
IN THE PAST YEAR, MY HOUSEHOLD HAS MADE AN EFFORT TO REDUCE THE AMOUNT OF FOOD WE THROW AWAY	19	25%	21	28%	18	24%	4	5%	12	16%	2	3%
MY HOUSEHOLD HAS COMPLETE CONTROL OVER REDUCING THE AMOUNT OF FOOD WE THROW AWAY	34	45%	18	24%	12	16%	8	11%	3	4%	1	1%
PEOPLE AROUND ME BELIEVE MY HOUSEHOLD SHOULD REDUCE THE AMOUNT OF FOOD WE THROW AWAY	2	3%	7	9%	25	33%	3	4%	38	50%	1	1%
MY HOUSEHOLD BELIEVES THAT REDUCING THE AMOUNT OF FOOD WE THROW AWAY WOULD BE GOOD	43	57%	17	22%	11	14%	0	0%	4	5%	1	1%
MY HOUSEHOLD INTENDS TO REDUCE THE AMOUNT OF FOOD WE THROW AWAY	34	45%	14	18%	21	28%	2	3%	4	5%	1	1%
GIVEN THE AMOUNT OF FOOD THAT IS THROWN AWAY IN THIS COUNTRY, THE ACTIONS OF MY HOUSEHOLD WON'T MAKE A MEANINGFUL DIFFERENCE IN THE AMOUNT OF FOOD BEING WASTED	5	7%	13	17%	11	14%	14	18%	32	42%	1	1%

Q30. HOW STRONGLY DO YOU AGREE OR DISAGREE WITH THE FOLLOWING STATEMENTS AS THEY RELATE TO YOUR HOUSEHOLD? (CONT.)

DENVER	AGREE		SOMEWHAT AGREE		NEITHER AGREE NOR DISAGREE		SOMEWHAT DISAGREE		DISAGREE		(BLANK)	
	#	%	#	%	#	%	#	%	#	%	#	%
IN THE PAST YEAR, MY HOUSEHOLD HAS MADE AN EFFORT TO REDUCE THE AMOUNT OF FOOD WE THROW AWAY	64	29%	66	30%	59	27%	18	8%	14	6%	1	0%
MY HOUSEHOLD HAS COMPLETE CONTROL OVER REDUCING THE AMOUNT OF FOOD WE THROW AWAY	95	43%	73	33%	33	15%	16	7%	4	2%	1	0%
PEOPLE AROUND ME BELIEVE MY HOUSEHOLD SHOULD REDUCE THE AMOUNT OF FOOD WE THROW AWAY	15	7%	20	9%	68	31%	16	7%	102	46%	1	0%
MY HOUSEHOLD BELIEVES THAT REDUCING THE AMOUNT OF FOOD WE THROW AWAY WOULD BE GOOD	133	60%	54	24%	27	12%	3	1%	3	1%	2	1%
MY HOUSEHOLD INTENDS TO REDUCE THE AMOUNT OF FOOD WE THROW AWAY	102	46%	67	30%	41	18%	5	2%	5	2%	2	1%
GIVEN THE AMOUNT OF FOOD THAT IS THROWN AWAY IN THIS COUNTRY, THE ACTIONS OF MY HOUSEHOLD WON'T MAKE A MEANINGFUL DIFFERENCE IN THE AMOUNT OF FOOD BEING WASTED	16	7%	34	15%	33	15%	52	23%	86	39%	1	0%

NYC	AGREE		SOMEWHAT AGREE		NEITHER AGREE NOR DISAGREE		SOMEWHAT DISAGREE		DISAGREE		(BLANK)	
	#	%	#	%	#	%	#	%	#	%	#	%
IN THE PAST YEAR, MY HOUSEHOLD HAS MADE AN EFFORT TO REDUCE THE AMOUNT OF FOOD WE THROW AWAY	138	32%	113	26%	89	21%	29	7%	38	9%	21	5%
MY HOUSEHOLD HAS COMPLETE CONTROL OVER REDUCING THE AMOUNT OF FOOD WE THROW AWAY	157	37%	132	31%	69	16%	39	9%	9	2%	22	5%
PEOPLE AROUND ME BELIEVE MY HOUSEHOLD SHOULD REDUCE THE AMOUNT OF FOOD WE THROW AWAY	28	7%	35	8%	115	27%	36	8%	189	44%	25	6%
MY HOUSEHOLD BELIEVES THAT REDUCING THE AMOUNT OF FOOD WE THROW AWAY WOULD BE GOOD	218	51%	100	23%	70	16%	7	2%	9	2%	24	6%
MY HOUSEHOLD INTENDS TO REDUCE THE AMOUNT OF FOOD WE THROW AWAY	172	40%	120	28%	86	20%	15	4%	9	2%	26	6%
GIVEN THE AMOUNT OF FOOD THAT IS THROWN AWAY IN THIS COUNTRY, THE ACTIONS OF MY HOUSEHOLD WON'T MAKE A MEANINGFUL DIFFERENCE IN THE AMOUNT OF FOOD BEING WASTED	35	8%	67	16%	75	18%	76	18%	151	35%	24	6%

Q30. HOW STRONGLY DO YOU AGREE OR DISAGREE WITH THE FOLLOWING STATEMENTS AS THEY RELATE TO YOUR HOUSEHOLD? (CONT.)

TOTAL	AGREE		SOMEWHAT AGREE		NEITHER AGREE NOR DISAGREE		SOMEWHAT DISAGREE		DISAGREE		(BLANK)	
	#	%	#	%	#	%	#	%	#	%	#	%
IN THE PAST YEAR, MY HOUSEHOLD HAS MADE AN EFFORT TO REDUCE THE AMOUNT OF FOOD WE THROW AWAY	221	30%	200	28%	166	23%	51	7%	64	9%	24	3%
MY HOUSEHOLD HAS COMPLETE CONTROL OVER REDUCING THE AMOUNT OF FOOD WE THROW AWAY	286	39%	223	31%	114	16%	63	9%	16	2%	24	3%
PEOPLE AROUND ME BELIEVE MY HOUSEHOLD SHOULD REDUCE THE AMOUNT OF FOOD WE THROW AWAY	45	6%	62	9%	208	29%	55	8%	329	45%	27	4%
MY HOUSEHOLD BELIEVES THAT REDUCING THE AMOUNT OF FOOD WE THROW AWAY WOULD BE GOOD	394	54%	171	24%	108	15%	10	1%	16	2%	27	4%
MY HOUSEHOLD INTENDS TO REDUCE THE AMOUNT OF FOOD WE THROW AWAY	308	42%	201	28%	148	20%	22	3%	18	2%	29	4%
GIVEN THE AMOUNT OF FOOD THAT IS THROWN AWAY IN THIS COUNTRY, THE ACTIONS OF MY HOUSEHOLD WON'T MAKE A MEANINGFUL DIFFERENCE IN THE AMOUNT OF FOOD BEING WASTED	56	8%	114	16%	119	16%	142	20%	269	37%	26	4%

NUMBER/PERCENTAGE WHO RESPONDED "AGREE" OR "SOMEWHAT AGREE" TO THE FOLLOWING STATEMENTS:

	# NASHVILLE	% NASHVILLE	# DENVER	% DENVER	# NYC	% NYC	# TOTAL	% TOTAL
IN THE PAST YEAR, MY HOUSEHOLD HAS MADE AN EFFORT TO REDUCE THE AMOUNT OF FOOD WE THROW AWAY	40	53%	130	59%	251	59%	421	58%
MY HOUSEHOLD HAS COMPLETE CONTROL OVER REDUCING THE AMOUNT OF FOOD WE THROW AWAY	52	68%	168	76%	289	68%	509	70%
PEOPLE AROUND ME BELIEVE MY HOUSEHOLD SHOULD REDUCE THE AMOUNT OF FOOD WE THROW AWAY	9	12%	35	16%	63	15%	107	15%
MY HOUSEHOLD BELIEVES THAT REDUCING THE AMOUNT OF FOOD WE THROW AWAY WOULD BE GOOD	60	79%	187	84%	318	74%	565	78%
MY HOUSEHOLD INTENDS TO REDUCE THE AMOUNT OF FOOD WE THROW AWAY	48	63%	169	76%	292	68%	509	70%
GIVEN THE AMOUNT OF FOOD THAT IS THROWN AWAY IN THIS COUNTRY, THE ACTIONS OF MY HOUSEHOLD WON'T MAKE A MEANINGFUL DIFFERENCE IN THE AMOUNT OF FOOD BEING WASTED	18	24%	50	23%	102	24%	170	23%

Q30. HOW STRONGLY DO YOU AGREE OR DISAGREE WITH THE FOLLOWING STATEMENTS AS THEY RELATE TO YOUR HOUSEHOLD? (CONT.)
NUMBER/PERCENTAGE WHO RESPONDED "DISAGREE" OR "SOMEWHAT DISAGREE" TO THE FOLLOWING STATEMENTS:

	# NASHVILLE	% NASHVILLE	# DENVER	% DENVER	# NYC	% NYC	# TOTAL	% TOTAL
IN THE PAST YEAR, MY HOUSEHOLD HAS MADE AN EFFORT TO REDUCE THE AMOUNT OF FOOD WE THROW AWAY	16	21%	32	14%	67	16%	115	16%
MY HOUSEHOLD HAS COMPLETE CONTROL OVER REDUCING THE AMOUNT OF FOOD WE THROW AWAY	11	14%	20	9%	48	11%	79	11%
PEOPLE AROUND ME BELIEVE MY HOUSEHOLD SHOULD REDUCE THE AMOUNT OF FOOD WE THROW AWAY	41	54%	118	53%	225	53%	384	53%
MY HOUSEHOLD BELIEVES THAT REDUCING THE AMOUNT OF FOOD WE THROW AWAY WOULD BE GOOD	4	5%	6	3%	16	4%	26	4%
MY HOUSEHOLD INTENDS TO REDUCE THE AMOUNT OF FOOD WE THROW AWAY	6	8%	10	5%	24	6%	40	6%
GIVEN THE AMOUNT OF FOOD THAT IS THROWN AWAY IN THIS COUNTRY, THE ACTIONS OF MY HOUSEHOLD WON'T MAKE A MEANINGFUL DIFFERENCE IN THE AMOUNT OF FOOD BEING WASTED	46	61%	138	62%	227	53%	411	57%

Q31. HOW STRONGLY DO YOU AGREE OR DISAGREE WITH THE FOLLOWING STATEMENTS AS THEY RELATE TO YOUR HOUSEHOLD?

NASHVILLE	AGREE		SOMEWHAT AGREE		NEITHER AGREE NOR DISAGREE		SOMEWHAT DISAGREE		DISAGREE		(BLANK)	
	#	%	#	%	#	%	#	%	#	%	#	%
REDUCING MY HOUSEHOLD'S FOOD WASTE WOULD SAVE ENERGY	41	54%	19	25%	11	14%	0	0%	4	5%	2	3%
REDUCING MY HOUSEHOLD'S FOOD WASTE WOULD SAVE WATER	45	59%	16	21%	10	13%	1	1%	3	4%	1	1%
REDUCING MY HOUSEHOLD'S FOOD WASTE WOULD FEED HUNGRY PEOPLE	16	21%	16	21%	15	20%	19	25%	9	12%	1	1%
REDUCING MY HOUSEHOLD'S FOOD WASTE WOULD IMPROVE THE HEALTH OF MY HOUSEHOLD	18	24%	18	24%	24	32%	7	9%	8	11%	1	1%
REDUCING MY HOUSEHOLD'S FOOD WASTE WOULD SAVE MY HOUSEHOLD MONEY	56	74%	11	14%	4	5%	2	3%	2	3%	1	1%
REDUCING MY HOUSEHOLD'S FOOD WASTE WOULD DECREASE LANDFILL USE	56	74%	6	8%	6	8%	2	3%	4	5%	2	3%
REDUCING MY HOUSEHOLD'S FOOD WASTE WOULD DECREASE CARBON EMISSIONS	48	63%	13	17%	9	12%	2	3%	3	4%	1	1%

Q3I. HOW STRONGLY DO YOU AGREE OR DISAGREE WITH THE FOLLOWING STATEMENTS AS THEY RELATE TO YOUR HOUSEHOLD? (CONT.)

DENVER	AGREE		SOMEWHAT AGREE		NEITHER AGREE NOR DISAGREE		SOMEWHAT DISAGREE		DISAGREE		(BLANK)	
	#	%	#	%	#	%	#	%	#	%	#	%
REDUCING MY HOUSEHOLD'S FOOD WASTE WOULD SAVE ENERGY	109	49%	55	25%	41	18%	9	4%	7	3%	1	0%
REDUCING MY HOUSEHOLD'S FOOD WASTE WOULD SAVE WATER	106	48%	45	20%	56	25%	8	4%	5	2%	2	1%
REDUCING MY HOUSEHOLD'S FOOD WASTE WOULD FEED HUNGRY PEOPLE	53	24%	42	19%	57	26%	43	19%	26	12%	1	0%
REDUCING MY HOUSEHOLD'S FOOD WASTE WOULD IMPROVE THE HEALTH OF MY HOUSEHOLD	40	18%	50	23%	87	39%	26	12%	18	8%	1	0%
REDUCING MY HOUSEHOLD'S FOOD WASTE WOULD SAVE MY HOUSEHOLD MONEY	146	66%	52	23%	14	6%	6	3%	2	1%	2	1%
REDUCING MY HOUSEHOLD'S FOOD WASTE WOULD DECREASE LANDFILL USE	148	67%	38	17%	18	8%	6	3%	8	4%	4	2%
REDUCING MY HOUSEHOLD'S FOOD WASTE WOULD DECREASE CARBON EMISSIONS	116	52%	45	20%	46	21%	5	2%	6	3%	4	2%

NYC	AGREE		SOMEWHAT AGREE		NEITHER AGREE NOR DISAGREE		SOMEWHAT DISAGREE		DISAGREE		(BLANK)	
	#	%	#	%	#	%	#	%	#	%	#	%
REDUCING MY HOUSEHOLD'S FOOD WASTE WOULD SAVE ENERGY	210	49%	97	23%	86	20%	9	2%	8	2%	18	4%
REDUCING MY HOUSEHOLD'S FOOD WASTE WOULD SAVE WATER	191	45%	99	23%	99	23%	11	3%	10	2%	18	4%
REDUCING MY HOUSEHOLD'S FOOD WASTE WOULD FEED HUNGRY PEOPLE	120	28%	82	19%	112	26%	45	11%	50	12%	19	4%
REDUCING MY HOUSEHOLD'S FOOD WASTE WOULD IMPROVE THE HEALTH OF MY HOUSEHOLD	91	21%	81	19%	138	32%	50	12%	49	11%	19	4%
REDUCING MY HOUSEHOLD'S FOOD WASTE WOULD SAVE MY HOUSEHOLD MONEY	266	62%	97	23%	27	6%	4	1%	15	4%	19	4%
REDUCING MY HOUSEHOLD'S FOOD WASTE WOULD DECREASE LANDFILL USE	258	60%	87	20%	39	9%	10	2%	13	3%	21	5%
REDUCING MY HOUSEHOLD'S FOOD WASTE WOULD DECREASE CARBON EMISSIONS	217	51%	101	24%	67	16%	9	2%	10	2%	24	6%

Q3I. HOW STRONGLY DO YOU AGREE OR DISAGREE WITH THE FOLLOWING STATEMENTS AS THEY RELATE TO YOUR HOUSEHOLD? (CONT.)

TOTAL	AGREE		SOMEWHAT AGREE		NEITHER AGREE NOR DISAGREE		SOMEWHAT DISAGREE		DISAGREE		(BLANK)	
	#	%	#	%	#	%	#	%	#	%	#	%
REDUCING MY HOUSEHOLD'S FOOD WASTE WOULD SAVE ENERGY	360	50%	171	24%	138	19%	18	2%	19	3%	21	3%
REDUCING MY HOUSEHOLD'S FOOD WASTE WOULD SAVE WATER	342	47%	160	22%	165	23%	20	3%	18	2%	21	3%
REDUCING MY HOUSEHOLD'S FOOD WASTE WOULD FEED HUNGRY PEOPLE	189	26%	140	19%	184	25%	107	15%	85	12%	21	3%
REDUCING MY HOUSEHOLD'S FOOD WASTE WOULD IMPROVE THE HEALTH OF MY HOUSEHOLD	149	21%	149	21%	249	34%	83	11%	75	10%	21	3%
REDUCING MY HOUSEHOLD'S FOOD WASTE WOULD SAVE MY HOUSEHOLD MONEY	468	64%	160	22%	45	6%	12	2%	19	3%	22	3%
REDUCING MY HOUSEHOLD'S FOOD WASTE WOULD DECREASE LANDFILL USE	462	64%	131	18%	63	9%	18	2%	25	3%	27	4%
REDUCING MY HOUSEHOLD'S FOOD WASTE WOULD DECREASE CARBON EMISSIONS	381	52%	159	22%	122	17%	16	2%	19	3%	29	4%

NUMBER/PERCENTAGE WHO RESPONDED "AGREE" OR "SOMEWHAT AGREE" TO THE FOLLOWING STATEMENTS:

	# NASHVILLE	% NASHVILLE	# DENVER	% DENVER	# NYC	% NYC	# TOTAL	% TOTAL
REDUCING MY HOUSEHOLD'S FOOD WASTE WOULD SAVE ENERGY	60	79%	164	74%	307	72%	531	73%
REDUCING MY HOUSEHOLD'S FOOD WASTE WOULD SAVE WATER	61	80%	151	68%	290	68%	502	69%
REDUCING MY HOUSEHOLD'S FOOD WASTE WOULD FEED HUNGRY PEOPLE	32	42%	95	43%	202	47%	329	45%
REDUCING MY HOUSEHOLD'S FOOD WASTE WOULD IMPROVE THE HEALTH OF MY HOUSEHOLD	36	47%	90	41%	172	40%	298	41%
REDUCING MY HOUSEHOLD'S FOOD WASTE WOULD SAVE MY HOUSEHOLD MONEY	67	88%	198	89%	363	85%	628	87%
REDUCING MY HOUSEHOLD'S FOOD WASTE WOULD DECREASE LANDFILL USE	62	82%	186	84%	345	81%	593	82%
REDUCING MY HOUSEHOLD'S FOOD WASTE WOULD DECREASE CARBON EMISSIONS	61	80%	161	73%	318	74%	540	74%

Q3I. HOW STRONGLY DO YOU AGREE OR DISAGREE WITH THE FOLLOWING STATEMENTS AS THEY RELATE TO YOUR HOUSEHOLD? (CONT.)

NUMBER/PERCENTAGE WHO RESPONDED "DISAGREE" OR "SOMEWHAT DISAGREE" TO THE FOLLOWING STATEMENTS:

	# NASHVILLE	% NASHVILLE	# DENVER	% DENVER	# NYC	% NYC	# TOTAL	% TOTAL
REDUCING MY HOUSEHOLD'S FOOD WASTE WOULD SAVE ENERGY	4	5%	16	7%	17	4%	37	5%
REDUCING MY HOUSEHOLD'S FOOD WASTE WOULD SAVE WATER	4	5%	13	6%	21	5%	38	5%
REDUCING MY HOUSEHOLD'S FOOD WASTE WOULD FEED HUNGRY PEOPLE	28	37%	69	31%	95	22%	192	26%
REDUCING MY HOUSEHOLD'S FOOD WASTE WOULD IMPROVE THE HEALTH OF MY HOUSEHOLD	15	20%	44	20%	99	23%	158	22%
REDUCING MY HOUSEHOLD'S FOOD WASTE WOULD SAVE MY HOUSEHOLD MONEY	4	5%	8	4%	19	4%	31	4%
REDUCING MY HOUSEHOLD'S FOOD WASTE WOULD DECREASE LANDFILL USE	6	8%	14	6%	23	5%	43	6%
REDUCING MY HOUSEHOLD'S FOOD WASTE WOULD DECREASE CARBON EMISSIONS	5	7%	11	5%	19	4%	35	5%

Appendix G: Residential Bin Dig Data

NASHVILLE ALL RESIDENTIAL TRASH BIN DIG SUMMARY			
FOOD	TOTAL POUNDS	% OF WASTED FOOD	% OF TRASH
INEDIBLE	139	23%	6%
MEAT & FISH	18	3%	1%
DAIRY & EGGS	8	1%	0%
FRUITS & VEGETABLES	137	23%	6%
BAKED GOODS	34	6%	1%
DRY FOOD	22	4%	1%
SNACKS & CONDIMENTS	26	4%	1%
LIQUIDS, OILS, & GREASE	47	8%	2%
PREPARED FOODS & LEFTOVERS	172	28%	7%
UNIDENTIFIABLE	4	1%	0%
SUBTOTAL EDIBLE	468	77%	20%
SUBTOTAL FOOD WASTE	607	100%	26%
NON-FOOD			
FOOD SOILED PAPER	138	N/A	6%
YARD WASTE	11	N/A	0%
GLASS	242	N/A	10%
PAPER	256	N/A	11%
METAL	83	N/A	4%
RIGID PLASTIC	117	N/A	5%
PLASTIC FILM	146	N/A	6%
OTHER	718	N/A	31%
SUBTOTAL NON-FOOD	1711	N/A	74%
TOTAL TRASH	2318	N/A	100%

DENVER ALL RESIDENTIAL TRASH BIN DIG SUMMARY			
FOOD	TOTAL POUNDS	% OF WASTED FOOD	% OF TRASH
INEDIBLE	192	38%	10%
MEAT & FISH	17	3%	1%
DAIRY & EGGS	7	1%	0%
FRUITS & VEGETABLES	119	24%	6%
BAKED GOODS	30	6%	2%
DRY FOOD	5	1%	0%
SNACKS & CONDIMENTS	26	5%	1%
LIQUIDS, OILS, & GREASE	30	6%	2%
PREPARED FOODS & LEFTOVERS	79	16%	4%
UNIDENTIFIABLE	1	0%	0%
SUBTOTAL EDIBLE	314	62%	16%
SUBTOTAL FOOD WASTE	506	100%	26%
NON-FOOD			
FOOD SOILED PAPER	104	N/A	5%
YARD WASTE	465	N/A	24%
GLASS	35	N/A	2%
PAPER	101	N/A	5%
METAL	31	N/A	2%
RIGID PLASTIC	43	N/A	2%
PLASTIC FILM	80	N/A	4%
OTHER	612	N/A	31%
SUBTOTAL NON-FOOD	1471	N/A	74%
TOTAL TRASH	1977	N/A	100%

NYC ALL RESIDENTIAL TRASH BIN DIG SUMMARY			
FOOD	TOTAL POUNDS	% OF WASTED FOOD	% OF TRASH
INEDIBLE	280	44%	15%
MEAT & FISH	23	4%	1%
DAIRY & EGGS	9	1%	0%
FRUITS & VEGETABLES	94	15%	5%
BAKED GOODS	38	6%	2%
DRY FOOD	11	2%	1%
SNACKS & CONDIMENTS	19	3%	1%
LIQUIDS, OILS, & GREASE	11	2%	1%
PREPARED FOODS & LEFTOVERS	152	24%	8%
UNIDENTIFIABLE	0	0%	0%
SUBTOTAL EDIBLE	357	56%	20%
SUBTOTAL FOOD WASTE	637	100%	35%
NON-FOOD			
FOOD SOILED PAPER	225	N/A	12%
YARD WASTE	14	N/A	1%
GLASS	38	N/A	2%
PAPER	161	N/A	9%
METAL	24	N/A	1%
RIGID PLASTIC	58	N/A	3%
PLASTIC FILM	134	N/A	7%
OTHER	530	N/A	29%
SUBTOTAL NON-FOOD	1184	N/A	65%
TOTAL TRASH	1821	N/A	100%

ALL CITIES RESIDENTIAL TRASH BIN DIG SUMMARY			
FOOD	TOTAL POUNDS	% OF WASTED FOOD	% OF TRASH
INEDIBLE	611	35%	10%
MEAT & FISH	58	3%	1%
DAIRY & EGGS	24	1%	0%
FRUITS & VEGETABLES	350	20%	6%
BAKED GOODS	102	6%	2%
DRY FOOD	38	2%	1%
SNACKS & CONDIMENTS	71	4%	1%
LIQUIDS, OILS, & GREASE	88	5%	1%
PREPARED FOODS & LEFTOVERS	403	23%	7%
UNIDENTIFIABLE	5	0%	0%
SUBTOTAL EDIBLE	1139	65%	19%
SUBTOTAL FOOD WASTE	1750	100%	29%
NON-FOOD			
FOOD SOILED PAPER	467	N/A	8%
YARD WASTE	490	N/A	8%
GLASS	315	N/A	5%
PAPER	518	N/A	8%
METAL	138	N/A	2%
RIGID PLASTIC	218	N/A	4%
PLASTIC FILM	360	N/A	6%
OTHER	1860	N/A	30%
SUBTOTAL NON-FOOD	4366	N/A	71%
TOTAL TRASH	6116	N/A	100%

COMPARISON OF TRASH BIN DIGS TO DIARIES (ALL DISCARD DESTINATIONS): NASHVILLE

	BIN DIGS		DIARIES		DIFFERENCE IN % OF WASTED FOOD (DIARIES MINUS BIN DIGS)
	TOTAL POUNDS	% OF WASTED FOOD	TOTAL POUNDS	% OF WASTED FOOD	
INEDIBLE	139	23%	131	37%	14%
MEAT & FISH	18	3%	9	2%	-1%
DAIRY & EGGS	8	1%	18	5%	4%
FRUITS & VEGETABLES	137	23%	84	24%	2%
BAKED GOODS	34	6%	10	3%	-3%
DRY FOOD	22	4%	4	1%	-2%
SNACKS & CONDIMENTS	26	4%	12	3%	-1%
LIQUIDS, OILS, & GREASE	47	8%	34	10%	2%
PREPARED FOODS & LEFTOVERS	172	28%	48	14%	-15%
UNIDENTIFIABLE	4	1%	1	0%	0%
SUBTOTAL EDIBLE	468	77%	219	63%	-14%
TOTAL FOOD WASTE	607	100%	350	100%	0%

COMPARISON OF TRASH BIN DIGS TO DIARIES (ALL DISCARD DESTINATIONS): DENVER

	BIN DIGS		DIARIES		DIFFERENCE IN % OF WASTED FOOD (DIARIES MINUS BIN DIGS)
	TOTAL POUNDS	% OF WASTED FOOD	TOTAL POUNDS	% OF WASTED FOOD	
INEDIBLE	192	38%	317	25%	-13%
MEAT & FISH	17	3%	72	6%	2%
DAIRY & EGGS	7	1%	71	6%	4%
FRUITS & VEGETABLES	119	24%	372	29%	5%
BAKED GOODS	30	6%	67	5%	-1%
DRY FOOD	5	1%	6	0%	-1%
SNACKS & CONDIMENTS	26	5%	31	2%	-3%
LIQUIDS, OILS, & GREASE	30	6%	111	9%	3%
PREPARED FOODS & LEFTOVERS	79	16%	240	19%	3%
UNIDENTIFIABLE	1	0%	5	0%	0%
SUBTOTAL EDIBLE	314	62%	974	75%	13%
TOTAL FOOD WASTE	506	100%	1291	100%	0%

COMPARISON OF TRASH BIN DIGS TO DIARIES (ALL DISCARD DESTINATIONS): NYC

	BIN DIGS		DIARIES		DIFFERENCE IN % OF WASTED FOOD (DIARIES MINUS BIN DIGS)
	TOTAL POUNDS	% OF WASTED FOOD	TOTAL POUNDS	% OF WASTED FOOD	
INEDIBLE	280	44%	695	35%	-9%
MEAT & FISH	23	4%	62	3%	0%
DAIRY & EGGS	9	1%	78	4%	3%
FRUITS & VEGETABLES	94	15%	523	26%	12%
BAKED GOODS	38	6%	79	4%	-2%
DRY FOOD	11	2%	20	1%	-1%
SNACKS & CONDIMENTS	19	3%	29	1%	-2%
LIQUIDS, OILS, & GREASE	11	2%	82	4%	2%
PREPARED FOODS & LEFTOVERS	152	24%	410	21%	-3%
UNIDENTIFIABLE	0	0%	0	0%	0%
SUBTOTAL EDIBLE	357	56%	1282	65%	9%
TOTAL FOOD WASTE	637	100%	1977	100%	0%

COMPARISON OF TRASH BIN DIGS TO DIARIES (ALL DISCARD DESTINATIONS): ALL CITIES

	BIN DIGS		DIARIES		DIFFERENCE IN % OF WASTED FOOD (DIARIES MINUS BIN DIGS)
	TOTAL POUNDS	% OF WASTED FOOD	TOTAL POUNDS	% OF WASTED FOOD	
INEDIBLE	611	35%	1143	32%	-3%
MEAT & FISH	58	3%	142	4%	1%
DAIRY & EGGS	24	1%	168	5%	3%
FRUITS & VEGETABLES	350	20%	979	27%	7%
BAKED GOODS	102	6%	156	4%	-2%
DRY FOOD	38	2%	30	1%	-1%
SNACKS & CONDIMENTS	71	4%	71	2%	-2%
LIQUIDS, OILS, & GREASE	88	5%	226	6%	1%
PREPARED FOODS & LEFTOVERS	403	23%	697	19%	-4%
UNIDENTIFIABLE	5	0%	5	0%	0%
SUBTOTAL EDIBLE	1139	65%	2475	68%	3%
TOTAL FOOD WASTE	1750	100%	3618	100%	0%

COMPARISON OF TRASH BIN DIGS TO DIARIES (TRASH ONLY): NASHVILLE

	BIN DIGS		DIARIES		DIFFERENCE IN % OF WASTED FOOD (DIARIES MINUS BIN DIGS)
	TOTAL POUNDS	% OF WASTED FOOD	TOTAL POUNDS	% OF WASTED FOOD	
INEDIBLE	139	23%	69	38%	15%
MEAT & FISH	18	3%	7	4%	1%
DAIRY & EGGS	8	1%	7	4%	3%
FRUITS & VEGETABLES	137	23%	45	25%	2%
BAKED GOODS	34	6%	8	4%	-1%
DRY FOOD	22	4%	1	1%	-3%
SNACKS & CONDIMENTS	26	4%	8	4%	0%
LIQUIDS, OILS, & GREASE	47	8%	2	1%	-7%
PREPARED FOODS & LEFTOVERS	172	28%	33	18%	-10%
UNIDENTIFIABLE	4	1%	1	1%	0%
SUBTOTAL EDIBLE	468	77%	113	62%	-15%
TOTAL FOOD WASTE	607	100%	181	100%	0%

COMPARISON OF TRASH BIN DIGS TO DIARIES (TRASH ONLY): DENVER

	BIN DIGS		DIARIES		DIFFERENCE IN % OF WASTED FOOD (DIARIES MINUS BIN DIGS)
	TOTAL POUNDS	% OF WASTED FOOD	TOTAL POUNDS	% OF WASTED FOOD	
INEDIBLE	192	38%	170	24%	-14%
MEAT & FISH	17	3%	54	8%	4%
DAIRY & EGGS	7	1%	27	4%	2%
FRUITS & VEGETABLES	119	24%	206	30%	6%
BAKED GOODS	30	6%	46	7%	1%
DRY FOOD	5	1%	4	1%	0%
SNACKS & CONDIMENTS	26	5%	19	3%	-2%
LIQUIDS, OILS, & GREASE	30	6%	17	2%	-3%
PREPARED FOODS & LEFTOVERS	79	16%	150	22%	6%
UNIDENTIFIABLE	1	0%	3	0%	0%
SUBTOTAL EDIBLE	314	62%	527	76%	14%
TOTAL FOOD WASTE	506	100%	696	100%	0%

COMPARISON OF TRASH BIN DIGS TO DIARIES (TRASH ONLY): NYC

	BIN DIGS		DIARIES		DIFFERENCE IN % OF WASTED FOOD (DIARIES MINUS BIN DIGS)
	TOTAL POUNDS	% OF WASTED FOOD	TOTAL POUNDS	% OF WASTED FOOD	
INEDIBLE	280	44%	367	36%	-8%
MEAT & FISH	23	4%	44	4%	1%
DAIRY & EGGS	9	1%	21	2%	1%
FRUITS & VEGETABLES	94	15%	286	28%	13%
BAKED GOODS	38	6%	48	5%	-1%
DRY FOOD	11	2%	9	1%	-1%
SNACKS & CONDIMENTS	19	3%	19	2%	-1%
LIQUIDS, OILS, & GREASE	11	2%	10	1%	-1%
PREPARED FOODS & LEFTOVERS	152	24%	230	22%	-2%
UNIDENTIFIABLE	0	0%	0	0%	0%
SUBTOTAL EDIBLE	357	56%	666	64%	8%
TOTAL FOOD WASTE	637	100%	1033	100%	0%

COMPARISON OF TRASH BIN DIGS TO DIARIES (TRASH ONLY): ALL CITIES

	BIN DIGS		DIARIES		DIFFERENCE IN % OF WASTED FOOD (DIARIES MINUS BIN DIGS)
	TOTAL POUNDS	% OF WASTED FOOD	TOTAL POUNDS	% OF WASTED FOOD	
INEDIBLE	611	35%	605	32%	-3%
MEAT & FISH	58	3%	106	6%	2%
DAIRY & EGGS	24	1%	56	3%	2%
FRUITS & VEGETABLES	350	20%	537	28%	8%
BAKED GOODS	102	6%	101	5%	-1%
DRY FOOD	38	2%	15	1%	-1%
SNACKS & CONDIMENTS	71	4%	45	2%	-2%
LIQUIDS, OILS, & GREASE	88	5%	29	2%	-4%
PREPARED FOODS & LEFTOVERS	403	23%	413	22%	-1%
UNIDENTIFIABLE	5	0%	4	0%	0%
SUBTOTAL EDIBLE	1,139	65%	1,306	68%	3%
TOTAL FOOD WASTE	1,750	100%	1,911	100%	0%

DENVER ALL RESIDENTIAL COMPOST BIN DIG SUMMARY			
FOOD	TOTAL POUNDS	% OF WASTED FOOD	% OF TRASH
INEDIBLE	73	65%	15%
MEAT & FISH	4	4%	1%
DAIRY & EGGS	0	0%	0%
FRUITS & VEGETABLES	28	25%	6%
BAKED GOODS	4	4%	1%
DRY FOOD	0	0%	0%
SNACKS & CONDIMENTS	0	0%	0%
LIQUIDS, OILS, & GREASE	0	0%	0%
PREPARED FOODS & LEFTOVERS	4	4%	1%
UNIDENTIFIABLE	0	0%	0%
SUBTOTAL EDIBLE	40	35%	8%
SUBTOTAL FOOD WASTE	113	100%	23%
NON-FOOD			
FOOD SOILED PAPER	22	N/A	4%
YARD WASTE	350	N/A	70%
GLASS	4	N/A	1%
PAPER	3	N/A	1%
METAL	1	N/A	0%
RIGID PLASTIC	1	N/A	0%
PLASTIC FILM	1	N/A	0%
OTHER	4	N/A	1%
SUBTOTAL NON-FOOD	386	N/A	77%
TOTAL COMPOST	499	N/A	100%

NYC ALL RESIDENTIAL COMPOST BIN DIG SUMMARY			
FOOD	TOTAL POUNDS	% OF WASTED FOOD	% OF TRASH
INEDIBLE	133	75%	64%
MEAT & FISH	5	3%	2%
DAIRY & EGGS	2	1%	1%
FRUITS & VEGETABLES	16	9%	8%
BAKED GOODS	6	3%	3%
DRY FOOD	1	1%	0%
SNACKS & CONDIMENTS	4	2%	2%
LIQUIDS, OILS, & GREASE	0	0%	0%
PREPARED FOODS & LEFTOVERS	11	6%	5%
UNIDENTIFIABLE	0	0%	0%
SUBTOTAL EDIBLE	45	25%	22%
SUBTOTAL FOOD WASTE	178	100%	86%
NON-FOOD			
FOOD SOILED PAPER	18	N/A	9%
YARD WASTE	9	N/A	4%
GLASS	0	N/A	0%
PAPER	0	N/A	0%
METAL	0	N/A	0%
RIGID PLASTIC	0	N/A	0%
PLASTIC FILM	2	N/A	1%
OTHER	0	N/A	0%
SUBTOTAL NON-FOOD	29	N/A	14%
TOTAL COMPOST	207	N/A	100%

ALL CITIES RESIDENTIAL COMPOST BIN DIG SUMMARY			
FOOD	TOTAL POUNDS	% OF WASTED FOOD	% OF COMPOST
INEDIBLE	206	71%	29%
MEAT & FISH	9	3%	1%
DAIRY & EGGS	2	1%	0%
FRUITS & VEGETABLES	44	15%	6%
BAKED GOODS	10	3%	1%
DRY FOOD	1	0%	0%
SNACKS & CONDIMENTS	4	1%	1%
LIQUIDS, OILS, & GREASE	0	0%	0%
PREPARED FOODS & LEFTOVERS	15	5%	2%
UNIDENTIFIABLE	0	0%	0%
SUBTOTAL EDIBLE	85	29%	12%
SUBTOTAL FOOD WASTE	291	100%	41%
NON-FOOD			
FOOD SOILED PAPER	40	N/A	6%
YARD WASTE	359	N/A	51%
GLASS	4	N/A	1%
PAPER	3	N/A	0%
METAL	1	N/A	0%
RIGID PLASTIC	1	N/A	0%
PLASTIC FILM	3	N/A	0%
OTHER	4	N/A	1%
SUBTOTAL NON-FOOD	415	N/A	59%
TOTAL TRASH	706	N/A	100%

COMPARISON OF COMPOST BIN DIGS TO DIARIES (COMPOST ONLY): DENVER

	BIN DIGS		DIARIES		DIFFERENCE IN % OF WASTED FOOD (DIARIES MINUS BIN DIGS)
	TOTAL POUNDS	% OF WASTED FOOD	TOTAL POUNDS	% OF WASTED FOOD	
INEDIBLE	73	65%	66	38%	-26%
MEAT & FISH	4	4%	7	4%	0%
DAIRY & EGGS	0	0%	1	1%	1%
FRUITS & VEGETABLES	28	25%	56	33%	8%
BAKED GOODS	4	4%	7	4%	0%
DRY FOOD	0	0%	1	0%	0%
SNACKS & CONDIMENTS	0	0%	1	1%	1%
LIQUIDS, OILS, & GREASE	0	0%	1	0%	0%
PREPARED FOODS & LEFTOVERS	4	4%	32	19%	15%
UNIDENTIFIABLE	0	0%	0	0%	0%
SUBTOTAL EDIBLE	40	35%	106	62%	26%
TOTAL FOOD WASTE	113	100%	172	100%	0%

COMPARISON OF COMPOST BIN DIGS TO DIARIES (COMPOST ONLY): NYC

	BIN DIGS		DIARIES		DIFFERENCE IN % OF WASTED FOOD (DIARIES MINUS BIN DIGS)
	TOTAL POUNDS	% OF WASTED FOOD	TOTAL POUNDS	% OF WASTED FOOD	
INEDIBLE	133	75%	179	40%	-35%
MEAT & FISH	5	3%	11	3%	0%
DAIRY & EGGS	2	1%	11	3%	1%
FRUITS & VEGETABLES	16	9%	130	29%	20%
BAKED GOODS	6	3%	22	5%	2%
DRY FOOD	1	1%	6	1%	1%
SNACKS & CONDIMENTS	4	2%	4	1%	-1%
LIQUIDS, OILS, & GREASE	0	0%	5	1%	1%
PREPARED FOODS & LEFTOVERS	11	6%	77	17%	11%
UNIDENTIFIABLE	0	0%	0	0%	0%
SUBTOTAL EDIBLE	45	25%	266	60%	35%
TOTAL FOOD WASTE	178	100%	444	100%	0%

COMPARISON OF COMPOST BIN DIGS TO DIARIES (COMPOST ONLY): ALL CITIES

	BIN DIGS		DIARIES		DIFFERENCE IN % OF WASTED FOOD (DIARIES MINUS BIN DIGS)
	TOTAL POUNDS	% OF WASTED FOOD	TOTAL POUNDS	% OF WASTED FOOD	
INEDIBLE	206	71%	244	40%	-31%
MEAT & FISH	9	3%	18	3%	0%
DAIRY & EGGS	2	1%	13	2%	1%
FRUITS & VEGETABLES	44	15%	186	30%	15%
BAKED GOODS	10	3%	29	5%	1%
DRY FOOD	1	0%	6	1%	1%
SNACKS & CONDIMENTS	4	1%	5	1%	-1%
LIQUIDS, OILS, & GREASE	0	0%	5	1%	1%
PREPARED FOODS & LEFTOVERS	15	5%	109	18%	13%
UNIDENTIFIABLE	0	0%	0	0%	0%
SUBTOTAL EDIBLE	85	29%	372	60%	31%
TOTAL FOOD WASTE	291	100%	616	100%	0%

The following charts compare Denver households that indicated they participate in city composting with Denver households that indicated they do not participate in city composting. Highlighted cells are those associated with t-tests. Asterisked numbers are those that are statistically significant ($P < 0.1$). Note: Of the 25 households that claimed to compost, only 14 actually set out compost. One of the homes only set out compost without trash, so the number of trash samples was 24 instead of 25.

DENVER COMPARISON PER CAPITA (TRASH AND COMPOST)

	DOES NOT COMPOST			COMPOSTS								
	TRASH			COMPOST			TRASH			TRASH+COMPOST		
	POUNDS WASTED FOOD PER CAPITA	POUNDS EDIBLE FOOD PER CAPITA	% EDIBLE	POUNDS WASTED FOOD PER CAPITA	POUNDS EDIBLE FOOD PER CAPITA	% EDIBLE	POUNDS WASTED FOOD PER CAPITA	POUNDS EDIBLE FOOD PER CAPITA	% EDIBLE	POUNDS WASTED FOOD PER CAPITA	POUNDS EDIBLE FOOD PER CAPITA	% EDIBLE
Average	5.3	2.7	52%	2.5	0.9	24%	0.9	0.5	37%	2.2	1.0	38%
St Dev	4.5	2.8	32%	2.8	1.4	27%	1.7	1.1	45%	2.6	1.4	37%
n	17	17	17	14	14	14	24	24	24	25	25	25
T-Test Score	0.020*	0.032*	0.207									

DENVER COMPARISON BY HOUSEHOLD (TRASH AND COMPOST)

	DOES NOT COMPOST			COMPOSTS								
	TRASH			COMPOST			TRASH			TRASH+COMPOST		
	POUNDS WASTED FOOD PER HOUSEHOLD	POUNDS EDIBLE FOOD PER HOUSEHOLD	% EDIBLE	POUNDS WASTED FOOD	POUNDS EDIBLE FOOD PER HOUSEHOLD	% EDIBLE	POUNDS WASTED FOOD PER HOUSEHOLD	POUNDS EDIBLE FOOD PER HOUSEHOLD	% EDIBLE	POUNDS WASTED FOOD PER HOUSEHOLD	POUNDS EDIBLE FOOD PER HOUSEHOLD	% EDIBLE
Average	11.9	5.5	52%	7.8	2.8	24%	2.4	1.5	37%	6.7	3.1	38%
St Dev	12.8	6.3	32%	9.6	4.4	27%	4.7	2.9	45%	8.4	4.3	37%
n	17	17	17	14	14	14	24	24	24	25	25	25
T-Test Score	0.156	0.170	0.207									

DENVER COMPARISON PER CAPITA (TRASH ONLY)								
	DOES NOT COMPOST				COMPOSTS			
	POUNDS TRASH PER CAPITA	POUNDS WASTED FOOD PER CAPITA	POUNDS EDIBLE PER CAPITA	% FOOD IN TRASH	POUNDS TRASH PER CAPITA	POUNDS WASTED FOOD PER CAPITA	POUNDS EDIBLE PER CAPITA	% FOOD IN TRASH
Average	22.4	5.3	2.7	35%	8.3	0.9	0.5	11%
St Dev	28.2	4.5	2.8	21%	8.4	1.7	1.1	20%
n	17	17	17	17	24	24	24	24
T-Test Score	0.061*	0.001*	0.006*	0.001*				
DENVER COMPARISON BY HOUSEHOLD (TRASH ONLY)								
	DOES NOT COMPOST				COMPOSTS			
	POUNDS TRASH PER HOUSEHOLD	POUNDS WASTED FOOD PER HOUSEHOLD	POUNDS EDIBLE PER HOUSEHOLD	% FOOD IN TRASH	POUNDS TRASH PER HOUSEHOLD	POUNDS WASTED FOOD PER HOUSEHOLD	POUNDS EDIBLE PER HOUSEHOLD	% FOOD IN TRASH
Average	40.5	11.9	5.5	35%	22.7	2.4	1.5	11%
St Dev	35.4	12.8	6.3	21%	24.2	4.7	2.9	20%
n	17	17	17	17	24	24	24	24
T-Test Score	0.083*	0.009*	0.024*	0.001*				

The following charts compare NYC households that indicated they participate in city composting with NYC households that indicated they do not participate in city composting. Highlighted cells are those associated with t-tests. Asterisked numbers are those that are statistically significant ($P < 0.1$). Note: Of the 27 households that claimed to compost, only 7 actually set out compost. One of the homes only set out compost without trash, so there were only 6 trash samples for the composting group.

NYC COMPARISON PER CAPITA (TRASH AND COMPOST)												
	DOES NOT COMPOST			COMPOSTS								
	TRASH			COMPOST			TRASH			TRASH+COMPOST		
	POUNDS WASTED FOOD PER CAPITA	POUNDS EDIBLE FOOD PER CAPITA	% EDIBLE	POUNDS WASTED FOOD PER CAPITA	POUNDS EDIBLE FOOD PER CAPITA	% EDIBLE	POUNDS WASTED FOOD PER CAPITA	POUNDS EDIBLE FOOD PER CAPITA	% EDIBLE	POUNDS WASTED FOOD PER CAPITA	POUNDS EDIBLE FOOD PER CAPITA	% EDIBLE
Average	2.5	1.7	52%	3.0	1.2	28%	0.9	0.7	57%	1.7	1.0	53%
St Dev	2.8	2.2	36%	2.1	1.5	30%	1.4	1.1	39%	2.4	1.6	38%
n	34	34	34	7	7	7	26	26	26	27	27	27
T-Test Score	0.213	0.125	0.882									

NYC COMPARISON BY HOUSEHOLD (TRASH AND COMPOST)												
	DOES NOT COMPOST			COMPOSTS								
	TRASH			COMPOST			TRASH			TRASH+COMPOST		
	POUNDS WASTED FOOD PER HOUSEHOLD	POUNDS EDIBLE FOOD PER HOUSEHOLD	% EDIBLE	POUNDS WASTED FOOD PER HOUSEHOLD	POUNDS EDIBLE FOOD PER HOUSEHOLD	% EDIBLE	POUNDS WASTED FOOD PER HOUSEHOLD	POUNDS EDIBLE FOOD PER HOUSEHOLD	% EDIBLE	POUNDS WASTED FOOD PER HOUSEHOLD	POUNDS EDIBLE FOOD PER HOUSEHOLD	% EDIBLE
Average	7.3	4.6	52%	12.2	4.4	28%	3.0	2.0	57%	6.0	3.1	53%
St Dev	7.9	5.7	36%	9.6	4.5	30%	3.9	2.8	39%	9.4	5.1	38%
n	34	34	34	7	7	7	26	26	26	27	27	27
T-Test Score	0.586	0.270	0.882									

NYC COMPARISON PER CAPITA (TRASH ONLY)								
	DOES NOT COMPOST				COMPOSTS			
	POUNDS TRASH PER CAPITA	POUNDS WASTED FOOD PER CAPITA	POUNDS EDIBLE PER CAPITA	% FOOD IN TRASH	POUNDS TRASH PER CAPITA	POUNDS WASTED FOOD PER CAPITA	POUNDS EDIBLE PER CAPITA	% FOOD IN TRASH
Average	6.1	2.5	1.7	42%	4.5	0.9	0.7	21%
St Dev	8.0	2.8	2.2	27%	5.6	1.4	1.1	18%
n	34	34	34	34	26	26	26	26
T-Test Score	0.353	0.007*	0.019*	0.001*				

NYC COMPARISON BY HOUSEHOLD (TRASH ONLY)								
	DOES NOT COMPOST				COMPOSTS			
	POUNDS TRASH PER HOUSEHOLD	POUNDS WASTED FOOD PER HOUSEHOLD	POUNDS EDIBLE PER HOUSEHOLD	% FOOD IN TRASH	POUNDS TRASH PER HOUSEHOLD	POUNDS WASTED FOOD	POUNDS EDIBLE PER HOUSEHOLD	% FOOD IN TRASH
Average	18.0	7.3	4.6	42%	14.4	3.0	2.0	21%
St Dev	23.9	7.9	5.7	27%	17.5	3.9	2.8	18%
n	34	34	34	34	26	26	26	26
T-Test Score	0.510	0.008*	0.024*	0.001*				

Appendix H: Comparing Demographics with Wasted Food Generation

The following analysis compares per capita-level total and edible food waste generated (as determined by kitchen diaries) to household demographics collected in the first survey. To do this, t-tests were performed to determine relationships between amount of food waste generated per capita and demographic variables (e.g. presence of children in the household, income). T-tests are tests of significance to help determine if two groups are likely to be different or if their difference is likely a result of randomness. The outcome of the t-test is a p-value. The lower the p-value, the more likely the difference between the two groups is not a result of random chance. For the purposes of this analysis, we will consider any p-value of under .1 (or 10% chance of being a result of random chance) to be “significant.” Please note that a “significant” t-test does not provide definitive evidence of association, but does indicate there is a high likelihood of association. A t-test will not prove causation of any kind.

Table 1 provides a summary of which demographics had statistically significant relationships with per capita food waste generation for all three cities. Tables 2-4 provide more detailed information about the results by city.

For example (see Row 2 in Table 2 for Nashville below), a t-test was performed to determine whether household size (single-person or multi-person household) is related to amounts of total and edible food waste generated in Nashville. P-values of .02 for total food waste and .03 for edible food waste were calculated. These p-values (both less than .1) indicate that household size is likely related to the amount of food wasted. From examining the data, the direction of the relationship can be noted. Single-person households generate more wasted food per capita than multi-person households.

Note 1: The results in terms of food wasted per capita are not “normally distributed” (see histograms of distribution in Appendix D). For the statistical calculations used in our analysis, a normal distribution is a required assumption. However, because of the large sample size of our data in all three cities, the non-normal distribution is likely to have a minimal effect on the statistical analysis.¹

Note 2: We found that per capita is the appropriate level of analysis for this compared to household, because household size confounds the relationships. Specifically, we found that many demographics are tightly related to household size. For example, in our study population, households in which ethnicity of members was primarily identified as white have a lower average household size compared to non-white households, so an analysis at the household level would likely show higher food waste generation in non-white households, solely because there are more people in those households. However, doing the same analysis at the per capita level may indicate that for those two groups, food waste generation may be lower in the non-white households.

¹ Thomas Lumley, Paula Diehr, Scott Emerson, and Lu Chen, *The Importance of the Normality Assumption in Large Public Health Data Sets*, Annual Review of Public Health, Volume 23, 2002, <http://www.annualreviews.org/doi/pdf/10.1146/annurev.publhealth.23.100901.140546>.

TABLE I: ALL CITIES SUMMARY – COMPARING DEMOGRAPHICS WITH PER CAPITA FOOD WASTE GENERATION

DEMOGRAPHIC VARIABLES	T-TEST RESULTS - SIGNIFICANCE					
	NASHVILLE		DENVER		NEW YORK CITY	
	TOTAL WASTED FOOD SIGNIFICANCE?	EDIBLE WASTED FOOD SIGNIFICANCE?	TOTAL WASTED FOOD SIGNIFICANCE?	EDIBLE WASTED FOOD SIGNIFICANCE?	TOTAL WASTED FOOD SIGNIFICANCE?	EDIBLE WASTED FOOD SIGNIFICANCE?
Household Composition: Family (related individuals) vs. Non-Family (non-related individuals) Households	no	no	no	no	no	no
Household Size: Single-Person Households vs. Multi-Person Households	YES	YES	no	no	YES	no
Household Size: Households with 4 or more people vs. Households with less than 4 people	YES	YES	YES	no	YES	YES
Maximum Age in Household: Millennial Age (19-35) vs. Non-Millennial Age	YES	YES	no	no	YES	no
Maximum Age in Household: Households with maximum age greater than 50 vs. Households with maximum age less than 50	no	no	no	no	no	no
Average Age in Household (of members over 18): Millennial Age (19-35) vs. Non-Millennial Age	YES	YES	no	no	YES	no
Average Age in Household (of members over 18): Households with maximum age greater than 50 vs. Households with maximum age less than 50	no	no	no	no	YES	no
Household Composition: Households with children (under 18) living in household vs. Households without children	YES	YES	YES	YES	no	no
Householder Education: Households where at least one person has more than a high school education vs. Households where no member has more than a high school education	no	no	YES	YES	YES	no
Race/Ethnicity: White vs. Non-White Households	YES	no	no	no	YES	no
Race/Ethnicity: Black vs. Non-Black Households	no	no	YES	no	no	no
Race/Ethnicity: Mixed Race Households vs. Non-Mixed Race Households	no	no	no	no	no	no

TABLE I: ALL CITIES SUMMARY – COMPARING DEMOGRAPHICS WITH PER CAPITA FOOD WASTE GENERATION (CONT.)

DEMOGRAPHIC VARIABLES	T-TEST RESULTS - SIGNIFICANCE					
	NASHVILLE		DENVER		NEW YORK CITY	
	TOTAL WASTED FOOD SIGNIFICANCE?	EDIBLE WASTED FOOD SIGNIFICANCE?	TOTAL WASTED FOOD SIGNIFICANCE?	EDIBLE WASTED FOOD SIGNIFICANCE?	TOTAL WASTED FOOD SIGNIFICANCE?	EDIBLE WASTED FOOD SIGNIFICANCE?
Primary Language Spoken at Home: English vs. Non-English	no	no	no	no	no	no
National Origin: Households with at least one member born outside of US vs. All members born in US	no	no	no	no	no	no
Income: Household incomes less than median household income vs. Household incomes greater than median (different threshold for each city)	no	no	no	no	no	no
Income: Household incomes less than mean household income vs. Household incomes greater than mean (different threshold for each city)	no	no	no	no	no	no
Food Expenditures for food eaten at home: Households spending less than \$50 per week vs. Households spending more than \$50 per week	no	no	no	no	no	no
Food Expenditures for food eaten at home: Households spending less than \$201 per week vs. Households spending more than \$201 per week	YES	YES	no	no	no	no
Food Expenditures for food eaten away from home: Households spending less than \$50 per week vs. Households spending more than \$50 per week	no	no	no	no	no	no
Food Expenditures for food eaten away from home: Households spending less than \$101 per week vs. Households spending more than \$101 per week	no	no	no	no	no	no
Knowledge of Food Waste Issues: Households that know about the issue of wasted food vs. Households that don't know about the issue of wasted food	no	no	no	no	no	no
Compost: Households that currently compost wasted food vs. Households that do not currently compost	n/a	n/a	no	no	YES	no

TABLE 2: NASHVILLE – COMPARING DEMOGRAPHICS WITH PER CAPITA FOOD WASTE GENERATION

	P-VALUE FOR TOTAL FOOD WASTED	SIGNIFICANT?	P-VALUE FOR EDIBLE FOOD WASTED	SIGNIFICANT?	NOTES ON RELATIONSHIP
Household Composition: Family (related individuals) vs. Non-Family (non-related individuals) Households	.37	no	.22	no	
Household Size: Single-Person Households vs. Multi-Person Households	.02	YES	.03	YES	Single-person households waste more food per capita (total and edible) than multi-person households.
Household Size: Households with 4 or more people vs. Households with less than 4 people	.01	YES	.03	YES	Households with 3 or fewer people waste more food per capita (total and edible) than households with more than 4 people.
Maximum Age in Household: Millennial Age (19-35) vs. Non-Millennial Age	.01	YES	.03	YES	Households with maximum age in the non-millennial range waste more food per capita (total and edible) than millennials (19-35 range).
Maximum Age in Household: Households with maximum age greater than 50 vs. Households with maximum age less than 50	.70	no	.64	no	
Average Age in Household (of members over 18): Millennial Age (19-35) vs. Non-Millennial Age	.00	YES	.02	YES	Households with average age in the non-millennial range waste more food per capita (total and edible) than millennials (19-35 range).
Average Age in Household (of members over 18): Households with maximum age greater than 50 vs. Households with maximum age less than 50	.70	no	.64	no	
Household Composition: Households with children (under 18) living in household vs. Households without children	.04	YES	.07	YES	Households without children waste more food per capita (total and edible) than households with children.
Householder Education: Households where at least one person has more than a high school education vs. Households where no member has more than a high school education	.84	no	.94	no	
Race/Ethnicity: White vs. Non-White Households	.05	YES	.20	no	White households waste more total food per capita than non-white households.
Race/Ethnicity: Black vs. Non-Black Households	.31	no	.99	no	
Race/Ethnicity: Mixed Race Households vs. Non-Mixed Race Households	.29	no	.24	no	
Primary Language Spoken at Home: English vs. Non-English	.96	no	.83	no	
National Origin: Households with at least one member born outside of US vs. All members born in US	.83	no	.62	no	
Income: Household incomes less than \$45k vs. Household incomes more than \$45k (based on Nashville median household income)	.52	no	.22	no	
Income: Household incomes less than \$65k vs. Household incomes more than \$65k (based on Nashville mean household income)	.14	no	.27	no	

TABLE 2: NASHVILLE – COMPARING DEMOGRAPHICS WITH PER CAPITA FOOD WASTE GENERATION (CONT.)

	P-VALUE FOR TOTAL FOOD WASTED	SIGNIFICANT?	P-VALUE FOR EDIBLE FOOD WASTED	SIGNIFICANT?	NOTES ON RELATIONSHIP
Food Expenditures for food eaten at home: Households spending less than \$50 per week vs. Households spending more than \$50 per week	.27	no	.66	no	
Food Expenditures for food eaten at home: Households spending less than \$201 per week vs. Households spending more than \$201 per week	.00	YES	.05	YES	Households spending less than \$201 per week on food eaten at home waste more food per capita (total and edible) than those spending more than \$201 per week.
Food Expenditures for food eaten away from home: Households spending less than \$50 per week vs. Households spending more than \$50 per week	.90	no	.77	no	
Food Expenditures for food eaten away from home: Households spending less than \$101 per week vs. Households spending more than \$101 per week	.85	no	.58	no	
Knowledge of Food Waste Issues: Households that know about the issue of wasted food vs. Households that don't know about the issue of wasted food	.63	no	.74	no	

TABLE 3: DENVER – COMPARING DEMOGRAPHICS WITH PER CAPITA FOOD WASTE GENERATION

	P-VALUE FOR TOTAL FOOD WASTED	SIGNIFICANT?	P-VALUE FOR EDIBLE FOOD WASTED	SIGNIFICANT?	NOTES ON RELATIONSHIP
Household Composition: Family (related individuals) vs. Non-Family (non-related individuals) Households	.76	no	.60	no	
Household Size: Single- Person Households vs. Multi-Person Households	.20	no	.18	no	
Household Size: Households with 4 or more people vs. Households with less than 4 people	.00	YES	.18	no	Households with 3 or fewer people waste more total food per capita than households with 4 or more.
Maximum Age in Household: Millennial Age (19-35) vs. Non-Millennial Age	.16	no	.21	no	
Maximum Age in Household: Households with maximum age greater than 65 vs. Households with maximum age less than 65	.83	no	.78	no	
Average Age in Household (of members over 18): Millennial Age (19-35) vs. Non-Millennial Age	.25	no	.53	no	
Average Age in Household (of members over 18): Households with maximum age greater than 65 vs. Households with maximum age less than 65	.58	no	.28	no	
Household Composition: Households with children (under 18) living in household vs. Households without children	.00	YES	.02	YES	Households without children waste more food per capita (total and edible) than households with children.

TABLE 3: DENVER – COMPARING DEMOGRAPHICS WITH PER CAPITA FOOD WASTE GENERATION (CONT.)

	P-VALUE FOR TOTAL FOOD WASTED	SIGNIFICANT?	P-VALUE FOR EDIBLE FOOD WASTED	SIGNIFICANT?	NOTES ON RELATIONSHIP
Householder Education: Households where at least one person has more than a high school education vs. Households where no member has more than a high school education	.08	YES	.09	YES	Households where at least one person has more than a high school education waste more food per capita (total and edible) than households where no member has more than a high school education.
Race/Ethnicity: White vs. Non-White Households	.41	no	.96	no	
Race/Ethnicity: Hispanic vs. Non-Hispanic Households	.10	YES	.27	no	Non-Hispanic households waste more total food per capita than Hispanic households.
Race/Ethnicity: Mixed Race Households vs. Non-Mixed Race Households	.50	no	.66	no	
Primary Language Spoken at Home: English vs. Non-English	.70	no	.45	no	
Primary Language Spoken at Home: Spanish vs. Non-Spanish	.63	no	.89	no	
National Origin: Households with at least one member born outside of U.S. vs. All members born in U.S.	.89	no	.96	no	
Income: Household incomes less than \$55k vs. Household incomes more than \$55k (based on Denver median household income)	.72	no	.38	no	
Income: Household incomes less than \$85k vs. Household incomes more than \$85k (based on Denver mean household income)	.72	no	.30	no	
Food Expenditures for food eaten at home: Households spending less than \$50 per week vs. Households spending more than \$50 per week	.16	no	.43	no	
Food Expenditures for food eaten at home: Households spending less than \$301 per week vs. Households spending more than \$301 per week	.29	no	.57	no	
Food Expenditures for food eaten away from home: Households spending less than \$50 per week vs. Households spending more than \$50 per week	.45	no	.78	no	
Food Expenditures for food eaten away from home: Households spending less than \$251 per week vs. Households spending more than \$251 per week	.64	no	.57	no	
Knowledge of Food Waste Issues: Households that know about the issue of wasted food vs. Households that don't know about the issue of wasted food	.82	no	.63	no	
Compost: Households that currently compost wasted food vs. Households that do not currently compost	.88	no	.32	no	

TABLE 3: NYC – COMPARING DEMOGRAPHICS WITH PER CAPITA FOOD WASTE GENERATION

	P-VALUE FOR TOTAL FOOD WASTED	SIGNIFICANT?	P-VALUE FOR EDIBLE FOOD WASTED	SIGNIFICANT?	NOTES ON RELATIONSHIP
Household Composition: Family (related individuals) vs. Non-Family (non-related individuals) Households	.50	no	.55	no	
Household Size: Single-Person Households vs. Multi-Person Households	.01	YES	.29	no	Single-person households waste more total food per capita than multi-person households.
Household Size: Households with 4 or more people vs. Households with less than 4 people	.00	YES	.01	YES	Households with 3 or fewer people waste more food (total and edible) per capita than households with 4 or more.
Maximum Age in Household: Millennial Age (19-35) vs. Non-Millennial Age	.10	YES	.51	no	Households where the oldest person is over 35 waste more total food per capita than households where the oldest person is a millennial (19-35 range).
Maximum Age in Household: Households with maximum age greater than 65 vs. Households with maximum age less than 65	.20	no	.83	no	
Average Age in Household (of members over 18): Millennial Age (19-35) vs. Non-Millennial Age	.01	YES	.25	no	Households where the average age of people over 18 is greater than 35 (non-millennial) waste more total food per capita than households with average ages between 19-35.
Average Age in Household (of members over 18): Households with maximum age greater than 65 vs. Households with maximum age less than 65	.04	YES	.30	no	Households with average age greater than 65 waste more total food per capita than households with average age less than 65.
Household Composition: Households with children (under 18) living in household vs. Households without children	.23	no	.86	no	
Householder Education: Households where at least one person has more than a high school education vs. Households where no member has more than a high school education	.01	YES	.19	no	Households where at least one person has more than a high school education waste more total food per capita than households where no member has more than a high school education.
Race/Ethnicity: White vs. Non-White Households	.02	YES	.17	no	White households waste more total food per capita than non-white households.
Race/Ethnicity: Hispanic vs. Non-Hispanic Households	.23	no	.74	no	
Race/Ethnicity: Asian vs. Non-Asian Households	.83	no	.76	no	
Race/Ethnicity: Mixed Race Households vs. Non-Mixed Race Households	.33	no	.21	no	
Primary Language Spoken at Home: English vs. Non-English	.68	no	.51	no	
Primary Language Spoken at Home: Spanish vs. Non-Spanish	.40	no	.63	no	
Primary Language Spoken at Home: Chinese vs. Non-Chinese	.30	no	.54	no	

TABLE 3: NYC – COMPARING DEMOGRAPHICS WITH PER CAPITA FOOD WASTE GENERATION (CONT.)

	P-VALUE FOR TOTAL FOOD WASTED	SIGNIFICANT?	P-VALUE FOR EDIBLE FOOD WASTED	SIGNIFICANT?	NOTES ON RELATIONSHIP
National Origin: Households with at least one member born outside of US vs. All members born in US	.80	no	.82	no	
Income: Household incomes less than \$55k vs. Household incomes more than \$55k (based on NYC median household income)	.22	no	.31	no	
Income: Household incomes less than \$85k vs. Household incomes more than \$85k (based on NYC mean household income)	.27	no	.39	no	
Food Expenditures for food eaten at home: Households spending less than \$50 per week vs. Households spending more than \$50 per week	.51	no	.35	no	
Food Expenditures for food eaten at home: Households spending less than \$301 per week vs. Households spending more than \$301 per week	.74	no	.77	no	
Food Expenditures for food eaten away from home: Households spending less than \$50 per week vs. Households spending more than \$50 per week	.47	no	.11	no	
Food Expenditures for food eaten away from home: Households spending less than \$251 per week vs. Households spending more than \$251 per week	.41	no	.51	no	
Knowledge of Food Waste Issues: Households that know about the issue of wasted food vs. Households that don't know about the issue of wasted food	.88	no	.46	no	
Compost: Households that currently compost wasted food vs. Households that do not currently compost	.02	YES	.70	no	Households that compost waste more total food per capita than households that do not compost.

Appendix I: Comparing Attitudes and Behaviors with Wasted Food Generation

The following analysis compares per capita total and edible food waste generated (as determined by kitchen diaries) to household attitudes and behaviors collected in the first survey. To do this, two-tailed t-tests were performed to determine relationships between amount of food generated per capita and demographic variables (e.g. presence of children in the household, income). T-tests are tests of significance to help determine if two groups are likely to be different or if their difference is likely a result of randomness. The outcome of the t-test is a p-value. The lower the p-value, the more likely the difference between the two groups is not a result of random chance. For the purposes of this analysis, we will consider any p-value of under .1 (or 10% chance of being a result of random chance) to be “significant.” Please note that a “significant” t-test does not provide definitive evidence of association, but does indicate there is a high likelihood of association. A t-test will not prove causation of any kind.

Note: Only variables with statistically significant relationships are listed below.

TABLE I: PER CAPITA COMPARISONS OF ATTITUDES AND BEHAVIOR WITH WASTED FOOD GENERATION – ALL CITIES						
ATTITUDE/BEHAVIOR VARIABLES	NASHVILLE		DENVER		NEW YORK CITY	
	P-VALUE FOR TOTAL WASTED FOOD (P-VALUE FOR EDIBLE WASTED FOOD)	DIRECTION OF RELATIONSHIP?	P-VALUE FOR TOTAL WASTED FOOD (P-VALUE FOR EDIBLE WASTED FOOD)	DIRECTION OF RELATIONSHIP?	P-VALUE FOR TOTAL WASTED FOOD (P-VALUE FOR EDIBLE WASTED FOOD)	DIRECTION OF RELATIONSHIP?
Borrowed Car: Households using borrowed car vs. households that don't use a borrowed car for food shopping	.08	Households that don't use a borrowed car for food shopping waste more total food per capita.			.08 (.01)	Households that use a borrowed car for food shopping waste more food (total and edible) per capita.
Farmers Markets/CSAs: Households that get food from Farmers Markets & CSAs vs. those that don't					.01	Households that do not get food from Farmers Markets and CSA waste more total food per capita.
Backyard Gardens: Households that get food from their backyard garden vs. those that don't					.07	Households that get food from their backyard garden waste more total food per capita.
Planning Meals Before Shopping: Households that always or often plan meals before shopping vs. households that sometimes, rarely, or never plan meals before shopping					.09	Households that plan meals before shopping waste more total food per capita.
Purchasing Unplanned Items: Households that never or rarely purchased unplanned items vs. households that sometimes, often, or always purchase unplanned items					.02 (.06)	Households that always/often/sometimes purchased unplanned items waste more food (total and edible) per capita.

TABLE I: PER CAPITA COMPARISONS OF ATTITUDES AND BEHAVIOR WITH WASTED FOOD GENERATION – ALL CITIES (CONT.)

ATTITUDE/BEHAVIOR VARIABLES	NASHVILLE		DENVER		NEW YORK CITY	
	P-VALUE FOR TOTAL WASTED FOOD (P-VALUE FOR EDIBLE WASTED FOOD)	DIRECTION OF RELATIONSHIP?	P-VALUE FOR TOTAL WASTED FOOD (P-VALUE FOR EDIBLE WASTED FOOD)	DIRECTION OF RELATIONSHIP?	P-VALUE FOR TOTAL WASTED FOOD (P-VALUE FOR EDIBLE WASTED FOOD)	DIRECTION OF RELATIONSHIP?
Very Cautious to Avoid Food Poisoning: Households that agree or somewhat agree that they are very cautious to avoid food poisoning vs. those that neither agree nor disagree, somewhat disagree, or disagree					.05 (.03)	Households that are very cautious to avoid food poisoning waste more food (total and edible) per capita.
Preparing Food for Family/Friends: Households that agree or somewhat agree that generally, preparing food for friends and family makes me feel good vs. those that neither agree nor disagree, somewhat disagree, or disagree					.07	Households for which preparing food for friends and family makes them feel good waste more total food per capita.
Avoidable Food Waste: Households who characterize their avoidable food waste as a lot or a fair amount vs. none or a little			.02 (.00)	Households that characterize their avoidable food waste as a lot or a fair amount waste more food (total and edible) per capita.	.05 (.03)	Households that characterize their avoidable food waste as a lot or a fair amount waste more food (total and edible) per capita.
Remove Bruised Parts of Fruits & Veggies: Households that always or most of the time remove and discard bruised parts of fruits and veggies vs. those that do it sometimes, rarely, or never					.08	Households that always/most of the time discard bruised parts of fruits/vegetables waste more total food per capita.
Try to Use All Parts of Food: Households that always or most of the time try to use all parts of food vs. those that do it sometimes, rarely, or never			.08	Households that sometimes/rarely/never try to use all parts of food waste more total food per capita.	.02	Households that always/most of the time try to use all parts of food waste more total food per capita.
Preparing Dinner at Home: Households that prepare dinner no more than 1-2 days per week at home vs. those that prepare dinner at least 2-4 days per week at home					.01 (.01)	Households that cook dinner at least 2-4 or more days per week at home waste more food (total and edible) per capita.
Eating Dinner at Home: Households that eat dinner no more than 1-2 days per week at home vs. those that eat dinner at least 2-4 days per week at home	.08	Households that eat dinner at least 2-4 days per week at home waste more total food per capita.			.03 (.02)	Households that eat dinner at least 2-4 days per week at home are more likely to waste more food (total and edible) per capita.

TABLE I: PER CAPITA COMPARISONS OF ATTITUDES AND BEHAVIOR WITH WASTED FOOD GENERATION – ALL CITIES (CONT.)

ATTITUDE/BEHAVIOR VARIABLES	NASHVILLE		DENVER		NEW YORK CITY	
	P-VALUE FOR TOTAL WASTED FOOD (P-VALUE FOR EDIBLE WASTED FOOD)	DIRECTION OF RELATIONSHIP?	P-VALUE FOR TOTAL WASTED FOOD (P-VALUE FOR EDIBLE WASTED FOOD)	DIRECTION OF RELATIONSHIP?	P-VALUE FOR TOTAL WASTED FOOD (P-VALUE FOR EDIBLE WASTED FOOD)	DIRECTION OF RELATIONSHIP?
Owning a Car: Households that use a car to shop for food more than once per week vs. those that use a car to shop less than once per week (does not include households without cars)			.09 (.10)	Households that use a car to shop for food more than once per week waste more food (total and edible) per capita.		
Preparing Too Much Food: Households that agree or somewhat agree that the person that most frequently prepares food frequently makes too much food vs. those that neither agree nor disagree, somewhat disagree, or disagree			.10 (.07)	Households that agree/somewhat agree that the primary food preparer frequently makes too much food waste more food (total and edible) per capita.		
Walking: Households that walk to shop for food more than once per week vs. those that walk to shop less than once per week (does not include households that do not use walking as a mode of transportation for food shopping)	.09	Households that walk to shop for food less than once a week waste more total food per capita.				
Estimate How Much Before Shopping: Households that always or often estimate how much of each item to buy before going shopping vs. those that sometimes, rarely, or never	.00 (.01)	Households that always or often estimate how much before shopping waste more food (total and edible) per capita.				
Reducing Wasted Food = Good: Households that agree or somewhat agree that reducing the amount of food they throw away is good vs. those that neither agree nor disagree, somewhat disagree, or disagree	.01 (.09)	Households that agree/somewhat agree that reducing the amount of food they waste is good waste more food (total and edible) per capita.				
Spur of the Moment Eating Out: Households that agree or somewhat agree that household members usually eat out spur of the moment (less than 48 hours' notice) vs those that neither agree nor disagree, somewhat disagree, or disagree	.00	Households that do not usually eat out spur of the moment waste more total food per capita.				

Comparing Demographics, Attitudes and Behaviors (From Survey #1) with Wasted Food Generation – Multivariate and Categorical Analysis

The following analysis compares the following:

1. Per capita total food waste (as reported in the kitchen diaries) with selected demographics, behaviors and attitudes reported in survey #1 using multivariate analysis (ANOVA). ANOVA allows for the comparison of multiple groups of people in terms of the mean per capita total (not edible) food waste generation (in comparison to t-tests which only allow for two groups to be compared). ANOVA is a test of significance to help determine if the compared groups are likely to be different or if their difference is likely a result of randomness.
2. Reported demographics, attitudes and behaviors with other demographics, attitudes and behaviors. We used categorical analysis (Pearson's Chi-Squared Test) to test correlation between two attitudes, behaviors, or demographics that do not have specific numerical values.

The output of both ANOVA and Pearson's Chi-Squared is a p-value. The lower the p-value, the more likely the difference between the two groups is not a result of random chance. For the purposes of this analysis, we will consider any p-value of under .1 (or 10% chance of being a result of random chance) to be "significant." Please note that a "significant" t-test does not provide definitive evidence of association or indicate the strength of the association, but does indicate there is a high likelihood of association. Neither of these tests provide causation of any kind.

Note 1: Only variables with statistically significant relationships are listed below.

Note 2: The multivariate and categorical analysis was performed only for Denver and NYC, as Nashville's sample size was too small for this type of test.

TABLE 2: MULTIVARIATE AND CATEGORICAL PER CAPITA COMPARISONS OF DEMOGRAPHICS, ATTITUDES AND BEHAVIOR WITH WASTED FOOD GENERATION – DENVER & NYC				
RELATIONSHIP ANALYZED (TEST USED)	DENVER		NEW YORK CITY	
	P-VALUE	BRIEF DESCRIPTION OF RELATIONSHIP	P-VALUE	BRIEF DESCRIPTION OF RELATIONSHIP
Average Age of Household Members with Per Capita Food Waste Generation (ANOVA) Groups: 1. Millennials (19-35) 2. Middle (36-64) 3. Older (65+)			.00	Households with older average age waste more food per capita. Average Food Waste Generation Per Capita in lbs/week by group: Millennials (19-35): 1.8 lbs Middle (36-64): 2.3 lbs Older (65+): 3.0 lbs
Household Size with Per Capita Food Waste Generation (ANOVA) Groups: 1. Living Alone 2. 2 to 4 people 3. 5 or more people	.03	Smaller households waste more food per capita. Average Food Waste Generation Per Capita in lbs/week by group: Living Alone: 3.3 lbs 2 to 4 people: 2.8 lbs 5 or more people: 1.5 lbs	.00	Smaller households waste more food per capita. Average Food Waste Generation Per Capita in lbs/week by group: Living Alone: 2.9 lbs 2 to 4 people: 2.1 lbs 5 or more people: 1.5 lbs
Food Waste Compared to Average American with Avoidable Food Waste (Chi-Squared) Groups for Average American: 1. A Lot More & A Little Bit More 2. The Same 3. A Lot Less and A Little Bit Less Groups for Avoidable Food Waste: 1. A Lot & A Fair Amount 2. None & A Little	.00	People who say they have a lot or a fair amount of avoidable food waste also say they waste more or the same amount of food than the average American.	.00	People who say they have a lot or a fair amount of avoidable food waste also say they waste more or the same amount of food than the average American.

TABLE 2: MULTIVARIATE AND CATEGORICAL PER CAPITA COMPARISONS OF DEMOGRAPHICS, ATTITUDES AND BEHAVIOR WITH WASTED FOOD GENERATION – DENVER & NYC

RELATIONSHIP ANALYZED (TEST USED)	DENVER		NEW YORK CITY	
	P-VALUE	BRIEF DESCRIPTION OF RELATIONSHIP	P-VALUE	BRIEF DESCRIPTION OF RELATIONSHIP
Whether Household Composts with Less Guilt If Food is Composted (Chi-Squared) Groups for Less Guilt if Food is Composted: 1. Agree & Somewhat Agree 2. Neither Agree Nor Disagree 3. Disagree & Somewhat Disagree	.00	People who compost feel less guilty about wasted food if it is composted.	.00	People who compost feel less guilty about wasted food if it is composted.
Whether Household Composts with Food Waste Compared to Average American (Chi-Squared) Groups: 1. A Lot More & A Little Bit More 2. The Same 3. A Lot Less and A Little Bit Less			.01	People who compost say they waste less than the average American.
Maximum Age of Household with Cooking/Preparing Dinners at Home (Chi-Squared) Groups for Age: 1. Millennials (19-35) 2. Over 35 Groups for Cooking/Preparing Dinner at Home: 1. 2 or Fewer Times Per Week 2. 3 or More Times Per Week			.00	Households with a maximum age of 35 or less (millennials) cook/prepare 2 or fewer dinners at home per week.
Maximum Age of Household with Eating Out Spur of the Moment (Chi-Squared) Groups for Age: 1. Millennials (19-35) 2. Over 35 Groups for Eating Out Spur of the Moment: 1. Agree & Somewhat Agree 2. Neither Agree Nor Disagree 3. Disagree & Somewhat Disagree			.04	Households with maximum age over 35 are more likely to eat out spur of the moment.

Appendix J: Survey 1 and 2 Comparison and Survey 2 Unique Questions

Comparison to Survey 1: Questions Repeated in Survey 2 from Survey 1

A subset of questions in residential surveys given to respondents in survey 1 (completed before the kitchen diary period) were identical to questions in survey 2 (completed after the kitchen diary period). Tables Q1 through Q15 show the direction of change in responses to the questions repeated in Survey 2 as compared to initial responses by the same respondents to the same questions in Survey 1. Q16 through Q24 summarize responses to questions unique to Survey 2.

Q1. CONSIDERING THE FOOD THROWN AWAY IN YOUR HOUSEHOLD IN THE AVERAGE WEEK, HOW MUCH OF THAT FOOD DISPOSAL DO YOU THINK COULD BE AVOIDED (E.G. THROUGH PLANNING MEALS AHEAD OF TIME, CHANGING FOOD SHOPPING HABITS)?								
	# NASHVILLE	% NASHVILLE	# DENVER	% DENVER	# NYC	% NYC	# TOTAL	% TOTAL
PERCEPTION OF AMOUNT THAT COULD BE AVOIDED INCREASED	9	13%	26	13%	46	13%	81	13%
STAYED THE SAME	47	66%	119	61%	207	59%	373	61%
PERCEPTION OF AMOUNT THAT COULD BE AVOIDED DECREASED	13	18%	48	25%	89	26%	150	25%
(BLANK)	2	3%	1	1%	6	2%	9	1%

Q2. DO YOU THINK THE AMOUNT OF EDIBLE FOOD YOU THROW OUT IS MORE THAN, THE SAME AS, OR LESS THAN THE AVERAGE AMERICAN?								
	# NASHVILLE	% NASHVILLE	# DENVER	% DENVER	# NYC	% NYC	# TOTAL	% TOTAL
PERCEPTION OF AMOUNT OF EDIBLE FOOD THROWN AWAY COMPARED TO AVERAGE AMERICAN INCREASED	6	8%	22	11%	43	12%	71	12%
STAYED THE SAME	52	73%	108	56%	221	64%	381	62%
PERCEPTION OF AMOUNT OF EDIBLE FOOD THROWN AWAY COMPARED TO AVERAGE AMERICAN DECREASED	13	18%	64	33%	78	22%	155	25%
(BLANK)	0	0%	0	0%	6	2%	6	1%

Q3. HOW STRONGLY DO YOU AGREE OR DISAGREE WITH THE FOLLOWING STATEMENT? "IN THE PAST YEAR, MY HOUSEHOLD HAS MADE AN EFFORT TO REDUCE THE AMOUNT OF FOOD WE THROW AWAY"								
	# NASHVILLE	% NASHVILLE	# DENVER	% DENVER	# NYC	% NYC	# TOTAL	% TOTAL
RESPONDENT AGREED MORE STRONGLY	30	42%	47	24%	117	34%	194	32%
STAYED THE SAME	29	41%	97	50%	175	50%	301	49%
RESPONDENT DISAGREED MORE STRONGLY	12	17%	50	26%	47	14%	109	18%
(BLANK)	0	0%	0	0%	9	3%	9	1%

Q4. HOW STRONGLY DO YOU AGREE OR DISAGREE WITH THE FOLLOWING STATEMENT? "MY HOUSEHOLD HAS COMPLETE CONTROL OVER REDUCING THE AMOUNT OF FOOD WE THROW AWAY"

	# NASHVILLE	% NASHVILLE	# DENVER	% DENVER	# NYC	% NYC	# TOTAL	% TOTAL
RESPONDENT AGREED MORE STRONGLY	14	20%	48	25%	90	26%	152	25%
STAYED THE SAME	40	56%	97	50%	168	48%	305	50%
RESPONDENT DISAGREED MORE STRONGLY	17	24%	49	25%	79	23%	145	24%
(BLANK)	0	0%	0	0%	11	3%	11	2%

Q5. HOW STRONGLY DO YOU AGREE OR DISAGREE WITH THE FOLLOWING STATEMENT? "PEOPLE AROUND ME BELIEVE MY HOUSEHOLD SHOULD REDUCE THE AMOUNT OF FOOD WE THROW AWAY"

	# NASHVILLE	% NASHVILLE	# DENVER	% DENVER	# NYC	% NYC	# TOTAL	% TOTAL
RESPONDENT AGREED MORE STRONGLY	16	23%	43	22%	97	28%	156	26%
STAYED THE SAME	40	56%	102	53%	164	47%	306	50%
RESPONDENT DISAGREED MORE STRONGLY	15	21%	49	25%	73	21%	137	22%
(BLANK)	0	0%	0	0%	14	4%	14	2%

Q6. HOW STRONGLY DO YOU AGREE OR DISAGREE WITH THE FOLLOWING STATEMENT? "MY HOUSEHOLD BELIEVES THAT REDUCING THE AMOUNT OF FOOD WE THROW AWAY WOULD BE GOOD"

	# NASHVILLE	% NASHVILLE	# DENVER	% DENVER	# NYC	% NYC	# TOTAL	% TOTAL
RESPONDENT AGREED MORE STRONGLY	23	32%	27	14%	104	30%	154	25%
STAYED THE SAME	42	59%	121	62%	198	57%	361	59%
RESPONDENT DISAGREED MORE STRONGLY	6	8%	46	24%	32	9%	84	14%
(BLANK)	0	0%	0	0%	14	4%	14	2%

Q7. HOW STRONGLY DO YOU AGREE OR DISAGREE WITH THE FOLLOWING STATEMENT? "MY HOUSEHOLD INTENDS TO REDUCE THE AMOUNT OF FOOD WE THROW AWAY"

	# NASHVILLE	% NASHVILLE	# DENVER	% DENVER	# NYC	% NYC	# TOTAL	% TOTAL
RESPONDENT AGREED MORE STRONGLY	20	28%	39	20%	115	33%	174	29%
STAYED THE SAME	41	58%	107	55%	173	50%	321	53%
RESPONDENT DISAGREED MORE STRONGLY	10	14%	48	25%	45	13%	103	17%
(BLANK)	0	0%	0	0%	15	4%	15	2%

Q8. HOW STRONGLY DO YOU AGREE OR DISAGREE WITH THE FOLLOWING STATEMENT? "GIVEN THE AMOUNT OF FOOD THAT IS THROWN AWAY IN THIS COUNTRY, THE ACTIONS OF MY HOUSEHOLD WON'T MAKE A MEANINGFUL DIFFERENCE IN THE AMOUNT OF FOOD BEING WASTED"

	# NASHVILLE	% NASHVILLE	# DENVER	% DENVER	# NYC	% NYC	# TOTAL	% TOTAL
RESPONDENT AGREED MORE STRONGLY	15	21%	41	21%	62	18%	118	19%
STAYED THE SAME	46	65%	100	52%	167	48%	313	51%
RESPONDENT DISAGREED MORE STRONGLY	10	14%	53	27%	106	30%	169	28%
(BLANK)	0	0%	0	0%	13	4%	13	2%

Q9. HOW STRONGLY DO YOU AGREE OR DISAGREE WITH THE FOLLOWING STATEMENT? "REDUCING MY HOUSEHOLD'S FOOD WASTE WOULD SAVE ENERGY"

	# NASHVILLE	% NASHVILLE	# DENVER	% DENVER	# NYC	% NYC	# TOTAL	% TOTAL
RESPONDENT AGREED MORE STRONGLY	12	17%	46	24%	74	21%	132	22%
STAYED THE SAME	47	66%	110	57%	200	57%	357	59%
RESPONDENT DISAGREED MORE STRONGLY	12	17%	38	20%	65	19%	115	19%
(BLANK)	0	0%	0	0%	9	3%	9	1%

Q10. HOW STRONGLY DO YOU AGREE OR DISAGREE WITH THE FOLLOWING STATEMENT? "REDUCING MY HOUSEHOLD'S FOOD WASTE WOULD SAVE WATER"

	# NASHVILLE	% NASHVILLE	# DENVER	% DENVER	# NYC	% NYC	# TOTAL	% TOTAL
RESPONDENT AGREED MORE STRONGLY	11	15%	48	25%	80	23%	139	23%
STAYED THE SAME	42	59%	106	55%	191	55%	339	56%
RESPONDENT DISAGREED MORE STRONGLY	18	25%	40	21%	67	19%	125	20%
(BLANK)	0	0%	0	0%	10	3%	10	2%

Q11. HOW STRONGLY DO YOU AGREE OR DISAGREE WITH THE FOLLOWING STATEMENT? "REDUCING MY HOUSEHOLD'S FOOD WASTE WOULD FEED HUNGRY PEOPLE"

	# NASHVILLE	% NASHVILLE	# DENVER	% DENVER	# NYC	% NYC	# TOTAL	% TOTAL
RESPONDENT AGREED MORE STRONGLY	19	27%	47	24%	88	25%	154	25%
STAYED THE SAME	32	45%	98	51%	157	45%	287	47%
RESPONDENT DISAGREED MORE STRONGLY	19	27%	49	25%	93	27%	161	26%
(BLANK)	1	1%	0	0%	10	3%	11	2%

Q12. HOW STRONGLY DO YOU AGREE OR DISAGREE WITH THE FOLLOWING STATEMENT? "REDUCING MY HOUSEHOLD'S FOOD WASTE WOULD IMPROVE THE HEALTH OF MY HOUSEHOLD"

	# NASHVILLE	% NASHVILLE	# DENVER	% DENVER	# NYC	% NYC	# TOTAL	% TOTAL
RESPONDENT AGREED MORE STRONGLY	18	25%	48	25%	52	15%	118	19%
STAYED THE SAME	33	46%	94	48%	217	62%	344	56%
RESPONDENT DISAGREED MORE STRONGLY	20	28%	52	27%	67	19%	139	23%
(BLANK)	0	0%	0	0%	12	3%	12	2%

Q13. HOW STRONGLY DO YOU AGREE OR DISAGREE WITH THE FOLLOWING STATEMENT? "REDUCING MY HOUSEHOLD'S FOOD WASTE WOULD SAVE MY HOUSEHOLD MONEY"

	# NASHVILLE	% NASHVILLE	# DENVER	% DENVER	# NYC	% NYC	# TOTAL	% TOTAL
RESPONDENT AGREED MORE STRONGLY	8	11%	43	22%	64	18%	115	19%
STAYED THE SAME	51	72%	115	59%	213	61%	379	62%
RESPONDENT DISAGREED MORE STRONGLY	10	14%	36	19%	61	18%	107	18%
(BLANK)	2	3%	0	0%	10	3%	12	2%

Q14. HOW STRONGLY DO YOU AGREE OR DISAGREE WITH THE FOLLOWING STATEMENT? "REDUCING MY HOUSEHOLD'S FOOD WASTE WOULD DECREASE LANDFILL USE"

	# NASHVILLE	% NASHVILLE	# DENVER	% DENVER	# NYC	% NYC	# TOTAL	% TOTAL
RESPONDENT AGREED MORE STRONGLY	8	11%	41	21%	74	21%	123	20%
STAYED THE SAME	49	69%	126	65%	203	58%	378	62%
RESPONDENT DISAGREED MORE STRONGLY	12	17%	27	14%	58	17%	97	16%
(BLANK)	2	3%	0	0%	13	4%	15	2%

Q15. HOW STRONGLY DO YOU AGREE OR DISAGREE WITH THE FOLLOWING STATEMENT? "REDUCING MY HOUSEHOLD'S FOOD WASTE WOULD DECREASE CARBON EMISSIONS"

	# NASHVILLE	% NASHVILLE	# DENVER	% DENVER	# NYC	% NYC	# TOTAL	% TOTAL
RESPONDENT AGREED MORE STRONGLY	11	15%	39	20%	39	20%	89	15%
STAYED THE SAME	45	63%	113	58%	113	58%	271	44%
RESPONDENT DISAGREED MORE STRONGLY	15	21%	42	22%	42	22%	99	16%
(BLANK)	0	0%	0	0%	0	0%	0	0%

Questions Unique to Survey 2

Q16. HOW STRONGLY DO YOU AGREE OR DISAGREE WITH THE FOLLOWING STATEMENT AS IT RELATES TO YOUR HOUSEHOLD? "MEASURING THE FOOD THAT WAS DISCARDED IN OUR HOUSEHOLD CHANGED HOW MUCH WE THROW AWAY"

	# NASHVILLE	% NASHVILLE	# DENVER	% DENVER	# NYC	% NYC	# TOTAL	% TOTAL
AGREE	15	21%	37	18%	67	19%	119	19%
SOMEWHAT AGREE	20	28%	62	31%	111	31%	193	31%
NEITHER AGREE NOR DISAGREE	12	17%	43	21%	78	22%	133	21%
SOMEWHAT DISAGREE	16	23%	23	11%	42	12%	81	13%
DISAGREE	8	11%	36	18%	54	15%	98	16%
(BLANK)	0	0%	2	1%	5	1%	7	1%

Q17. HOW STRONGLY DO YOU AGREE OR DISAGREE WITH THE FOLLOWING STATEMENT AS IT RELATES TO YOUR HOUSEHOLD? "AFTER MEASURING THE FOOD THAT WAS DISCARDED IN OUR HOUSEHOLD, I NOW BELIEVE THAT OUR HOUSEHOLD WASTES MORE THAN I PREVIOUSLY THOUGHT"

	# NASHVILLE	% NASHVILLE	# DENVER	% DENVER	# NYC	% NYC	# TOTAL	% TOTAL
AGREE	6	8%	14	7%	35	10%	55	9%
SOMEWHAT AGREE	12	17%	35	17%	52	15%	99	16%
NEITHER AGREE NOR DISAGREE	9	13%	22	11%	67	19%	98	16%
SOMEWHAT DISAGREE	14	20%	50	25%	71	20%	135	21%
DISAGREE	30	42%	80	39%	125	35%	235	37%
(BLANK)	0	0%	2	1%	7	2%	9	1%

Q18. HOW FREQUENTLY DID YOU TALK TO A MEMBER OF YOUR HOUSEHOLD ABOUT FOOD WASTE BECAUSE OF PARTICIPATING IN THE STUDY?

	# NASHVILLE	% NASHVILLE	# DENVER	% DENVER	# NYC	% NYC	# TOTAL	% TOTAL
NEVER	15	21%	46	23%	66	18%	127	20%
ONE TIME	3	4%	13	6%	45	13%	61	10%
A COUPLE OF TIMES	24	34%	81	40%	132	37%	237	38%
MANY TIMES	29	41%	60	30%	105	29%	194	31%
(BLANK)	0	0%	3	1%	9	3%	12	2%

Q19. HOW FREQUENTLY DID YOU TALK TO SOMEONE OUTSIDE OF YOUR HOUSEHOLD ABOUT FOOD WASTE BECAUSE OF PARTICIPATING IN THE STUDY?

	# NASHVILLE	% NASHVILLE	# DENVER	% DENVER	# NYC	% NYC	# TOTAL	% TOTAL
NEVER	10	14%	59	29%	115	32%	184	29%
ONE TIME	10	14%	40	20%	76	21%	126	20%
A COUPLE OF TIMES	38	54%	85	42%	135	38%	258	41%
MANY TIMES	13	18%	16	8%	22	6%	51	8%
(BLANK)	0	0%	3	1%	9	3%	12	2%

Survey #2 Results: Unique Questions (Part 2)

OPEN-ENDED QUESTIONS

The following are major themes from answers to the following open-ended questions in Survey 2. Themes represent summaries of responses and the number of responses fitting each theme is identified in parentheses. Not all answers are captured below.

Q20. What (if anything) would have made it easier to complete the kitchen diary?

- Nothing/it was easy (209)
- Online or electronic version of the kitchen diary (68)
- More space to write on the kitchen diary (41)
- Being able to lump food items together instead of weigh them separately (18)
- Simpler instructions (7)
- Take pictures of wasted food instead of writing it down (6)
- Start on any day that is convenient (2)
- Add column for things dropped on floor or wasted by children (2)

Q21. What (if anything) would have made it easier to be a participant in the study?

- Nothing (209)
- Online or electronic version of the kitchen diary (24)
- Reduce time needed to complete (20)
- Make it easier to record food wasted outside of the home (8)
- Make it easier to track all household members (8)
- Clearer instructions (8)
- Being able to lump food items together instead of weigh them separately (7)
- Start on any day that is convenient (7)
- More publicity on the study and initiative (4)
- Questions and kitchen diary were geared towards family units and/or single persons; hard for roommates or non-conventional housing situations (2)

Q22. What did you learn (if anything) from participating in this study?

- Household wastes less food than previously thought or household is doing a good job not wasting (118)
- More aware of the significant quantities of food thrown away (86)
- Participating increased desire to compost (38)
- Most of the food wasted was inedible (16)
- Household needs to be more aware of the issue (12)
- Need to change purchasing habits to waste less (19)
- Waste a lot of one item (7)
- Household eats out a lot (6)
- Most of the waste related to food is packaging (6)
- Waste a lot of coffee (2)

Additional Responses to Q22:

“I marked much of our food waste as ‘inedible parts,’ but even many of those inedible parts (onion skins, stems from greens, carrot peelings) could have been used another time to make broths, smoothies, teas, etc. We cook almost every night in our home (significant investment of time) but as a family of four with two working parents going the extra mile to save compostable kitchen scraps for second use (like uses listed above), it feels like it tips us over the edge of what kind of time we can give to maintaining our kitchen. I also learned that cooking large quantities of meals (pasta especially) to eat all week for lunches contributed to wasting food (surprised me) because we ultimately get sick of eating the leftovers around the fourth day in a row.”

“That my personal household does not produce much food waste. I think that primary focus should be on restaurants, events spaces, festivals and sporting events.”

“That most of the food we throw out is when we clean out the fridge when we take out the trash.”

“All of the little food wastes accumulate to something.”

“Some of the things we throw away probably could be composted (egg shells, coffee grounds, moldy vegetables), but also that we tend to waste more when we eat away from home. I don’t know if it’s because I’m not actually preparing it (don’t have a vested interest in not seeing it go to waste), or because our child is picky, but we all tend to waste less when we eat at home.”

“I learned that each individual is in complete control of how much food they throw away. The food we throw away directly relates to many other important factors in the world we live in today. Thank you for allowing me to be a part of this study and helping me realize the impact and control I have over the food I throw away.”

“That I need to stop wasting food as much. I want to minimize buying a ton of produce at a time and maybe make more frequent stops at the store.”

“I plan to go to the store more often, start meal planning more, and eat the food we have before buying new. For example, we have two bananas that are pretty ripe but totally fine to eat. I was at the store and I was going to grab bananas but I thought about how we have two at home. We found ourselves reaching toward the newly purchased bananas rather than eating the ones that are a bit more ripe. Then those would get too ripe and we would toss them.”

“I learned that our household food waste was not so much, but that if we caught me during a fridge cleanout week, it would be huge. Also we eat out a lot, and I believe restaurant per capita food waste would be greater than if we ate at home all the time.”

“I don’t waste as much as I thought. I have great portion control. My problem is I am the Queen of Freeze, and this particular week I did not do a big ‘throw out’ from my freezer. Such periodic tossing occurs about once every two months and waste from it probably adds up over a year. I freeze things and do NOT eat them in the long run.”

“I waste more than I want, but less than I feared.”

“It’s the packaging, not the food, that’s the biggest waste.”

“A much greater percentage of waste was due to food packaging. Though we recycle everything we can, we’re still getting food packaged in styrofoam, which can’t be recycled. Also, the amount of plastic food is packaged in is incredible. Even if it is recycled the plastic we discarded (into recycling) was 10 times the amount of food we discarded in a week.”

“I learned that our food waste habits vary from week to week. The week of the study we hardly wasted any food at all, but the following week our food waste was higher because of some food that was spoiling.”

“I throw away a lot more food when I eat out than when I cook and eat at home.”

“Generally, I throw out very little, but saw I could throw out less. I became more thoughtful about it.”

“When weighing the items I would think to myself, ‘Is there any other application I can think of where I can use this item rather than throwing it out?’ - it helped push me to keep coffee grinds as a shower scrub, and some lemon peels for air freshener sprays. The study helped spark creativity in ways to reuse the food rather than tossing it.”

“My household actually wastes a considerable amount of food without thinking. We let food go past due dates and on whim, when we eat out, we don’t consider food that’s already in the fridge.”

“Now I cook only the amount of food for the people that are in the house. Sometimes I would cook extra because someone called to say that they are coming over and they never show up. Now I will wait until they come. If they don’t show up by the time they say they are coming, I will only cook for the ones that are here.”

Q23a. What do you think Nashville can do to help residents waste less food?

- Provide education on issues of food waste (28)
 - Promote awareness of food waste through the Mayor’s office and issue a challenge for the community to strive to reduce food waste
 - Focus on education in elementary schools
 - Promote outreach through neighborhood association groups
- Provide tips for reducing food waste (10)
 - Smaller and more frequent shopping trips
 - Meal planning
 - Date labels
- Composting or anaerobic digestion (20)
 - Make cheaper
 - Make available city-wide
 - Offer deals on compost bins
 - Neighborhood compost sites
- Make it possible to buy food in smaller portions in stores and restaurants, especially for small households (4)

Additional Responses to Q23a (Nashville):

“I don’t understand the expiration dates on products. Some say ‘sell by’ (but then by when do I need to use them?); canned or jarred products just have a date, but once opened, when do they need to be thrown away? How long do things like spices last? Seems to me there is a lot of confusion regarding these dates and this causes me to err on the side of caution and throw away products that are perfectly good just because of confusing expiration dates.”

“They could start an ad campaign with slogans like: ‘Save your cash, don’t throw food in the trash!’, ‘Food didn’t come to Nashville for a bachelorette party, don’t let it get wasted!’, or ‘Truth be told, that bread is old, but it still is viable if you scrape off the mold!’”

“Educate Nashvillians on what the causes of wasted food are and what the consequences of that are—I need suggestions for creating less waste that is the result of inedible parts of fruits and vegetables. It would also be helpful if there were smaller portions that meet the needs of single households available when purchasing fruits like melon and vegetables like spinach.”

“Nashville needs to make healthy food more affordable, so people don’t have to wait until it goes on sale and ‘stock up.’ That leads to waste (at least in our household).”

Q23b. What do you think Denver can do to help residents waste less food?

- Provide education on issues of food waste (57)
- Provide tips for reducing food waste (14)
- Composting (71)
 - Make cheaper or free
 - Make available city-wide
- Make it possible to buy food in smaller portions in stores and restaurants, especially for small households (7)
- Do more studies and surveys on food waste (9)

- Don't really know how a city can help since it is more of an individual issue (4)
- Provide incentives (3)
- Focus on restaurants and grocers to reduce food waste (6)

Additional Responses to Q23b (Denver):

"Currently we pay a separate fee to have curbside compost pickup. We think it should be included in our current waste management fees for trash and recycle pickup. It might encourage more people to participate."

"Have families take the challenge. I thought we would waste more but because we were doing this study, I wanted to eat the food we have. My husband would look at expiration dates and put the food about to expire toward the front of the fridge. It made us think about it and will probably do it more in the future."

"Reminders in the produce section of the store how long certain items may last in the fridge and maybe a fun campaign that includes in-store reminders to buy what you need. "

"Create opportunities for restaurants and grocery stores to get their waste to people in need, even if that was just having a time and a 'clean' dumpster where people could expect items to be thrown out."

"I think a huge part of food waste stems from restaurants and grocery stores. I think there need to be more programs in place for food that is wasted from those venues, to disseminate those products to people who might need them."

"I think that while residential food waste is certainly a problem, it isn't THE problem. Most of the food waste comes before the consumer takes it home. I've volunteered with Denver Food Rescue and seen how much grocery stores get rid of that is still 100% edible EVERY DAY and I know that even more (especially produce) never even makes it to the grocery store because it isn't pretty enough."

"Add an extra hour in the day :) I really don't think there is much we can do. I mean my recycle bin is right next to my trash bin and I still throw recyclables away. Incentivize it??"

Q23c. What do you think New York City can do to help residents waste less food?

- Provide education on issues of food waste (77)
 - Education in schools
 - Billboards, ads, etc.
- Provide tips for reducing food waste (19)
- Composting (81)
 - Make cheaper or free
 - Make available city-wide
- Make it possible to buy food in smaller portions in stores and restaurants, especially for small households (19)
- Do more studies and surveys on food waste (11)
- Don't really know how a city can help since it is more of an individual issue (5)
- Focus on restaurants and grocers to reduce food waste (8)

Additional Responses to Q23c (New York City):

"We need to quit buying in 'bulk' since people's good intentions (cooking homecooked meals throughout the week) can get sidetracked by hunger, something else popping up, etc., and that 'bulk' food can be forgotten."

"Inform people of the facts. Such as whether you can still eat food if it is past the date on the package—I know you can still eat it unless it has 'gone bad,' but some people throw it out as soon as it is past the date on the package. I personally would like to know whether egg yolks are still viewed as bad for your heart, because I don't like throwing out egg yolks, but I also don't want to eat too many egg yolks if they are bad for my health."

"Compared to the companies the consumer is small potatoes and we are fighting a losing battle."

“Make them aware of the size of the total problem. Make it clear that even though it seems that each family’s waste is a tiny percentage of the whole, it all adds up, so everyone should do their bit. It’s the same idea as voting, or lowering the amount of electricity, gas and gasoline we use.”

“Make it easier to compost and recycle—like many NYCers I live in a small place and mice and cockroaches come up often. That means we have to keep our trash on a specific counter. Since we have to already split up our paper recycling, and have trash, there is no room for four bins!!! When we lived in San Francisco and we could throw all recycling in one bin, we composted a lot more often.”

“The problem is the grocery stores—it can be hard to buy some things in small quantities.”

“I think more education would be good—I have the composting bucket, but honestly all it did was create a haven for fruit flies. Then when I’d go to dump it, it was a disgusting mess.”

“I don’t think the city can do anything. This is where personal responsibility plays a role.”

“Run ads kind of similar to the ones in the early 2000’s: like the one with the dinosaurs that taught kids to not let the water run while brushing your teeth, or the talking trash cans that taught you how to recycle cardboard, plastic and metal. Something actually fun and not guilt trippy?”

“I do not think that residents of metropolitan NYC waste much food, since they buy only as much food as they can carry by foot, it really forces one to plan all the meals. The same with takeouts—portions are small and delicious; plates are licked out!”

“Make it easier to buy fresh food more frequently, discouraging bulk/excess purchasing. More blame is on the retail economy than the consumer.”

Q24. What suggestions do you have for the study team to improve the experience for participants in the study?

- Nothing (183)
- Provide kitchen diary electronically or online (52)
- The collection of garbage as part of the study was off-putting or confusing (11)
- Be clearer about the process to participate in the study (10)
- Share the study results (9)
- More incentives (5)
- Study should be longer than one week to better capture how much food is wasted (3)

Appendix K: ICI Bin Digs Conversion Factors

Bin digs were performed in Nashville, Denver, and New York City to help understand how much and what types of food are discarded from institutional, commercial, and industrial (ICI) facilities. Samples of up to 200 pounds of trash (and compost, when available) were collected from each facility and sorted into 10 food and 8 non-food categories. Additionally, facilities were asked to fill out a survey which included basic information to aid in sample pickup coordination, facility characteristics such as number of employees and annual revenue, and information on current food- and food waste-related behaviors.

When feasible, findings from the bin digs were extrapolated to generate annual food waste generation estimates. Two methods of extrapolation were used based on available information: 1) If the bin dig represented all or a known portion of food waste discarded for a known period of time, the amount was extrapolated for an entire year based on the number of days a facility operates per year (if the portion of waste material collected was not known, the bin dig was not extrapolated); and/or 2) If the bin dig represented all trash and/or compost materials disposed by that facility and the facility provided annual estimates of total waste generation in their survey, the percentage of total trash or compost material that food represented by weight in the bin dig was multiplied by the estimate of total food waste disposed per year. In some cases, both methods could be used to generate an estimate and numbers are presented as a range. For most cases, there was only enough information and/or the bin dig only allowed for extrapolation using one method. However, if it was evident that the sampled material did not represent a facility's normal waste pattern, the bin dig results were not extrapolated.

Bin digs were only conducted one time and generally represented one day's worth of waste materials from each facility. As such, these bin digs are "snapshots" and may not represent a facility's normal waste generation pattern. Additionally, the samples collected were a maximum of 200 pounds of material each; for example, for larger facilities with non-homogeneous waste (e.g., grocers), a single 200-pound sample may not have been "representative" of that facility's waste. When it was obvious that the sampled material did not represent a facility's normal waste pattern, the bin dig results were not extrapolated.

Using estimated annual food waste generation as determined, "conversion factors" were estimated for each facility, whenever possible. As applicable by facility type, conversion factors include food waste generation per: 1) employee; 2) bed; 3) student; 4) \$ of revenue; 5) rooms; and 6) meals.

Below are the conversion factors calculated below by facility type. For each facility, the following information is provided: 1) Anonymized sample ID; 2) Facility Characteristics (e.g. Public Elementary School); 3) Conversion Factors as applicable; 4) Method of Extrapolation (see paragraph two for description of each; note that method 1 above corresponds to "bin dig" and method 2 corresponds to "self-reported"); 5) Notes Relevant to Estimate. Prior to the table for each sector, there is a list of conversion factors currently used or generated by EPA, Massachusetts, California, or MetroVancouver for comparison. See Appendix L for specific conversion factors and citations for these references.

COLLEGES & UNIVERSITIES

The following conversion factor was derived from previous studies: .35 lbs/meal*

SAMPLE ID (CITY)	FACILITY CHARACTERISTICS	BY EMPLOYEE (LBS/EMPLOYEE/YR)	BY BED (LBS/BED/YR)	BY MEAL (LBS/MEAL)	METHOD OF EXTRAPOLATION: BIN DIG OR SELF-REPORTED?	NOTES
T39/C39 (NYC)	University		60 lbs/bed/yr		Bin Dig	Residence Hall and Dining Hall
T45/C45 (NYC)	University	161.5 lbs/employee/yr			Bin Dig	Dining Hall Only
TI3 (Denver)	University	931 lbs/employee/yr		.17 lbs/meal	Bin Dig	Dining Hall Only

* Used in NRDC's ICI Food Waste Estimates

CORPORATE CAFETERIAS AND BREAKROOMS

Corporate cafeterias and breakrooms were not included as a sector of interest in the city-level food waste estimations; however, the results below indicate that they could be a significant generator of wasted food. By employee, corporate cafeteria food waste generation ranged from 5 lbs/employee/yr to 80 lbs/employee/yr.

SAMPLE ID (CITY)	FACILITY CHARACTERISTICS	BY EMPLOYEE (LBS/EMPLOYEE/YR)	METHOD OF EXTRAPOLATION: BIN DIG OR SELF-REPORTED?	NOTES
ICI-09/10 (Nashville)	Corporate Cafeteria/ Breakroom	5 lbs/employee/yr	Bin Dig	
ICI-21 (Nashville)	Corporate Cafeteria/ Breakroom	29 lbs/employee/yr	Bin Dig	
T43/C43 (NYC)	Corporate Cafeteria/ Breakroom	63 lbs/employee/yr	Bin Dig	
T42 (NYC)	Corporate Cafeteria/ Breakroom	16 lbs/employee/yr	Bin Dig	
T15/C15 (NYC)	Corporate Cafeteria/ Breakroom	22 to 25 lbs/employee/yr	Both	
T36 (NYC)	Corporate Cafeteria/ Breakroom	9 lbs/employee/yr	Bin Dig	
T13/C13 (NYC)	Corporate Cafeteria/ Breakroom	74 lbs/employee/yr	Bin Dig	
T12 (NYC)	Corporate Cafeteria/ Breakroom	80 lbs/employee/yr	Self-Reported	
T35/C35 (NYC)	Corporate Cafeteria/ Breakroom	38 lbs/employee/yr	Self-Reported	
T15/C15 (Denver)	Corporate Cafeteria/ Breakroom	54 lbs/employee/yr	Bin Dig	
T18 (Denver)	Corporate Cafeteria/ Breakroom	53 lbs/employee/yr	Bin Dig	
T07/C07 (Denver)	Corporate Cafeteria/ Breakroom	49.2 lbs/employee/yr	Bin Dig	

CORRECTIONAL FACILITIES

The following conversion factors were derived from previous studies:

- 1 lbs/inmate/day (365 lbs/inmate/yr)*
- 2 lbs/inmate/day (730 lbs/inmate/yr)

SAMPLE ID (CITY)	FACILITY CHARACTERISTICS	BY EMPLOYEE (LBS/EMPLOYEE/YR)	BY BED (LBS/BED/YR)	BY MEAL (LBS/MEAL)	METHOD OF EXTRAPOLATION: BIN DIG OR SELF-REPORTED?	NOTES
ICI-13 (Nashville)	Correctional Facility	629 lbs/employee/yr	99 lbs/bed/yr	.09 lbs/meal	Bin Dig	

EVENTS & RECREATION FACILITIES

As expected, the amount of wasted food generated by Events & Recreation facilities greatly varies at least partially due to the varying uses of these facilities. Additionally, large variations in waste generation are expected throughout the year based on event frequency and type.

The following conversion factors were derived from previous studies:

- .6 lbs/seat/day*
- .45 lbs/visitor*
- 1 lb/meal
- 1 ton/employee/yr (2000 lbs/employee/yr)
- .53 tons/1,000 visitors/yr (1 lb/visitor)

* Used in NRDC's ICI Food Waste Estimates

SAMPLE ID (CITY)	FACILITY CHARACTERISTICS	BY EMPLOYEE (LBS/EMPLOYEE/YR)	BY VISITOR (LBS/VISITOR)	SEAT (LBS/SEAT/YEAR)	METHOD OF EXTRAPOLATION: BIN DIG OR SELF-REPORTED?	NOTES
ICI-I5 (Nashville)	Multiple daily food vendors, produce vendors, special events	230 lbs/employee/yr			Bin Dig	
T33 (NYC)	Sports Arena	4200 lbs/employee/yr	.13 lbs/visitor	7 lbs/seat/year	Self-Reported	
T01 (NYC)	Zoo	152 lbs/employee/yr				
T14/C14 (Denver)	Convention Center	169 to 495 lbs/employee/yr	.01 lbs/visitor			

FOOD RESCUE ORGANIZATIONS

Food rescue organizations were not included as a sector of interest in the city-level food waste estimations; while this sector as a whole is not likely to be a large generator of food waste, the results below suggest that individual facilities within this sector may be significant generators of wasted food. Quantity per employee ranges widely, ranging from 1,823 to 10,455 lbs/employee/yr.

SAMPLE ID (CITY)	FACILITY CHARACTERISTICS	BY EMPLOYEE (LBS/EMPLOYEE/YR)	METHOD OF EXTRAPOLATION: BIN DIG OR SELF-REPORTED?	NOTES
ICI-II (Nashville)	Distribution Center	5,365 lbs/employee/yr	Self-Reported	
ICI-I4 (Nashville)	Re-purposes Food On-Site	1,823 lbs/employee/yr	Self-Reported	
T41/C41 (NYC)	Distribution	10,455 lbs/employee/yr	Self-Reported	

FOOD SERVICE (RESTAURANTS & CATERERS)

The amount of food waste generated per employee varies widely from 82 lbs/employee/yr to 5,200 lbs/employee/yr; however, most of the facilities ranged between 623 and 2,306 lbs/employee/year. By meal, the range was .01 lbs per meal to 1.7 lbs per meal.

The following conversion factors were derived from previous studies:

- 3,000 lbs/employee/yr*
- 1,500 lbs/employee/yr
- .5 lbs/meal

* Used in NRDC's ICI Food Waste Estimates

SAMPLE ID (CITY)	FACILITY CHARACTERISTICS	BY EMPLOYEE (LBS/EMPLOYEE/YR)	BY REVENUE (LBS/\$ REVENUE)	BY MEAL (LBS/MEAL)	METHOD OF EXTRAPOLATION: BIN DIG OR SELF-REPORTED?	NOTES
ICI-01 (Nashville)	Full Service Restaurant	465 to 791 lbs/employee/yr	.004 to .006 lbs/\$ revenue	.1 to .16 lbs/meal	Both	
ICI-03 (Nashville)	Full Service Restaurant	760.83 lbs/employee/yr	.01 lbs/\$ revenue	.79 lbs/meal	Bin Dig	UNDERESTIMATE. Does not count food going to compost collection. Trash only.
ICI-12 (Nashville)	Full Service Restaurant	335.60 lbs/employee/yr			Bin Dig	UNDERESTIMATE. Was not one full day of service. Picked up in late evening but before restaurant closed.
ICI-22 (Nashville)	Limited Service Restaurant	623 to 3,242 lbs/employee/yr	.01 to .08 lbs/\$ revenue	.09 to .48 lbs/meal	Both	Large range due to discrepancy in self-reported waste rate vs. bin dig
T21 (NYC)	Limited Service Restaurant	5200 lbs/employee/year		.26 lbs/meal	Bin Dig	
T22/C22 (NYC)	Limited Service Restaurant	82 lbs/employee/year		.01 lbs/meal	Bin Dig	Seems like an outlier
T19/C19 (NYC)	Limited Service Restaurant	1522 to 2306 lbs/employee/year	.02 to .03 lbs/\$ revenue	.24 to .36 lbs/meal	Both	
T05/C05 (Denver)	Full Service Restaurant	838 to 3263 lbs/employee/yr	.01 to .5 lbs/\$ revenue	.17 to .67 lbs/meal	Both	
T17 (Denver)	Full Service Restaurant	1672 lbs/employee/yr		1.7 lbs/meal	Bin Dig	

GROCERS & MARKETS

The following conversion factors were derived from previous studies:

- 3,000 lbs/employee/yr*
- 5,577 lbs/employee/yr

SAMPLE ID (CITY)	FACILITY CHARACTERISTICS	BY EMPLOYEE (LBS/EMPLOYEE/YR)	METHOD OF EXTRAPOLATION: BIN DIG OR SELF-REPORTED?	NOTES
T31/C31 (NYC)	Small Grocer/Market	1700 lbs/employee/yr	Bin Dig	

HEALTH CARE: HOSPITALS

By employee, food waste generation ranged widely from 31.6 to 3500 lbs/employee. However, multiple facilities had a factor of .07 lbs of wasted food per meal. Note that many of these are underestimates, as only a portion of discarded food was captured in the bin digs.

The following conversion factors were derived from previous studies:

- 3.42 lbs/bed/day* (1,248.3 lbs/bed/yr)
- .6 lbs/meal
- .16 tons/employee/yr (320 lbs/employee/yr)
- 3.12 lbs/bed/day (1,138.8 lbs/bed/yr)

* Used in NRDC's ICI Food Waste Estimates

SAMPLE ID (CITY)	FACILITY CHARACTERISTICS	BY EMPLOYEE (LBS/EMPLOYEE/YR)	BY BED (LBS/BED/YR)	BY MEAL (LBS/MEAL)	METHOD OF EXTRAPOLATION: BIN DIG OR SELF-REPORTED?	NOTES
ICI-19/20 (Nashville)	Hospital. Cafeteria and Food Production.	293 lbs/employee/yr	51 lbs/bed/yr	.07 lbs/meal	Bin Dig	UNDERESTIMATE. Does not include plate waste from patient rooms.
TII (NYC)	Hospital		244 lbs/bed/yr		Bin Dig	Kitchen & Post-Consumer
T29 (NYC)	Hospital	3500 lbs/employee/yr	512 lbs/bed/yr	.31 lbs/meal	Bin Dig	Kitchen & Post-Consumer
T25 (Denver)	Hospital	31.6 lbs/employee/yr		.07lbs/meal	Self-Reported	
T28 (Denver)	Hospital			.07 lbs/meal	Bin Dig	UNDERESTIMATE: Kitchen waste only

HOSPITALITY (HOTELS)

The following conversion factors have been used:

- 1,984 lbs/employee/yr*
- 1 lb/guest/day
- 345 lbs/room/yr
- 1.31 tons/room/yr (2,620 lbs/room/yr)
- 1,370 lbs/employee/yr

SAMPLE ID (CITY)	FACILITY CHARACTERISTICS	BY EMPLOYEE (LBS/EMPLOYEE/YR)	BY ROOM (LBS/ROOM/YR)	METHOD OF EXTRAPOLATION: BIN DIG OR SELF-REPORTED?	NOTES
T25/C25 (NYC)	Hotel	600 lbs/employee/yr	600 lbs/room/yr	Bin Dig	Kitchen, dish pit, and employee commissary

K-12 SCHOOLS

By student, food waste generation ranged from 12 lbs/student/year to 50 lbs/student/year (note that outlier of 165 lbs/student/year was not considered). These are in line with the estimates below.

The following conversion factors were derived from previous studies:

- 1.13 lbs/elementary student/week* (40.68 lbs/elementary student/yr)
- .73 lbs/middle school student/week* (26.28 lbs/middle school student/yr)
- .35 lbs/middle school student/week* (12.6 lbs/middle school student/yr)
- .72 lbs/student/week (25.92 lbs/student/yr)
- .5 lbs/student/week (18 lbs/student/yr)
- 1.4 lbs/student/week (50.4 lbs/student/yr)

Note: Assume 36 weeks in a school year

* Used in NRDC's ICI Food Waste Estimates

SAMPLE ID (CITY)	FACILITY CHARACTERISTICS	BY STUDENT (LBS/STUDENT/YR)	METHOD OF EXTRAPOLATION: BIN DIG OR SELF-REPORTED?	NOTES
ICI-05 (Nashville)	Public Elementary	14 lbs/student/yr	Bin Dig	
ICI-06 (Nashville)	Public Elementary	50 lbs/student/yr	Bin Dig	
ICI-07 (Nashville)	Public Elementary	50 lbs/student/yr	Bin Dig	
ICI-16 (Nashville)	Private, All Grades	13 lbs/student/yr	Bin Dig	
ICI-17 (Nashville)	Private, High School	16 to 34 lbs/student/yr	Both	
ICI-23 (Nashville)	Private, Middle/High School	18 lbs/student/yr	Bin Dig	UNDERESTIMATE. Only took front-of-the-house waste.
T02/C02 (NYC)	Public, Middle/High School	12 lbs/student/yr	Bin Dig	
T26/C26 (NYC)	Private, Elementary	165 lbs/student/year	Bin Dig	Seems like an outlier
T05/C05 (NYC)	Private	41 lbs/students/year	Bin Dig	
T10 (Denver)	Public, Elementary	19 lbs/student/year	Bin Dig	
T16 (Denver)	Public, Middle School	17 lbs/student/year	Bin Dig	
T19 (Denver)	Public, High School	12 lbs/student/year	Bin Dig	

“GROUND-TRUTHING” ICI FOOD WASTE ESTIMATES

In order to “ground-truth” the conversion factors used by the ICI food waste estimates (see Appendix L), the conversion factors derived from the bin digs (see description above for method of developing conversion factors) were compared to those used in our analysis. To compare, both a range of values and average conversion factors derived from bin digs were compared to the conversion factors used in ICI food waste estimates (see table below). Additionally, for each sector, any notable and common characteristics of bin dig results are presented in the table below. Please note that the table below only compares conversion factors derived above with the one used for the city-level estimates. Other conversion factors were derived and can be found above by sector.

SECTOR	CONVERSION FACTOR USED IN ICI FOOD WASTE ESTIMATES	RANGE OF DERIVED CONVERSION FACTORS	AVERAGE OF DERIVED CONVERSION FACTORS	RATIONALE FOR OR AGAINST USING NUMBER IN ICI FOOD WASTE ESTIMATES	NOTABLE CHARACTERISTICS OF SECTOR BIN DIGS
Colleges & Universities	.35 lbs/meal	.17 lbs/meal	.17 lbs/meal	Conversion factor seems reasonable given limited data.	Dining halls only Only based on one facility Highest proportion of wasted food by type was cooked/prepared foods/leftovers.
Correctional Facilities	1 lb/inmate/day	.3 lbs/bed/yr	.3 lbs/bed/yr	Conversion factor seems reasonable given limited data.	Only based on one facility
Events & Recreation	.6 lbs/seat/day .45 lbs/visitor	.01 -.13 lb/seat/yr .07 lbs/visitor	.7lb/seat/yr .07 lbs/visitor	Conversion factor seems reasonable given limited data and highly variable nature of events and recreation facilities.	Only based on one facility for seat/yr conversion factor
Food Manufacturers	.053 lbs/\$ of revenue/yr	None Derived			Unable to get “representative” facility that provided facility-level information

SECTOR	CONVERSION FACTOR USED IN ICI FOOD WASTE ESTIMATES	RANGE OF DERIVED CONVERSION FACTORS	AVERAGE OF DERIVED CONVERSION FACTORS	RATIONALE FOR OR AGAINST USING NUMBER IN ICI FOOD WASTE ESTIMATES	NOTABLE CHARACTERISTICS OF SECTOR BIN DIGS
Food Service (Restaurants & Caterers)	3,000 lbs/employee/yr	82-5,200 lbs/employee/yr	1,620 lbs/employee/yr	Conversion factor seems reasonable given large variability and it falls within range of derived conversion factors.	Restaurants only Huge variability in derived conversion factors Highest proportions of wasted food by type were cooked/prepared foods/leftovers and inedible parts.
Food Wholesalers & Distributors	.01 lbs/\$ of revenue/yr	None Derived			Unable to get "representative" facility that provided facility-level information
Grocers & Markets	3,000 lbs/employee/yr	1,700 lbs/employee/yr	1,700 lbs/employee/yr		Only based on one small grocer
Hospitals	3.42 lbs/bed/day	.14-1.4 lbs/bed/day	.74 lbs/bed/day	Conversion factor seems reasonable given that patient waste is not included.	Does not include patient waste for health and safety reasons. Highest proportions of wasted food by type were cooked/prepared foods/leftovers and liquids.
Hospitality (Hotels)	1,984 lbs/employee/yr	600 lbs/employee/yr	600 lbs/employee/yr	Conversion factor seems reasonable given limited data.	Only based on one facility
K-12 Schools	Elementary – 1.13 lbs/student/week Middle – .73 lbs/student/week High – .35 lbs/student/week All – .74 lbs/student/week Elementary/Middle – .93 lbs/student/week Middle/High – .54 lbs/student/week	.3-4.6 lbs/student/week	1 lbs/student/week	Conversion factor is within range and very close to average.	Highest proportion of wasted food by type is fruits & vegetables

Appendix L: ICI Estimates Conversion Factors

FACILITY-LEVEL INFORMATION

In order to conduct ICI food waste generation estimates, information on the types of facilities in the geographic area was obtained using several databases, both public and proprietary. Information on location, sales, number of employees, number of students, square footage, and number of beds at each facility was obtained to estimate food waste generation, whenever possible. The information collected from the database was “cleaned” to remove duplicates, facilities outside of the sectors of interest, and facilities located outside of the city limits.

The following public databases were used (facility information for other sectors was found on proprietary databases):

- *National Center for Education Statistics*: Provided list of colleges/universities and K-12 schools (both public and private), including location, education levels, and number of students.
- *American Hospital Directory*: Provided list of hospitals, including location and number of beds.
- *PrisonPro.com*: Provided list of correctional facilities by location and number of beds.

CONVERTING FACILITY-LEVEL INFORMATION TO FOOD WASTE ESTIMATES

For each sector, conversion factors were used to convert facility-level information to food waste generation estimates (see Table 1 below for list of conversion factors). The conversion factors used for this analysis were identified by the U.S. Environmental Protection Agency in their report entitled “Technical Methodology for the U.S. EPA Wasted Food Opportunities Map (Version 1.0)”¹. The sources were compared to other potential sources of information, including some of the limited number of food waste characterizations completed by local and state governments (see Table 1 for specific sources).

Below is the main piece of facility-level information used to estimate food waste generation for each sector:

- Colleges & Universities (# of students)
- Correctional Facilities (# of inmates/beds)
- Events & Recreation Facilities (# of seats)
- Food Manufacturing & Processing (revenue)
- Food Wholesalers & Distributors (revenue)
- Grocers & Markets (# of employees)
- Health Care (# of beds for hospitals; revenue for nursing homes)
- Hospitality (Hotels) (# of employees)
- K-12 Schools (# of students, grade levels)
- Restaurants & Caterers (# of employees)

TABLE I. CONVERSION FACTORS USED IN ANALYSIS

SECTOR	CONVERSION FACTOR(S) USED	DATABASE USED FOR LIST OF FACILITIES
Colleges & Universities	.35 lbs/meal Residential – 405 meals/student/yr Non-Residential – 108 meals/students/yr ²	National Center for Education Statistics
Correctional Facilities	1 lb/inmate/day ³	PrisonPro.com
Events & Recreation Facilities	100 days/yr .6 lbs/seat/day Attendance is 80% of capacity OR (depending on available facility information): .45 lbs/visitor ⁴	Online Search
Food Manufacturing & Processing	.053 lbs/\$ of revenue/yr ⁵	Proprietary Database
Food Service Sector (Restaurants & Caterers)	3,000 lbs/employee/yr ⁶	Proprietary Database
Food Wholesalers & Distributors	.01 lbs/\$ of revenue/yr ⁷	Proprietary Database
Grocers & Markets	3,000 lbs/employee/yr ⁸	Proprietary Database
Health Care—Hospitals	3.42 lbs/bed/day ⁹	American Hospital Directory
Health Care—Nursing Homes	1.8 lbs/bed/day 23 beds/\$ million of revenue ¹⁰	Proprietary Database
Hospitality (Hotels)	1,984 lbs/employee/yr ¹¹	Proprietary Database
K-12 Schools	31 weeks/year Elementary – 1.13 lbs/student/week Middle – .73 lbs/student/week High – .35 lbs/student/week All – .74 lbs/student/week Elementary/Middle – .93 lbs/student/week Middle/High – .54 lbs/student/week ¹²	National Center for Education Statistics

K-12 Schools

For K-12 schools, different wastage rates were used for elementary, middle, and high schools. However, some schools are combined middle/high schools or have all grades. It was assumed that there were 36 weeks of school per year. For combined schools, an average was used:

- Elementary/Middle School: .93 lbs per student per week
- Middle/High School: .54 lbs per student per week
- All Grades: .74 lbs per student per week

Nursing Homes

For nursing homes, it was estimated that 23 beds equate to \$1 million in revenue. This estimate was generated using information from the American Health Care Association¹³ stating that there are 1.7 million beds in nursing homes in the U.S. representing \$72 billion of revenue.

Events & Recreation Facilities

A comprehensive list of events and recreation facilities serving food was not available. A list of facilities was generated through online searches; however, information on number of seats, number of employees, number of visitors, and revenue could not be found for all facilities. Additionally, events and recreation facilities represent a wide range of facility types and uses (number of days per year the facility is in use, types of event, etc.), thus determining a conversion factor that works for all is difficult. EPA's methodology did not include conversion factors for event facilities, so two conversion factors from Recycling Works Massachusetts¹⁴ were used due to the overall similarity between numbers used by Recycling Works and EPA.

If information on number of seats was available, the following assumptions and conversion factors were used:

- Each facility is in operation for 100 days per year (assumption by NRDC)
- 80% capacity (assumption by NRDC)
- .6 lbs/seat/day

If information on the number of visitors was available and number of seats was not, the following conversion factor was used:

- .45 lbs/visitor

COMPARISONS TO OTHER CONVERSION FACTORS

The conversion factors used for this analysis were identified by the U.S. Environmental Protection Agency in their report entitled "Technical Methodology for the U.S. EPA Wasted Food Opportunities Map (Version 1.0)".¹⁵ Acknowledging that there are other potential sources of food waste generation information, we compared EPA's conversion factors to other sources of information, including some of the limited number of waste characterizations completed by local and state governments. Additionally, potential concerns about specific conversion factors were identified as potential areas for further research (see Table 2 for comparison of conversion factors and Table 3 for list of concerns). Please note that the information in these tables is not comprehensive of all studies on food waste generated in the institutional, commercial, and industrial sectors. A sensitivity analysis was performed for some of the facility types (see Table 3 for list) to determine the potential impact of specific conversion factors on the entire food waste generation estimate. Although we believe that the most appropriate conversion factors were selected for this analysis, the alternate estimations derived from the scenarios used to conduct the sensitivity analysis can be used as a range to show certainty if desired. (See Tables 4-6 for detailed scenarios and conversion factors derived from the sensitivity analysis.)

TABLE 2: COMPARISON OF CONVERSION FACTORS

SECTOR	NRDC ANALYSIS	EPA WASTED FOOD OPPORTUNITIES MAP ¹⁶	RECYCLING WORKS MASSACHUSETTS FOOD WASTE ESTIMATION GUIDE ¹⁷	METRO VANCOUVER 2014 ICI WASTE CHARACTERIZATION ¹⁸	CALRECYCLE 2014 GENERATOR-BASED CHARACTERIZATION OF COMMERCIAL SECTOR DISPOSAL AND DIVERSION IN CA ¹⁹
NOTES ON SOURCE		No Direct Measurement. Uses previous studies and other state estimation factors.	No Direct Measurement. Uses previous studies and conversations with industry.	Direct Measurement. Used total waste generated (tons/employee/yr) in each sector and % of total waste that is food to determine factors below. Sampled from 100 generators in Metro Vancouver. <i>Note: Numbers provided are for "compostable organics"</i>	Direct Measurement. Used total waste generated (tons)/employee/yr in each sector and % of total waste that is food to determine factors below. Sampled from 837 generators in California.
CORRECTIONAL FACILITIES	1 lb/inmate/day	1 lb/inmate/day	1) 2 lbs/inmate/day 2) 30% of total waste generated by weight		
EDUCATION					1) .17 tons/employee/yr 2) 3.67 tons/100 students/yr (1.4 lbs/student/week)
K-12 SCHOOLS		.72 lbs/student/week 40 weeks/yr	1) .5 lbs/student/week 2) 45% of disposed waste by weight		
K-12 SCHOOLS - PRIVATE		.35 lbs/meal 180 meals/student/yr			
K-12 SCHOOLS - PUBLIC		.5 lbs/student/week 40 weeks/yr			
K-12 SCHOOLS - ELEMENTARY	1.13 lbs/student/week	1.13 lbs/student/week			
K-12 SCHOOLS - MIDDLE	.73 lbs/student/week	.73 lbs/student/week			
K-12 SCHOOLS - MIDDLE/HIGH	.54 lbs/student/week				
K-12 SCHOOLS - HIGH SCHOOL	.35 lbs/student/week	.35 lbs/student/week			
COLLEGES AND UNIVERSITIES - RESIDENTIAL	.35 lbs/meal 405 meals/student/yr	.35 lbs/meal 405 meals/student/yr	.35 lbs/meal 405 meals/student/yr		
COLLEGES AND UNIVERSITIES - NON-RESIDENTIAL	.35 lbs/meal 108 meals/student/yr	.35 lbs/meal 108 meals/student/yr	.35 lbs/meal 108 meals/student/yr		
EVENTS & RECREATION	.6 lbs/seat/day		1) .6 lbs/seat/day 2) 1 lb/meal 3) .45 lbs/visitor 4) 25% of disposed waste by weight		1) 1 ton/employee/yr 2) .53 tons/1,000 visitors/yr

TABLE 2: COMPARISON OF CONVERSION FACTORS (CONT.)

SECTOR	NRDC ANALYSIS	EPA WASTED FOOD OPPORTUNITIES MAP ¹⁶	RECYCLING WORKS MASSACHUSETTS FOOD WASTE ESTIMATION GUIDE ¹⁷	METRO VANCOUVER 2014 ICI WASTE CHARACTERIZATION ¹⁸	CALRECYCLE 2014 GENERATOR-BASED CHARACTERIZATION OF COMMERCIAL SECTOR DISPOSAL AND DIVERSION IN CA ¹⁹
FOOD MANUFACTURERS	.053 lbs/\$ of revenue/yr	.053 lbs/\$ of revenue/yr		2,398 lbs/employee/yr	.7 tons/employee/yr
FOOD SERVICE (RESTAURANTS AND CATERERS)	3,000 lbs/employee/yr	3,000 lbs/employee/yr	1) .5 lbs/meal 2) 1,500 lbs/employee/yr 3) 66% of disposed waste by weight 4) 51% of disposed waste by weight	1) 666 lbs/employee/yr 2) .13 lbs/visitor/yr	1.5 tons/employee/yr (2,978 lbs/employee/yr)
FOOD WHOLESALERS AND DISTRIBUTORS	.01 lbs/\$ of revenue/yr	.01 lbs/\$ of revenue/yr			
GROCERY STORES AND MARKETS	3,000 lbs/employee/yr	3,000 lbs/employee/yr	1) 3,000 lbs/employee/yr 2) 63% of disposed waste by weight		2.8 tons/employee/yr (5,577 lbs/employee/yr)
HEALTH CARE					1) .16 tons/employee/yr 2) .57 tons/bed/yr (3.12 lbs/bed/day)
HEALTH CARE - HOSPITALS	3.42 lbs/bed/day	3.42 lbs/bed/day	1) .6 lbs/meal 2) 30% of food served by weight 3) 3.42 lbs/bed/day		
HEALTH CARE - NURSING HOMES	1.8 lbs/bed/day (23 beds/\$1 million - calculated by NRDC based on info from American Health Care Association ²⁰)	1.8 lbs/bed/day .269 beds/\$ million revenue (was based on hospitals)	1) .6 lbs/meal 2) 20% of food served by weight 3) 1.8 lbs/bed/day		
HOSPITALITY (HOTELS)	1,984 lbs/employee/yr	1,984 lbs/employee/yr (Alternate: 345.64 lbs/room/yr; 3.38 rooms/employee)	1) 1 lb/guest/day 2) 345 lbs/room/yr 3) 36% of disposed waste by weight	1) 994 lbs/employee/yr 2) .4 lb/visitor/yr	1) .68 tons/employee/yr (1369.6 lbs/employee/yr) 2) 1.31 tons/guest room/yr

ICI ESTIMATES—SENSITIVITY ANALYSIS

In order to conduct ICI food waste generation estimates, information on the types of facilities in the geographic area was obtained using several databases, both public and proprietary. Information on location, sales, number of employees, number of students, square footage, and number of beds at each facility was obtained to estimate food waste generation, whenever possible. The conversion factors used are sector-based averages of food waste generation. The average represents an entire sector of diverse facilities with wide-ranging food waste generation rates. The data used were the best available; however, there were concerns about some of the conversion factors (see Table 3 below).

TABLE 3: CONCERNS ABOUT CONVERSION FACTORS		
SECTOR	CONCERNS ABOUT DATA	SENSITIVITY ANALYSIS?
Colleges & Universities		No
Correctional Facilities		No
Events & Recreation Facilities	Depends significantly on event types, number of events/year, and other factors that make this sector diverse Seat capacity vs. visitors is important distinction (may only be able to find seat capacity)	No
Food Manufacturing & Processing		No
Food Service Sector (Restaurants and Caterers)	May be significant differences based on type of restaurant: quick service vs. full service vs. limited service Some industry estimates are lower (e.g. 1,500 lbs/employee/yr)	Yes (Scenarios 1 & 2)
Food Wholesalers & Distributors		No
Grocers & Markets	3,000 lb number is from 1990s. There has been a reduction in employee size for grocers which may mean a higher food waste/employee number Does not distinguish between hypermarkets, supermarkets, and smaller grocers Does not include food that goes to reclaimer	Yes (Scenario 3)
Health Care - Hospitals		No
Health Care – Nursing Homes		No
Hospitality	May significantly depend on what types of food services are provided (e.g. room service, restaurants, bars, etc.)	Yes (Scenario 4)
K-12 Schools	May be significant differences by public vs. private school within school level	No

In order to determine the impact of using other available conversion factors from trusted sources, the following four scenarios were run to determine sensitivity of the analysis to changes in conversion factors:

Scenario 1: Use 1,500 lbs/employee/year for restaurants & caterers instead of 3,000 lbs/employees/year. New figure is from Recycling Works Massachusetts.²¹

Scenario 2: Use 1,500 lbs/employee/year for limited service restaurants and 3,000 lbs/employee/year for all other restaurants and caterers instead of 3,000 lbs/employees/year. New figure is from Recycling Works Massachusetts.²²

Scenario 3: Use 5,577 lbs/employee/year for grocers & markets instead of 3,000 lbs/employees/year. New figure is from CalRecycle's 2014 Generator-Based Characterization of Commercial Sector Disposal and Diversion in California.²³

Scenario 4: Use 1,369.6 lbs/employee/year for hospitality instead of 1,984 lbs/employees/year. New figure is from CalRecycle's 2014 Generator-Based Characterization of Commercial Sector Disposal and Diversion in California.²⁴

Summary tables for each city are below.

TABLE 4: NASHVILLE SENSITIVITY ANALYSIS										
	BASELINE SCENARIO		SCENARIO 1		SCENARIO 2		SCENARIO 3		SCENARIO 4	
			USED 1,500 LBS/ EMPLOYEE/YR FOR RESTAURANTS AND CATERERS (INSTEAD OF 3,000 LBS/ EMPLOYEE/YR)		USED 1,500 LBS/ EMPLOYEE/YR FOR LIMITED SERVICE RESTAURANTS AND 3,000 LBS/YEAR FOR ALL OTHERS (INSTEAD OF 3,000 LBS/EMPLOYEE/ YEAR FOR ALL)		USED 5577 LBS/ EMPLOYEE/YR FOR GROCERS (INSTEAD OF 3000 LBS/ EMPLOYEE/YR)		USED 1,369.6 LBS/ EMPLOYEE/YEAR FOR HOSPITALITY (INSTEAD OF 1,984 LBS/ EMPLOYEE/YR)	
	FOOD WASTE GENERATION (TONS/YR)	% OF TOTAL	FOOD WASTE GENERATION (TONS/YR)	% OF TOTAL	FOOD WASTE GENERATION (TONS/YR)	% OF TOTAL	FOOD WASTE GENERATION (TONS/YR)	% OF TOTAL	FOOD WASTE GENERATION (TONS/YR)	% OF TOTAL
Colleges and Universities	3,223	3%	3,223	3%	3,223	3%	3,223	2%	3,223	3%
Hospitality	6,773	6%	6,773	7%	6,773	6%	6,773	5%	4,819.62	4%
Health Care	3,794	3%	3,794	4%	3,794	3%	3,794	3%	3,794	3%
Grocers and Markets	15,299	13%	15,299	15%	15,299	14%	28,439.91	21%	15,299	13%
Food Wholesalers and Distributors	14,271	12%	14,271	14%	14,271	13%	14,271	11%	14,271	12%
Restaurants and Caterers	59,993	50%	39,995.00	40%	52,518.75	47%	59,993	45%	59,993	51%
Food Manufacturing and Processing	11,586	10%	11,586	12%	11,586	10%	11,586	9%	11,586	10%
Events and Recreation Facilities	2,996	3%	2,996	3%	2,996	3%	2,996	2%	2,996	3%
K-12 Schools	876	1%	876	1%	876	1%	876	1%	876	1%
Correctional Facilities	469	<1%	469	<1%	469	0%	469	<1%	469	<1%
TOTAL	119,280	100%	99,282	100%	111,806	100%	132,421	100%	117,326	100%

TABLE 5: DENVER SENSITIVITY ANALYSIS

	BASELINE SCENARIO		SCENARIO 1		SCENARIO 2		SCENARIO 3		SCENARIO 4	
			USED 1,500 LBS/ EMPLOYEE/YR FOR RESTAURANTS AND CATERERS (INSTEAD OF 3,000 LBS/ EMPLOYEE/YR)		USED 1,500 LBS/ EMPLOYEE/YR FOR LIMITED SERVICE RESTAURANTS AND 3,000 LBS/YEAR FOR ALL OTHERS (INSTEAD OF 3,000 LBS/EMPLOYEE/ YEAR FOR ALL)		USED 5577 LBS/ EMPLOYEE/YR FOR GROCERS (INSTEAD OF 3000 LBS/ EMPLOYEE/YR)		USED 1,369.6 LBS/ EMPLOYEE/YEAR FOR HOSPITALITY (INSTEAD OF 1,984 LBS/ EMPLOYEE/YR)	
	FOOD WASTE GENERATION (TONS/YR)	% OF TOTAL	FOOD WASTE GENERATION (TONS/YR)	% OF TOTAL	FOOD WASTE GENERATION (TONS/YR)	% OF TOTAL	FOOD WASTE GENERATION (TONS/YR)	% OF TOTAL	FOOD WASTE GENERATION (TONS/YR)	% OF TOTAL
Colleges and Universities	2,736	3%	2,736	3%	2,736	3%	2,736	2%	2,736	3%
Hospitality	7,675	7%	7,675	9%	7,675	7%	7,675	6%	5,298.30	5%
Health Care	2,683	2%	2,683	3%	2,683	3%	2,683	2%	2,683	3%
Grocers and Markets	11,480	11%	11,480	13%	11,480	11%	21,340.39	18%	11,480	11%
Food Wholesalers and Distributors	16,757	15%	16,757	19%	16,757	16%	16,757	14%	16,757	16%
Restaurants and Caterers	45,158	42%	22,578.75	26%	40,904.25	39%	45,158	38%	45,158	43%
Food Manufacturing and Processing	15,980	15%	15,980	19%	15,980	15%	15,980	13%	15,980	15%
Events and Recreation Facilities	4,197	4%	4,197	5%	4,197	4%	4,197	4%	4,197	4%
K-12 Schools	1,296	1%	1,296	2%	1,296	1%	1,296	1%	1,296	1%
Correctional Facilities	568	1%	568	1%	568	1%	568	0%	568	1%
TOTAL	108,530	100%	85,950	100%	104,275	100%	118,389	100%	106,152	100%

1 Environmental Protection Agency, "Technical Methodology for the U.S. EPA Wasted Food Opportunities Map (Version 1.0)," to be available at <https://www.epa.gov/sustainable-management-food/technical-methodology-wasted-food-opportunities-map> (not yet available at time of print).

2 South Carolina Department of Commerce (SCDOC), "South Carolina Food Waste Generation Report. Prepared by South Carolina Department of Commerce," available at http://www.recyclinginnc.com/sites/default/files/all/scfoodwastegeneration_summary_updated_1.pdf (February 2015);

Vermont Agency of Natural Resources, Department of Environmental Conservation, Solid Waste Program (DECVT), "ANR Universal Recycling Materials Management Database & Map Methodology," available at http://www.anr.state.vt.us/dec/wastediv/solid/documents/Methodology_OrganicsMapDatabase.pdf (2014);

Food Scrap Generator Database Calculations available at <http://www.anr.state.vt.us/dec/wastediv/solid/documents/FSGCalculations-Final.pdf> (2014); Recycling Works Massachusetts available at <http://www.recyclingworksma.com/food-waste-estimation-guide/#Jump04> (all accessed on October 17, 2017);

Recycling Works Massachusetts, "Food Waste Estimation Guide," available at <http://recyclingworksma.com/food-waste-estimation-guide> (accessed on October 17, 2017).

3 SCDOC (2015); DECVT (2014a); DECVT (2014b); Recycling Works Massachusetts.

4 Recycling Works Massachusetts, "Food Waste Estimation Guide," available at <http://recyclingworksma.com/food-waste-estimation-guide> (accessed on October 17, 2017).

5 Food Waste Reduction Alliance (FWRA), "Analysis of U.S. Food Waste Among Food Manufacturers, Retailers, and Wholesalers," available at http://www.foodwastealliance.org/wp-content/uploads/2014/11/FWRA_BSR_Tier3_FINAL.pdf (2014) (accessed on October 17, 2017).

6 SCDOC (2015); DECVT (2014a); DECVT (2014b); and Recycling Works Massachusetts.

7 FWRA (2014).

8 SCDOC (2015); DECVT (2014a); DECVT (2014b); Recycling Works Massachusetts.

9 SCDOC (2015); Recycling Works Massachusetts.

10 SCDOC (2015); Recycling Works Massachusetts.

TABLE 6: NEW YORK CITY SENSITIVITY ANALYSIS

	BASELINE SCENARIO		SCENARIO 1		SCENARIO 2		SCENARIO 3		SCENARIO 4	
			USED 1,500 LBS/ EMPLOYEE/YR FOR RESTAURANTS AND CATERERS (INSTEAD OF 3,000 LBS/ EMPLOYEE/YR)		USED 1,500 LBS/ EMPLOYEE/YR FOR LIMITED SERVICE RESTAURANTS AND 3,000 LBS/YEAR FOR ALL OTHERS (INSTEAD OF 3,000 LBS/EMPLOYEE/ YEAR FOR ALL)		USED 5577 LBS/ EMPLOYEE/YR FOR GROCERS (INSTEAD OF 3000 LBS/ EMPLOYEE/YR)		USED 1,369.6 LBS/ EMPLOYEE/YEAR FOR HOSPITALITY (INSTEAD OF 1,984 LBS/ EMPLOYEE/YR)	
	FOOD WASTE GENERATION (TONS/YR)	% OF TOTAL	FOOD WASTE GENERATION (TONS/YR)	% OF TOTAL	FOOD WASTE GENERATION (TONS/YR)	% OF TOTAL	FOOD WASTE GENERATION (TONS/YR)	% OF TOTAL	FOOD WASTE GENERATION (TONS/YR)	% OF TOTAL
Colleges and Universities	30,115	5%	30,115	7%	30,115	5%	30,115	5%	30,115	5%
Hospitality	52,113	9%	52,113	11%	52,113	9%	52,113	8%	36,067.05	6%
Health Care	28,752	5%	28,752	6%	28,752	5%	28,752	4%	28,752	5%
Grocers and Markets	61,310	10%	61,310	13%	61,310	11%	113,974.36	18%	61,310	11%
Food Wholesalers and Distributors	49,122	8%	49,122	11%	49,122	9%	49,122	8%	49,122	9%
Restaurants and Caterers	262,226	44%	131,112.75	28%	238,884.00	42%	262,226	41%	262,226	45%
Food Manufacturing and Processing	86,296	15%	86,296	19%	86,296	15%	86,296	13%	86,296	15%
Events and Recreation Facilities	7,520	1%	7,520	2%	7,520	1%	7,520	1%	7,520	1%
K-12 Schools	12,895	2%	12,895	3%	12,895	2%	12,895	2%	12,895	2%
Correctional Facilities	2,976	<1%	2,976	1%	2,976	1%	2,976	<1%	2,976	1%
TOTAL	593,325	100%	462,211	100%	569,982	100%	645,988	100%	577,278	100%

11 California Environmental Protection Agency, Integrated Waste Management Board, "Waste Disposal and Diversion Findings for Selected Industry Groups. No. 341-2006-0006," prepared by Cascadia Consulting Group available at <http://www.calrecycle.ca.gov/publications/Documents/Disposal/34106006.pdf> (June 2006) (accessed on October 17, 2017).

12 DECVT (2014a); DECVT (2014b).

13 American Health Care Association, "Fast Facts," available at https://www.ahcancal.org/research_data/trends_statistics/Pages/Fast-Facts.aspx (accessed on October 17, 2017).

14 Recycling Works Massachusetts.

15 Environmental Protection Agency, "Technical Methodology for the U.S. EPA Wasted Food Opportunities Map (Version 1.0)," (not yet available at time of print).

16 Environmental Protection Agency, "Technical Methodology for the U.S. EPA Wasted Food Opportunities Map (Version 1.0)," (not yet available at time of print).

17 Recycling Works Massachusetts.

18 Metro Vancouver, "2014 ICI Waste Characterization Program," available at <http://www.metrovancouver.org/services/solid-waste/SolidWastePublications/FinalReport-2014ICIWasteCharacterizationProgram3-Jun-15.pdf> (June 2015) (accessed on October 17, 2017).

19 CalRecycle, "Generator-Based Characterization of Commercial Sector Disposal and Diversion in California," available at <http://www.calrecycle.ca.gov/Publications/Details.aspx?PublicationID=1543> (2014) (accessed on October 17, 2017).

20 American Health Care Association, "Fast Facts," available at https://www.ahcancal.org/research_data/trends_statistics/Pages/Fast-Facts.aspx (accessed on October 17, 2017).

21 Recycling Works Massachusetts.

22 Ibid.

23 CalRecycle, 2014.

24 Ibid.

Appendix M: Sample Individual Facility ICI Report

Note: this is a sample of the customized reports sent to ICI facilities in NYC that participated in bin digs. Similar reports customized with city-specific information were sent to participating facilities in Denver and Nashville.

NATURAL RESOURCES DEFENSE COUNCIL FOOD WASTE ASSESSMENT STUDY RESULTS

Sample Business - January 2017

The Natural Resources Defense Council (NRDC) recently collected, sorted, and categorized a sample of waste material from dozens of businesses and institutions in New York City. This information will be used to help set a baseline for how much and what types of food are wasted in NYC.

Below are general recommendations for reducing the amount of food in your waste stream as well as information on organizations and resources in NYC that might be useful to your facility. Page Two of this document provides details on what types of food and non-food materials were found in your waste stream during our audit. Page Three provides individualized recommendations based on the findings from your facility.

GENERAL RECOMMENDATIONS

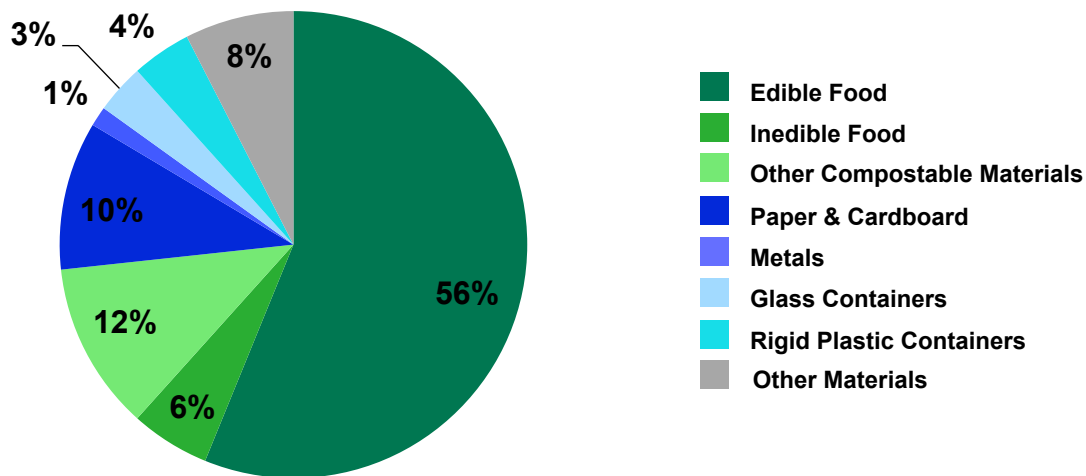
Reducing the amount of food in your waste stream can help save money as well as reduce your ecological impact. Here are some easy steps you can take to minimize wasted food in your operations:

- **Prevent food waste:** Preventing food waste in the first place is the best way to save your business money while benefiting the environment. Measuring wasted food will empower your staff to better manage this issue. For more information, see the Environmental Protection Agency's Tools for Assessing Wasted Food (www.epa.gov/sustainable-management-food) and Leanpath (www.leanpath.com) for software to track the amounts, causes and costs of wasted food in institutional foodservice and restaurant environments. Educating your customers and staff can also help reduce food waste.
- **Donate food surpluses:** Donating food can yield valuable tax benefits, is protected from liability by federal law, and is a way your business can help address food insecurity in NYC. Organizations that receive or help direct donated food in NYC include City Harvest (www.cityharvest.org), Rock and Wrap it Up (www.rockandwrapitup.org), and Rescuing Leftover Cuisine (www.rescuingleftovercuisine.org/). You can also check out the City of New York directory to find food pantries (www1.nyc.gov/apps/311utils/providerInformation.htm?serviceId=1083).
- **Recycle food scraps:** After maximizing waste prevention and food donation, you can help keep food waste out of the landfill by sending it to a composter or anaerobic digester. As of July 19, 2016, certain New York City businesses are required by law to separate their organic waste (see the DSNY website for more information: www1.nyc.gov/assets/dsny/zerowaste/businesses/food-scraps-and-yard-waste.shtml). Businesses covered by this law are given the option to arrange for collection by a private carter, transport organic waste themselves, or process the material on site (e.g. through composting or anaerobic digestion). Businesses both covered by and exempt from the organics separation requirement may find this resource sheet useful (www1.nyc.gov/assets/dsny/docs/commercial-organics-notice-english.pdf).
- For more information on the environmental impacts associated with food waste, please see NRDC's food waste resources (www.nrdc.org/issues/food-waste). NRDC welcomes your participation in the national Save The Food public service campaign. See www.savethefood.com for more information.

Every citizen and business in NYC, as well as municipal government, can help reduce food waste. Please contact NRDC for more information or to learn more about reducing food waste in NYC.

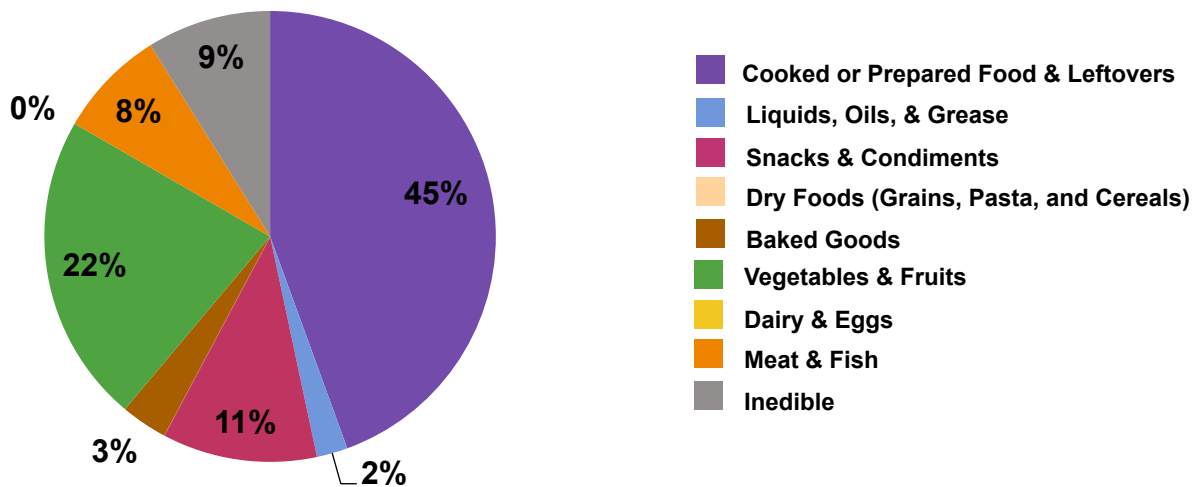
Sample Business Name
New York City
January 2017

What is in your trash?



Edible Food: 56%; Inedible Food: 6%; Other Compostable Materials: 12%; Paper & Cardboard: 10%; Metals: 1%; Glass Containers: 3%; Rigid Plastic Containers: 4%; Other Materials: 8%

What types of food waste are in your trash?



Cooked or Prepared Food & Leftovers: 45%; Liquids, Oils, & Grease: 2%; Snacks & Condiments: 11%; Dry Foods: 0%; Baked Goods: 3%; Vegetables & Fruits: 22%; Dairy & Eggs: 0%; Meat & Fish: 8%; Inedible: 9%

Material Categories	Examples
Inedible Food	Inedible peels (banana, citrus, melon, winter squash), apple cores, pits, shells, bones, husks, animal fat and tendons
Edible Food	Meat, fish, dairy, eggs, vegetables, fruits, baked goods, dry goods, grains, pastas, cereals, snacks, condiments, canned goods, candy, snacks, drinks, water, oil, fats, cooked meals
Other Compostable Materials	Food-soiled paper, pizza boxes, paper cups, paper towels/napkins, grass, leaves, branches, yard trimmings
Recyclable Materials	Paper, cardboard, metal containers, glass containers, rigid plastic containers
Other Materials	All other materials such as non-container glass, plastic bags, plastic wrap, polystyrene foam, hygiene products, clothing, electronics

A sample of your trash (up to 220 lbs) was sorted and categorized into 9 food waste categories and 6 other materials categories. Results can be found on the previous page. Below are individualized suggestions for reducing your waste.

The individual results provided in this report will not be shared with anyone other than your organization. Any results reported by NRDC will be reported in aggregate and your facility participation will be kept confidential.

Individualized Recommendations

Notable Findings

- 146 lbs of waste material were taken from the trash bin (not recycling) of your facility.
- 74% of the material in your trash is compostable, with a majority being edible food.
- Of the food found in your trash, 91% was considered edible.
 - 45% of discarded food was cooked or prepared foods (see pictures below)
 - 22% was fruits and vegetables
 - 11% was snacks and condiments

Potential Strategies to Reduce Wasted Food

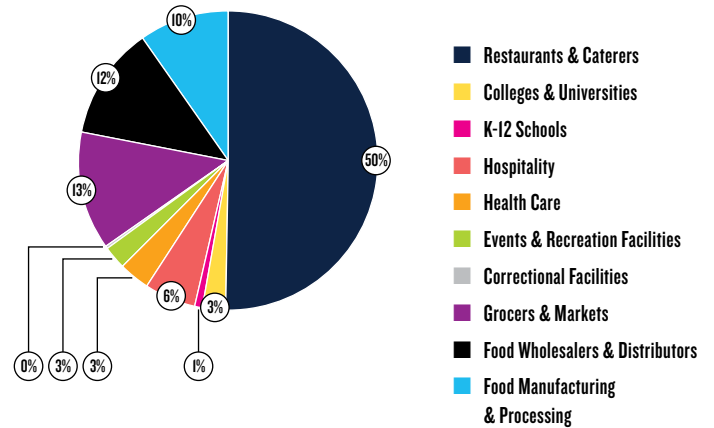
- Since a majority of your wasted food was edible prior to disposal and seems to originate from the back-of-the-house, here are some potential ways to reduce your edible wasted food:
 - Donate surplus food to local food rescue organizations;
 - Create secondary uses for food (e.g. make old bread into bread crumbs, French toast, or crispy bread garnish); or
 - Perform a quick assessment to understand which types of food are most frequently wasted (and reduce purchase of those items).
- A fair amount of wasted food was from condiments in single-serving packets. Providing bulk condiments could reduce both food and packaging waste.
- Since a majority of your facility's waste is compostable (including food and food-soiled paper), this facility could significantly reduce landfilled material through composting, either on-site (e.g. in-vessel composting system) or using a hauler.



Appendix N: ICI Sectors

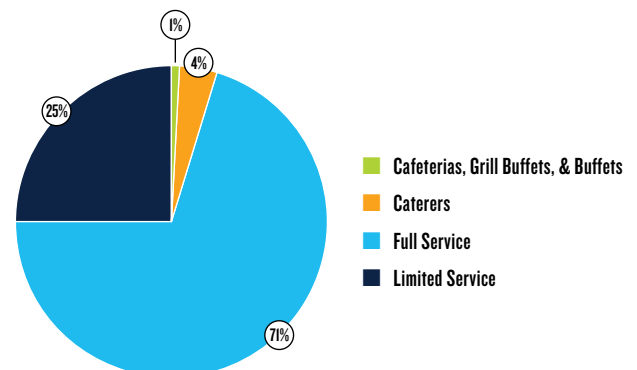
NASHVILLE ICI SUMMARY BY SECTOR			
	FOOD WASTE GENERATION (TONS/YEAR)	PERCENTAGE OF TOTAL	# OF FACILITIES
RESTAURANTS & CATERERS	59,993	50%	3,188
COLLEGES & UNIVERSITIES	3,223	3%	28
K-12 SCHOOLS	876	1%	157
HOSPITALITY	6,773	6%	211
HEALTH CARE	3,794	3%	24
EVENTS & RECREATION FACILITIES	2,996	3%	17
CORRECTIONAL FACILITIES	469	0%	4
GROCERS & MARKETS	15,299	13%	703
FOOD WHOLESALERS & DISTRIBUTORS	14,271	12%	125
FOOD MANUFACTURING & PROCESSING	11,586	10%	241
TOTAL	119,280	100%	4,698

FOOD WASTE GENERATION BY SECTOR: NASHVILLE (ICI ONLY)



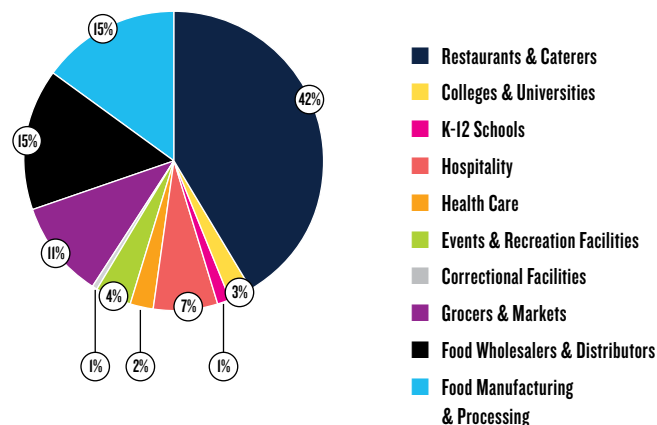
BREAKDOWN OF RESTAURANTS & CATERERS: NASHVILLE		
TYPE OF ESTABLISHMENT	FOOD WASTE GENERATION (TONS/YEAR)	PERCENTAGE OF TOTAL
CAFETERIAS, GRILL BUFFETS, & BUFFETS	329	1%
CATERERS	2,328	4%
FULL SERVICE	42,389	71%
LIMITED SERVICE	14,948	25%
TOTAL	59,994	100%

RESTAURANT AND CATERER FOOD WASTE GENERATION: NASHVILLE



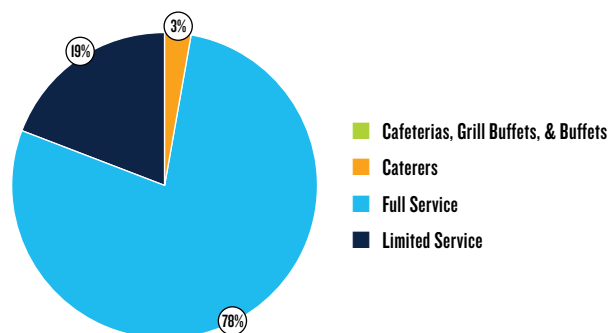
DENVER ICI SUMMARY BY SECTOR			
	FOOD WASTE GENERATION (TONS/YEAR)	PERCENTAGE OF TOTAL	# OF FACILITIES
RESTAURANTS & CATERERS	45,158	42%	1,759
COLLEGES & UNIVERSITIES	2,736	3%	15
K-12 SCHOOLS	1,296	1%	240
HOSPITALITY	7,675	7%	144
HEALTH CARE	2,683	2%	61
EVENTS & RECREATION FACILITIES	4,197	4%	17
CORRECTIONAL FACILITIES	568	1%	4
GROCERS & MARKETS	11,480	11%	188
FOOD WHOLESALE & DISTRIBUTORS	16,757	15%	105
FOOD MANUFACTURING & PROCESSING	15,980	15%	32
TOTAL	108,530	100%	2,565

FOOD WASTE GENERATION BY SECTOR: DENVER (ICI ONLY)



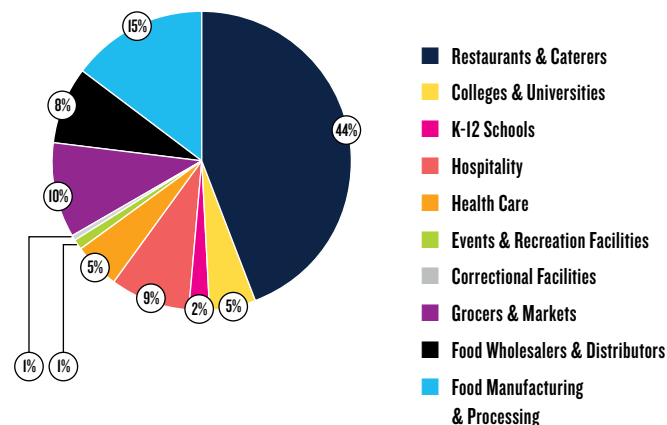
BREAKDOWN OF RESTAURANTS & CATERERS: DENVER		
TYPE OF ESTABLISHMENT	FOOD WASTE GENERATION (TONS/YEAR)	PERCENTAGE OF TOTAL
CAFETERIAS, GRILL BUFFETS, & BUFFETS	57	0%
CATERERS	1,493	3%
FULL-SERVICE RESTAURANTS	35,102	78%
LIMITED-SERVICE RESTAURANTS	8,507	19%
TOTAL	45,159	100%

RESTAURANT AND CATERER FOOD WASTE GENERATION: DENVER



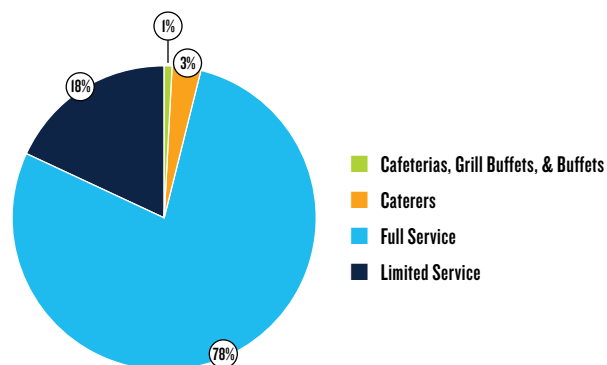
NYC ICI SUMMARY BY SECTOR			
	FOOD WASTE GENERATION (TONS/YEAR)	PERCENTAGE OF TOTAL	# OF FACILITIES
RESTAURANTS & CATERERS	262,226	44%	18,300
COLLEGES & UNIVERSITIES	30,115	5%	138
K-12 SCHOOLS	12,895	2%	2,100
HOSPITALITY	52,113	9%	752
HEALTH CARE	28,752	5%	216
EVENTS & RECREATION FACILITIES	7,520	1%	19
CORRECTIONAL FACILITIES	2,976	1%	11
GROCERS & MARKETS	61,310	10%	4,451
FOOD WHOLESALERS & DISTRIBUTORS	49,122	8%	577
FOOD MANUFACTURING & PROCESSING	86,296	15%	213
TOTAL	593,325	100%	26,777

**FOOD WASTE GENERATION BY SECTOR: NYC
(ICI ONLY)**



BREAKDOWN OF RESTAURANTS & CATERERS: NYC		
TYPE OF ESTABLISHMENT	FOOD WASTE GENERATION (TONS/YEAR)	PERCENTAGE OF TOTAL
CAFETERIAS, GRILL BUFFETS, & BUFFETS	2,785	1%
CATERERS	7,392	3%
FULL-SERVICE RESTAURANTS	205,372	78%
LIMITED-SERVICE RESTAURANTS	46,677	18%
TOTAL	262,226	100%

RESTAURANT AND CATERER FOOD WASTE GENERATION: NYC



THREE CITY ICI SECTOR COMPARISON						
	NASHVILLE		DENVER		NYC	
	FOOD WASTE GENERATION (TONS/YR)	% OF TOTAL	FOOD WASTE GENERATION (TONS/YR)	% OF TOTAL	FOOD WASTE GENERATION (TONS/YR)	% OF TOTAL
Restaurants and Caterers	59,993	50%	45,158	42%	262,226	44%
Colleges and Universities	3,223	3%	2,736	3%	30,115	5%
K-12 Schools	876	1%	1,296	1%	12,895	2%
Hospitality	6,773	6%	7,675	7%	52,113	9%
Health Care	3,794	3%	2,683	2%	28,752	5%
Events & Recreation Facilities	2,996	3%	4,197	4%	7,520	1%
Correctional Facilities	469	0%	568	1%	2,976	1%
Grocers and Markets	15,299	13%	11,480	11%	61,310	10%
Food Wholesalers and Distributors	14,271	12%	16,757	15%	49,122	8%
Food Manufacturing and Processing	11,586	10%	15,980	15%	86,296	15%
TOTAL	119,280	100%	108,530	100%	593,325	100%

BREAKDOWN OF RESTAURANTS & CATERERS: ALL CITIES						
TYPE OF ESTABLISHMENT	NASHVILLE		DENVER		NYC	
	FOOD WASTE GENERATION (TONS/YR)	% OF TOTAL	FOOD WASTE GENERATION (TONS/YR)	% OF TOTAL	FOOD WASTE GENERATION (TONS/YR)	% OF TOTAL
Cafeterias, Grill Buffets, and Buffets	329	1%	57	0%	2,785	1%
Caterers	2,328	4%	1,493	3%	7,392	3%
Full-Service Restaurants	42,389	71%	35,102	78%	205,372	78%
Limited-Service Restaurants	14,948	25%	8,507	19%	46,677	18%
TOTAL	59,994	100%	45,159	100%	262,226	100%

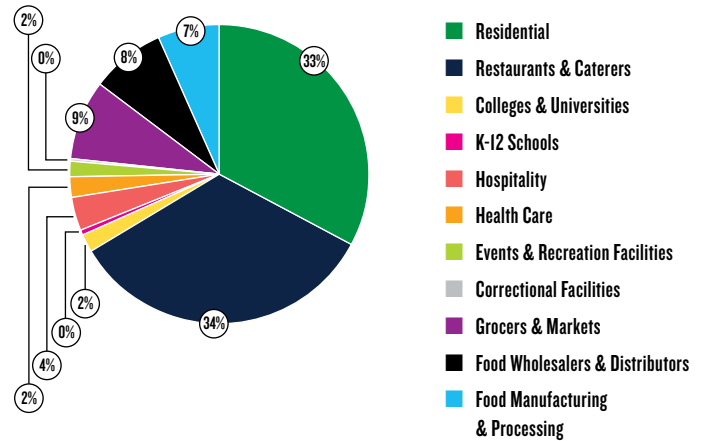
Appendix O: ICI and Residential Combined

NASHVILLE ICI SECTOR FOOD WASTE GENERATION SUMMARY			
	FOOD WASTE GENERATION (TONS/YEAR)	PERCENTAGE OF TOTAL	# OF FACILITIES
COLLEGES & UNIVERSITIES	3,223	3%	28
HOSPITALITY	6,773	6%	211
HEALTH CARE	3,794	3%	24
GROCERS & MARKETS	15,299	13%	703
FOOD WHOLESALERS & DISTRIBUTORS	14,271	12%	125
RESTAURANTS & CATERERS	59,993	50%	3,188
FOOD MANUFACTURING & PROCESSING	11,586	10%	241
EVENTS & RECREATION FACILITIES	2,996	3%	17
K-12 SCHOOLS	876	1%	157
CORRECTIONAL FACILITIES	469	0%	4
TOTAL	119,280	100%	4,698

NASHVILLE RESIDENTIAL FOOD WASTE GENERATION SUMMARY	
NASHVILLE POPULATION (2016)	660,388
CORRECTED FOOD WASTE GENERATION PER CAPITA (LBS/PERSON/WEEK) — FROM KITCHEN DIARIES	3.4
ESTIMATED RESIDENTIAL FOOD WASTE GENERATION (TONS/YEAR)	58,378

NASHVILLE ICI AND RESIDENTIAL FOOD WASTE GENERATION SUMMARY		
	FOOD WASTE GENERATION (TONS/YR)	%
RESIDENTIAL	58,378	33%
RESTAURANTS & CATERERS	59,993	34%
COLLEGES & UNIVERSITIES	3,223	2%
K-12 SCHOOLS	876	0%
HOSPITALITY	6,773	4%
HEALTH CARE	3,794	2%
EVENTS & RECREATION FACILITIES	2,996	2%
CORRECTIONAL FACILITIES	469	0%
GROCERS & MARKETS	15,299	9%
FOOD WHOLESALERS & DISTRIBUTORS	14,271	8%
FOOD MANUFACTURING & PROCESSING	11,586	7%
TOTAL	177,658	100%

FOOD WASTE GENERATION BY SECTOR: NASHVILLE
(ICI AND RESIDENTIAL)

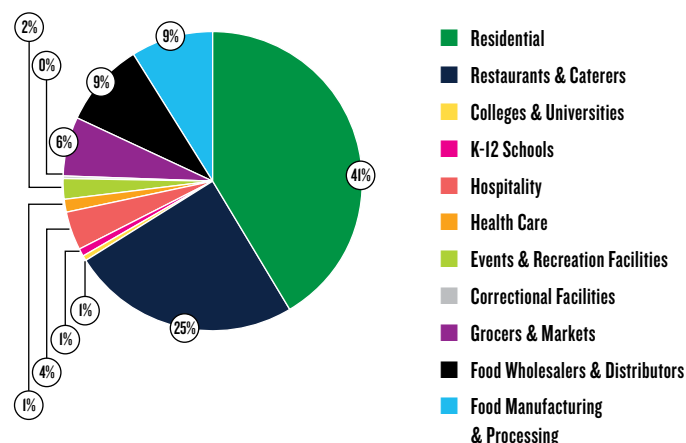


DENVER ICI SECTOR FOOD WASTE GENERATION SUMMARY			
	FOOD WASTE GENERATION (TONS/YEAR)	PERCENTAGE OF TOTAL	# OF FACILITIES
COLLEGES & UNIVERSITIES	2,736	3%	15
HOSPITALITY	7,675	7%	144
HEALTH CARE	2,683	2%	61
GROCCERS & MARKETS	11,480	11%	188
FOOD WHOLESALERS & DISTRIBUTORS	16,757	15%	105
RESTAURANTS & CATERERS	45,158	42%	1,759
FOOD MANUFACTURING & PROCESSING	15,980	15%	32
EVENTS & RECREATION FACILITIES	4,197	4%	17
K-12 SCHOOLS	1,296	1%	240
CORRECTIONAL FACILITIES	568	1%	4
TOTAL	108,530	100%	2,565

DENVER RESIDENTIAL FOOD WASTE GENERATION SUMMARY	
DENVER POPULATION (2016)	693,060
CORRECTED FOOD WASTE GENERATION PER CAPITA (LBS/PERSON/WEEK) — FROM KITCHEN DIARIES	4.2
ESTIMATED RESIDENTIAL FOOD WASTE GENERATION (TONS/YEAR)	75,682

DENVER ICI AND RESIDENTIAL FOOD WASTE GENERATION SUMMARY		
	FOOD WASTE GENERATION (TONS/YEAR)	%
RESIDENTIAL	75,682	41%
RESTAURANTS & CATERERS	45,158	25%
COLLEGES & UNIVERSITIES	2,736	1%
K-12 SCHOOLS	1,296	1%
HOSPITALITY	7,675	4%
HEALTH CARE	2,683	1%
EVENTS & RECREATION FACILITIES	4,197	2%
CORRECTIONAL FACILITIES	568	0%
GROCCERS & MARKETS	11,480	6%
FOOD WHOLESALERS & DISTRIBUTORS	16,757	9%
FOOD MANUFACTURING & PROCESSING	15,980	9%
TOTAL	184,212	100%

**FOOD WASTE GENERATION BY SECTOR: DENVER
(ICI AND RESIDENTIAL)**

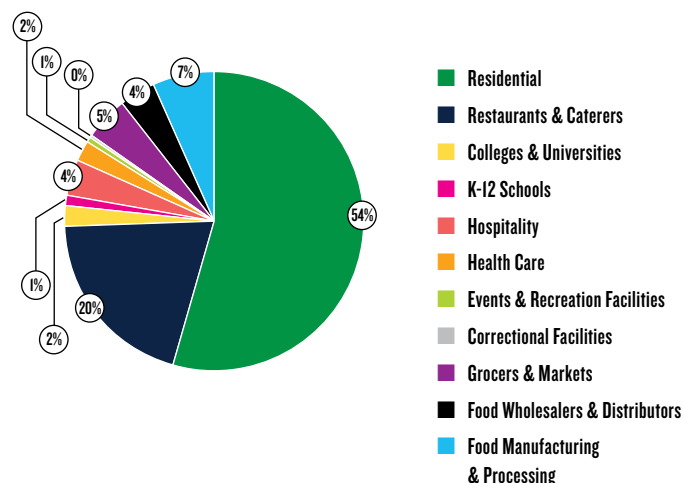


NYC ICI SECTOR FOOD WASTE GENERATION SUMMARY			
	FOOD WASTE GENERATION (TONS/YEAR)	PERCENTAGE OF TOTAL	# OF FACILITIES
COLLEGES & UNIVERSITIES	30,115	5%	138
HOSPITALITY	52,113	9%	752
HEALTH CARE	28,752	5%	216
GROCERS & MARKETS	61,310	10%	4,451
FOOD WHOLESALERS & DISTRIBUTORS	49,122	8%	577
RESTAURANTS & CATERERS	262,226	44%	18,300
FOOD MANUFACTURING & PROCESSING	86,296	15%	213
EVENTS & RECREATION FACILITIES	7,520	1%	19
K-12 SCHOOLS	12,895	2%	2,100
CORRECTIONAL FACILITIES	2,976	1%	11
TOTAL	593,325	100%	26,777

NYC RESIDENTIAL FOOD WASTE GENERATION SUMMARY	
NYC POPULATION (2016)	8,537,673
CORRECTED FOOD WASTE GENERATION PER CAPITA (LBS/PERSON/WEEK) — FROM KITCHEN DIARIES	3.2
ESTIMATED RESIDENTIAL FOOD WASTE GENERATION (TONS/YEAR)	710,334

NYC ICI AND RESIDENTIAL FOOD WASTE GENERATION SUMMARY		
	FOOD WASTE GENERATION (TONS/YEAR)	%
RESIDENTIAL	710,334	54%
RESTAURANTS & CATERERS	262,226	20%
COLLEGES & UNIVERSITIES	30,115	2%
K-12 SCHOOLS	12,895	1%
HOSPITALITY	52,113	4%
HEALTH CARE	28,752	2%
EVENTS & RECREATION FACILITIES	7,520	1%
CORRECTIONAL FACILITIES	2,976	0%
GROCERS & MARKETS	61,310	5%
FOOD WHOLESALERS & DISTRIBUTORS	49,122	4%
FOOD MANUFACTURING & PROCESSING	86,296	7%
TOTAL	1,303,659	100%

**FOOD WASTE GENERATION BY SECTOR: NYC
(ICI AND RESIDENTIAL)**



THREE CITY SECTOR COMPARISON - COMBINED ICI AND RESIDENTIAL									
	NASHVILLE			DENVER			NYC		
	FOOD WASTE GENERATION (TONS/YR)	% OF TOTAL	# OF UNITS	FOOD WASTE GENERATION (TONS/YR)	% OF TOTAL	# OF UNITS	FOOD WASTE GENERATION (TONS/YR)	% OF TOTAL	# OF UNITS
Residential	58,378	33%	660,388	75,682	41%	693,060	710,334	54%	8,537,673
Restaurants and Caterers	59,993	34%	3,188	45,158	25%	1,759	262,226	20%	18,300
Colleges and Universities	3,223	2%	28	2,736	1%	15	30,115	2%	138
K-12 Schools	876	0%	157	1,296	1%	240	12,895	1%	2,100
Hospitality	6,773	4%	211	7,675	4%	144	52,113	4%	752
Health Care	3,794	2%	24	2,683	1%	61	28,752	2%	216
Events and Recreation Facilities	2,996	2%	17	4,197	2%	17	7,520	1%	19
Correctional Facilities	469	0%	4	568	0%	4	2,976	0%	11
Grocers and Markets	15,299	9%	703	11,480	6%	188	61,310	5%	4,451
Food Wholesalers and Distributors	14,271	8%	125	16,757	9%	105	49,122	4%	577
Food Manufacturing and Processing	11,586	7%	241	15,980	9%	32	86,296	7%	213
TOTAL	177,658	100%	4,698 (ICI)	184,212	100%	2,565 (ICI)	1,303,659	100%	26,777 (ICI)

Appendix P: Study Templates

1. Guidebook and Kitchen Diary Templates

Natural Resources Defense Council Residential Food Waste Assessment Kitchen Diary Instructions

Participant ID: _____

Quick Start Guide

Thank you for participating in this important research that will examine wasted food in [city]. This study is being conducted by researchers with the Natural Resources Defense Council. The purpose of this research study is to understand and measure how much and what types of food are wasted in [city] households.

The following Quick Start Guide provides you with the basic information on how to participate in the study. For more detailed information, please consult the Guidebook.

If you have any questions or concerns about the research or how to complete the surveys or kitchen diary, please contact participant support at [phone or text] or [email].

Over the next two weeks, please complete the following:

First Online Survey.....More info on page 3 of the Guidebook

- Go to [link] to fill out the first survey BEFORE you start the kitchen diary. It should take no more than 10-15 minutes to answer the questions about your household's waste and food related activities.
- At the beginning of the survey, you will be requested to put in your four-digit Participant ID, which can be found at the bottom of this page.
- Please contact participant support at [phone or text] or [email] if you cannot complete the survey online to make alternate arrangements.

Kitchen Diary.....More info on pages 3-7 of the Guidebook

- Start your kitchen diary in the morning of [date] and finish it in the evening of [date] (please capture all food discarded on the start and finish days as well as the days in between).
- Provide information on ALL food and drink that is discarded (not eaten) by all people in your household for one week using the provided kitchen diary sheets. This includes inedible food and drink, such as banana peels, eggshells, and coffee grounds.
- Each day, write down the basic information about what food was discarded outside of the household (e.g. at work or at a restaurant) in the Daily Comments section.
- Include information on food, inedible food parts (e.g. bones, peels), and beverages disposed of in any way (e.g. garbage, down the drain, composted, fed to animals).

Second Online Survey.....More info on page 8 of the Guidebook

- Go to [link] to fill out the second, shorter survey by [date]. It should take no more than 5-15 minutes to answer the questions about your household's waste and food related activities, as well as your experience participating in this study.
- At the beginning of the survey, you will be requested to put in your four-digit Participant ID, which can be found on the bottom of this page.
- Please contact participant support at [phone or text] or [email] if you would rather not complete the survey online to make alternate arrangements.
- **IMPORTANT:** In order to receive your \$50 gift card, you must complete the survey (as well as the previous survey and the kitchen diary) **and** either mail or scan your completed kitchen diary. To mail your kitchen diary, use the provided postage-paid envelope (only include the kitchen diary, not other materials). To email your kitchen diary, scan the completed diary and email to [email]. After receipt of the kitchen diary, your gift card will be sent to you. If you cannot receive emails, contact participant support to coordinate.

Guidebook Table of Contents

Thank you for participating in this important research that will examine wasted food in your city. The following guidebook provides you with detailed information on how to participate in the study. To help you measure your wasted food, we have also provided a digital kitchen scale. As one of our thank you gifts, this scale is yours to keep.

If you have any questions or concerns about the research or how to complete the surveys or kitchen diary, please contact participant support at [phone or text] or [email].

Bin Dig Information – Page 3

First Online Survey – Page 3

Kitchen Diary – Page 3

- **Important Notes – Page 4**
- **Kitchen Diary Kit Contents – Page 4**
- **How to Fill Out Kitchen Diary – Pages 5 & 6**
- **How to Use the Kitchen Scale – Pages 6 & 7**

Second Online Survey – Page 8

Frequently Asked Questions (FAQs) – Pages 8 & 9

Bin Dig Information

Your household may be randomly selected to have your trash (and compost, if you are part of the compost collection pilot) sorted and categorized once during the study. You should not change any of your normal disposal habits, whether of food or other materials. If you happen to be in the randomly selected group, we will collect your trash and compost during the week following your kitchen diary completion. Please put out your trash and compost the night before your trash collection day every week. If you happen to be in the randomly selected group, we will collect your trash and compost early in the morning and do the sorting and categorizing at another location.

If you have a shared dumpster, please put all of your trash (and compost) in the provided bags during the study period. Your trash will be collected from your communal trash (and compost) bin.

First Online Survey

Please fill out the first online survey prior to starting the kitchen diary.

You can access the online survey at [link]. Please contact participant support at [phone or text] or [email] if you cannot complete the survey online to make alternate arrangements.

The survey takes approximately 10-15 minutes and asks you to report your household's waste and food related activities. You do not have to complete the survey in one sitting. If you feel uncomfortable answering any questions, please feel free to skip those questions.

At the beginning of the survey, you will be asked for your four-digit participant ID, which can be found at the bottom of the Quick Start Guide. You must put in this ID to complete the survey.

Kitchen Diary

Thank you for completing the first online survey. Now, it is time to start the kitchen diary. Please record all of the food (including inedible food parts, e.g. banana peels, eggshells, and coffee grounds) and beverages you discard in your household for one week using the kitchen diary templates provided. Additionally, we do not ask that you measure any food/drink discarded outside of your home, but we do ask that you describe it in the Daily Comments section at the bottom of each kitchen diary page.

You can help us by filling out the kitchen diary as completely and accurately as possible. To help everyone in your household remember to write down all of the food and drink that gets thrown away during the week, you may want to select one person to take the lead in your household.

It is very important that you write down ALL of the food and drink that is thrown away:

- By all the people in your household;
- No matter what it is or why it is being discarded (even food that you would not normally eat such as fruit pits, bones, or vegetable peels);
- No matter where you discarded it (in your trash, curbside compost, put down the drain, fed to pets or animals, or composted in your backyard);
- No matter the amount being discarded (nothing is too small to measure);
- Do not include food purchased for the main intention of feeding animals.

Kitchen Diary: Important Notes

- Please consult your Quick Start Guide for dates to start and end your kitchen diary.
- Don't change how you usually prepare or discard food/drinks. If you would normally do a refrigerator or cupboard clean out during the week, do that.
- If anything unusual occurs in your weekly food-related activities (like you throw a party or eat out more than usual), please note that in the daily comments section.
- Describe any food/drink discarded in detail and fill out the required boxes in each row of the kitchen diary. If there are many ingredients, please provide as much detail as possible (for example: one pan of homemade lasagna including two zucchini, ground beef, tomato sauce, and cheese).
- You do not need to include food/drink discarded outside of your household in the rows of the kitchen diary table. However, any food discarded in your household trash or compost should be recorded in the table even if it was not prepared at home (for example: you should record leftovers from restaurants that are later discarded at home).
- Make sure to provide a daily narrative in the Daily Comments section (located at the bottom of each diary page) of any food discarded outside of your household (at work or restaurants) by all household members, including estimates of how much and what was discarded (for example: for lunch I had one tuna sandwich and one large salad, threw away half the sandwich and about 1 cup of the salad).
- Do not leave any day's pages completely blank. If you did not discard any food/drink at home that day, please check the box that best explains why not at the top of the first kitchen diary page for that day.
- If you run out of room to record information, there are extra pages at the back of your kitchen diary packet.
- It is best to record discarded food/drink as it happens; however, you or other household members may want to set discarded food aside until you can record it in the kitchen diary.

Kitchen Diary Contents

Before you begin, please ensure that you have all the necessary items in your kitchen diary kit:

- Kitchen Scale (with batteries)
- Kitchen Diary Template and Sheets
- Pen

If you have any questions or concerns about the research or how to complete the surveys or kitchen diary, please contact participant support at [phone or text] or [email].

How to Fill Out the Kitchen Diary

It is very important that you fill out the kitchen diary as completely and accurately as possible.

For each day of the study, you are provided with two kitchen diary sheets to provide information on the food you discard in the household. If you run out of room, there are extra pages at the end of your kitchen diary packet (make sure to indicate the date if you use those pages).

Every time you discard food (including inedible parts) or drink, please provide all of the following information in the diary sheets. Most of the information can be provided by simply checking the appropriate box.

- **Time** (What time are you recording each item? Indicate AM or PM)
- **What Are You Discarding?** (Please give a detailed description of any food/drink (including inedible parts) that you discard – for example: Pizza with cheese, tomato sauce, and pepperoni)
- **Which Meal Is This Food/Drink Associated With?** (Check the box in the column that best describes the meal associated with the discarded food/drink. If food waste is not associated with any meal, please check “Other”.)
 - Breakfast
 - Lunch
 - Dinner
 - Snacks
- **How Much Does it Weigh?** (Using the provided kitchen scale and weighing bins, approximate the weight of the material to the nearest tenth of an ounce [.1 ounces])
 - Instructions on using the kitchen scale can be found on page 6
 - Remember to tare (set the kitchen scale to zero) before each use
- **Was The Food/Drink Weighed in Packaging?**
 - If it is not easy to remove the discarded food/drink from its packaging before weighing it, then you do not need to remove the food/drink from the packaging.
 - If the discarded food was in glass, metal, or hard plastic when weighed, estimate the size of the packaging (dimensions or volume).
 - If it is easier to place the discarded food/drink in a separate container to weigh it, you may use a container during weighing. If you use a container, tare it prior to weighing food material. You do not need to indicate that you used a container for weighing in the kitchen diary.
 - Do not record lightweight packaging such as plastic wrap or paper packaging in the diary, as these materials are much lighter than the weight of the food/drink.
- **Where Are You Discarding The Food/Drink?** Check the box that best describes where you discarded the food/drink; if none of them apply please write in where you discarded the food/drink into the “Other” box.
 - Trash
 - Down the Drain
 - Fed Pets/Animals
 - Backyard Compost
 - Curbside Compost Collection
 - Compost Drop-Off (e.g. Greenmarket or community garden)
 - Other (write in)

How to Fill Out the Kitchen Diary...continued

- **What Was The State Of The Food/Drink At The Time Of Discarding?** Check the box that best describes the state of the food/drink when discarded. If none of them apply, please write the state of the food/drink in the “Other” box.
 - Whole (meaning it was not cut up or cooked – for example: whole onion or carrot)
 - Prepared, But Not Cooked (meaning the food was chopped or prepared to be cooked, but was not yet in its final state – for example: raw chopped onions)
 - Cooked or Leftovers (meaning food was cooked or in the final state before eating – for example: salads, lasagna, sandwiches)
 - Inedible Parts (meaning the parts of food that are not edible – for example: bones or eggshells)
- **Why Did You Discard The Food?** Check the box that best describes why you discarded the food/drink. If none of them apply, please write the reason in the “Other” box. Only choose one option.
 - Past Date on Label
 - Moldy or Spoiled
 - Didn’t Taste Good
 - Left Out Too Long
 - Improperly Cooked
 - Too Little to Save
 - Don’t Want As Leftovers
 - Inedible Parts

How to Use the Kitchen Scale

Learning how to use the kitchen scale may seem a little confusing at first, but is simple once you know how to use it. Follow the instructions below when weighing wasted food/drink.

- **Step 1 (initial setup only):** Install the provided batteries into the kitchen scale.
- **Step 2:** Press the Power/Tare button.

- **Step 3 (initial setup only):** Ensure the unit of measurement is ounces by pressing the “Unit” button until “lb:oz” appears on the screen right above the “amazon basics” logo. The weight in ounces is on the right-hand side of the screen. Only use that number when recording the weight, not the number on the left-hand side.



How to Use the Kitchen Scale...continued

- **Step 4:** Press the “Tare” button right before each time you add food/drink to be weighed to ensure that the scale reads “0.0” prior to weighing food/drink.



- If you are weighing the food/drink in an empty container, you must weigh that container beforehand so the weight can be subtracted from the weight of the food. To make this easy, put the empty container on scale and press “Tare.” Ensure that the scale reads “0.0” prior to weighing food.



- **Step 5:** Add food/drink to be thrown away. There will be two numbers on the screen, one on the left and one on the right (for example – 1 : 11.3). Please record both numbers. The first number is in lbs and the second is in oz. If you see “1 : 11.3,” please record 1 lb. 11.3 oz.



- **Step 6:** Turn off scale by holding Power/Tare button.

Second Online Survey & Receiving Gift Card

In order to receive your \$50 gift card, you must complete the second survey (as well as the previous survey and the kitchen diary) **and** either mail (via post) or scan and email your completed kitchen diary. To mail your kitchen diary, use the provided postage-paid envelope (only include the kitchen diary, not other materials). To email your kitchen diary, scan the completed diary and email to [email]. After receipt of the kitchen diary, your gift card will be sent to you. If you cannot receive emails, contact participant support to coordinate.

You can access the online survey at [link]. Please contact participant support [phone or text] or [email] if you cannot complete the survey online to make alternate arrangements.

The survey takes approximately 5-10 minutes and asks questions about your household's waste and food related activities as well as your experience participating in this study. You do not have to complete the survey in one sitting. If you feel uncomfortable answering any question, you can skip it.

At the beginning of the survey, you will be asked for your four-digit participant ID, which can be found at the bottom of the Quick Start Guide. You must put in this ID to complete the survey.

Frequently Asked Questions (FAQs)

Kitchen Diary

Q: What if we forgot to complete the diary for one of the days?

A: Don't worry. Try to remember what food was discarded that day and fill out the kitchen diary table for the day you omitted with estimates of what was wasted in your household on that day. Don't worry about the weight. Instead, provide estimates by volume or number of items. For example: two medium sized carrots. You should still fill out all columns in the kitchen diary for each item. For food discarded outside the household, provide a brief description in the Daily Comments as usual. If you are recording discarded food a day or more after it was discarded, please provide a brief note in the Daily Comments section to let us know what date you recorded the information.

Q: Am I supposed to record food/drink discarded outside of the house?

A: Do not record food /drink wasted outside of the house in the kitchen diary tables, but please do provide a narrative of food consumed and discarded outside the home in the Daily Comments section at the bottom of each diary page.

Q: We didn't discard anything in our house for a day. What do we record?

A: If you didn't discard anything in your household, leave the kitchen diary table blank, but choose the checkbox at the top of that day's kitchen diary that indicates why no food/drink waste was recorded.

Q: We ran out of pages for one day of the kitchen diary. What do we do?

A: There are extra overflow pages at the end of the kitchen diary if you need more room. Just make sure to put the date on that page so we know what day the food/drink was discarded.

Q: Should we record food/drink discarded outside of the household for every family member?

A: Yes, the kitchen diary should be used to record information from all members of the household.

Q: How should we note if the amount of food/drink discarded is different than usual because of a special event (e.g. party, barbeque, cleaned out refrigerator)?

A: Write a note in the Daily Comments section that indicates there was a special event.

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Frequently Asked Questions (FAQs)...continued

Kitchen Scale

Q: What if I can't get my scale to work?

A: First, ensure that your batteries are properly installed and that you have read the section on how to use the kitchen scale (pages 6-7). If the scale still doesn't work, please contact participant support at [phone or text] or [email].

Surveys

Q: The first question in the survey is asking me for a participant ID. Where do I find that?

A: Your participant ID is a four-digit number that can be found in several locations, including the front of your guidebook, the front of your kitchen diary, and the Quick Start Guide.

Q: What if we forgot to complete the online survey before starting the diary?

A: Don't worry. Just complete the online survey as soon as possible.

Q: I had an error when submitting my survey. How do I know you received it?

A: Please contact participant support at [phone or text] or [email].

Bin Digs

Q: What if I forgot to place my trash and/or compost out on the curb?

A: It's okay. But, please ensure that you place your trash and compost out for the rest of the study period.

Thank You!!

The information collected as part of this research is important, as it will help us understand how much and what types of food are wasted in your city.

Please ensure that you completed both surveys and returned the completed kitchen diary to us via mail or email, as this is required to receive your \$50 gift card. Additionally, as a thank you gift, the kitchen scale provided is yours to keep.

Daily Comments Section: For each day, if any food or drink was consumed outside of the house, please provide a short description and estimated quantities of any food that was discarded outside of the home.

Need help? Contact participant support at [phone or text] or [email]. If you need more space to record discarded food and beverage, please use overflow pages

2: Survey Templates (Residential Survey 1, Residential Survey 2, ICI Facility Survey)

Survey #1 – Residential Food Waste Measurement

Thank you again for agreeing to participate in this important study to understand and measure how much and what types of food are wasted in [your city] households. The following survey should take you less than 30 minutes and will ask you questions about the basics of your household and food-related attitudes and behaviors. This survey must be completed before you start the kitchen diary. If you have any questions or concerns, please contact participant support at [phone or text] or [email].

What is your participant ID? _____

(this number can be found on the front page of the provided Guidebook or Quick Start Guide)

The following are demographic questions about your entire household (please include information about all people living in your household).

Which of the following best describes the people who live in your household?

- ☐ Family or Related Individuals
- ☐ Non-Related Individuals (e.g. roommates)
- ☐ I Live Alone
- ☐ Other (please specify) _____

How many people live in your household, including yourself? _____

Please fill out the following for each person that lives in your household (up to 8 people).

Person #1 (Person Filling Out Survey) [the following was replicated 8 times for up to 8 residents]

- Age _____
- Gender
 - ☐ Male
 - ☐ Female
 - ☐ Transgender
 - ☐ Neither male, female, nor transgender
- Employment Status
 - ☐ Unemployed
 - ☐ Part-Time
 - ☐ Full-Time
 - ☐ Retired
 - ☐ Student
- Race/Ethnicity (mark all that apply)
 - ☐ American Indian/Alaska Native,
 - ☐ Asian
 - ☐ Black or African American
 - ☐ Hispanic/Latino
 - ☐ Pacific Islander
 - ☐ White
 - ☐ Other (please specify) _____
- National Origin (country of birth) _____
- Primary Language(s) Spoken at Home _____
- Level of Education Completed
 - ☐ Not Yet School Age, K-12
 - ☐ High School/GED
 - ☐ Some Higher Education
 - ☐ Bachelor's degree
 - ☐ Graduate degree
 - ☐ Professional degree

What is your approximate annual household income?

- ☐ Less than \$25,000
- ☐ \$25,001-\$35,000
- ☐ \$35,001-\$45,000
- ☐ \$45,001-\$55,000
- ☐ \$55,001-\$65,000
- ☐ \$65,001-\$75,000
- ☐ \$75,001-\$85,000
- ☐ \$85,000-\$95,000
- ☐ \$95,001 and over

How many people does this income support? _____

The following set of questions will ask you about food-related topics.

Approximately how much money does your household spend on food and beverages eaten at home each week (do not include food eaten away from home)?

- ☐ \$50 or less
- ☐ \$51-\$100
- ☐ \$101-\$150
- ☐ \$151-\$200
- ☐ \$201-\$250
- ☐ \$251-\$300
- ☐ More than \$301

Approximately how much money does your household spend on food and beverages eaten away from home each week (do not include food eaten at home)?

- ☐ \$50 or less
- ☐ \$51-\$100
- ☐ \$101-\$150
- ☐ \$151-\$200
- ☐ \$201-\$250
- ☐ \$251-\$300
- ☐ More than \$301

Are you familiar with the issues related to wasted food?

- ☐ Yes
- ☐ No

If you have seen or heard about the issue of wasted food, how did you learn about it? (select all that apply)

- ☐ Social Media (e.g. YouTube, Facebook, Pinterest)
- ☐ Online Ad
- ☐ Billboard
- ☐ Radio
- ☐ Word of Mouth
- ☐ Direct Email
- ☐ Documentary
- ☐ Television
- ☐ Book
- ☐ Class/Schooling
- ☐ Other _____

On average, how frequently does your household **prepare or cook (not necessarily eat)** the following meals at home during an average week?

	Every Day	At Least 5 Days	Between 2 and 4 Days	Between 1 and 2 days	Less than Once
Breakfast	☐	☐	☐	☐	☐
Lunch	☐	☐	☐	☐	☐
Dinner	☐	☐	☐	☐	☐
Snacks	☐	☐	☐	☐	☐

On average, how frequently does your household **eat (not necessarily prepare or cook)** the following meals at home during an average week?

	Every Day	At Least 5 Days	Between 2 and 4 Days	Between 1 and 2 days	Less than Once
Breakfast	☐	☐	☐	☐	☐
Lunch	☐	☐	☐	☐	☐
Dinner	☐	☐	☐	☐	☐
Snacks	☐	☐	☐	☐	☐

Is your primary refrigerator generally...

- ☐ Fairly empty
- ☐ Half full
- ☐ Mostly full
- ☐ Don't have one

Is your secondary refrigerator or freezer generally...

- ☐ Fairly empty
- ☐ Half full
- ☐ Mostly full
- ☐ Don't have one

Which of the following best describes your thoughts about your refrigerator?

- ☐ It makes me uncomfortable or nervous if my refrigerator is too empty
- ☐ It makes me uncomfortable or nervous if my refrigerator is too full
- ☐ I don't care or don't think about how full my refrigerator is

When planning a visit to the grocery store or when shopping for food, how often does your household do the following...

	Never	Rarely	Sometimes	Often	Always	Not Applicable
Make a shopping list	☐	☐	☐	☐	☐	☐
Check to see what is in your refrigerator/freezer and cupboards before you go shopping	☐	☐	☐	☐	☐	☐
Plan your meals before shopping	☐	☐	☐	☐	☐	☐
Estimate how much of each item you need to buy before going shopping	☐	☐	☐	☐	☐	☐
Buy only items on your shopping list in the store	☐	☐	☐	☐	☐	☐
Buy food in larger quantities than desired, due to the way food is packaged	☐	☐	☐	☐	☐	☐
Purchase more of a product than you need because it is on sale	☐	☐	☐	☐	☐	☐
Purchase more of a product than you need because it is cheaper to buy in larger packages or quantities	☐	☐	☐	☐	☐	☐
Purchase something unplanned because it looks good at the time	☐	☐	☐	☐	☐	☐

The column on the left lists possible places where your household purchases food (not including food purchased and eaten away from home). For each possible place, use the drop-down list to indicate how frequently household members use various modes of transportation to visit that place. If your household members do not use one of the transportation options, leave that box empty.

	Car Owned by Household Member			Borrowed Car			Biking			Walking			Public Transportation			Delivery		
	More than 3 times per week	1-2 times per week	Less than once per week	More than 3 times per week	1-2 times per week	Less than once per week	More than 3 times per week	1-2 times per week	Less than once per week	More than 3 times per week	1-2 times per week	Less than once per week	More than 3 times per week	1-2 times per week	Less than once per week	More than 3 times per week	1-2 times per week	Less than once per week
Superstore (e.g. Costco)	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Grocery Store	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Corner Store/Bodega	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Farmers' Market	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Food Pantry	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Backyard Garden	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Local Garden (not at your household)	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Community-Supported Agriculture	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Online Delivery Service	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Other (please specify)	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Other (please specify)	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐

For this question, consider the person in your household who most frequently prepares meals (if there isn't one particular person that applies to, then consider yourself for this question). How strongly do you agree or disagree with the following statements?

	Agree	Somewhat Agree	Neither Agree Nor Disagree	Somewhat Disagree	Disagree
This person usually follows recipes when cooking	☐	☐	☐	☐	☐
This person improvises meals based on what food is available	☐	☐	☐	☐	☐
This person frequently makes too much food	☐	☐	☐	☐	☐

Many foods you purchase are marked with a "use by," "sell by," or "best by" date. By food type, what do you generally do with foods after the date provided on the packaging has passed?

	Don't Pay Attention to Date Labels	Throw It Away	Smell or Look at it to Determine if it is Still Good	Everything is Eaten or Frozen Before the Date on the Package	I don't consume this type of food
Meat & Fish	☐	☐	☐	☐	☐
Milk	☐	☐	☐	☐	☐
Cheeses	☐	☐	☐	☐	☐
Yogurt & Sour Cream	☐	☐	☐	☐	☐
Bread	☐	☐	☐	☐	☐
Eggs	☐	☐	☐	☐	☐
Fruits & Vegetables	☐	☐	☐	☐	☐

How strongly do you agree or disagree with the following statements?

	Agree	Somewhat Agree	Neither Agree Nor Disagree	Somewhat Disagree	Disagree
We are very cautious about avoiding food poisoning	☐	☐	☐	☐	☐
Date labels are the main source of information we use when deciding whether to throw away food	☐	☐	☐	☐	☐
We frequently use sight, taste, or smell to determine if food is safe to eat	☐	☐	☐	☐	☐
We frequently put foods that need to be used soon in a certain part of the refrigerator	☐	☐	☐	☐	☐
I would like to have more time to spend on preparing and cooking food	☐	☐	☐	☐	☐
We frequently prepare meals a day or more in advance	☐	☐	☐	☐	☐
We frequently eat prepared or frozen meals to save time	☐	☐	☐	☐	☐
I feel less guilty about wasting food that has been in the refrigerator for a long time	☐	☐	☐	☐	☐
I feel less guilty about wasting food if it is composted	☐	☐	☐	☐	☐
I prefer fruits and vegetables with no blemishes	☐	☐	☐	☐	☐
At least one person in the household is a skilled cook	☐	☐	☐	☐	☐
Having regular family or household meals is important	☐	☐	☐	☐	☐
Generally, preparing food for friends and/or family makes me feel good	☐	☐	☐	☐	☐
When household members eat out it is usually spur of the moment, or planned with less than 48 hours notice	☐	☐	☐	☐	☐
We clean out our refrigerator regularly (at least every other week)	☐	☐	☐	☐	☐
It is important that we finish all food that is put on our plates for a meal	☐	☐	☐	☐	☐

Considering the food thrown away in your household in the average week, how much of that food disposal do you think could be avoided (e.g. through planning meals ahead of time, changing food shopping habits)?

- ☐ None
- ☐ A Little
- ☐ A Fair Amount
- ☐ A Lot

Do you think the amount of edible food you throw out is more than, the same as, or less than the average American?

- ☐ A Lot More
- ☐ A Little Bit More
- ☐ The Same
- ☐ A Little Bit Less
- ☐ A Lot Less

Does your household currently compost food?

- ☐ No
- ☐ Yes, we compost at our home
- ☐ Yes, we participate in [city's] organic waste collection program
- ☐ Yes, we contribute to community or other type of composting

If your household does not currently compost, then why not? (select all that apply)

- ☐ We don't know how to compost
- ☐ We are worried about insects and other animals attracted to compost
- ☐ We are worried it will smell
- ☐ It will be too expensive to compost at home
- ☐ We don't have time to compost
- ☐ There is no room to compost at our house
- ☐ We don't waste enough food to compost
- ☐ Don't know what composting is

How often do you and other household members take the following actions during the average week?

	Never	Rarely	Sometimes	Most of the Time	Always
Remove and discard only the bruised parts of fruits and vegetables instead of throwing away the entire food	☐	☐	☐	☐	☐
Try to use all parts of food items (e.g. broccoli stalks, bones for soups, etc.)	☐	☐	☐	☐	☐
Prioritize eating leftovers	☐	☐	☐	☐	☐
Freeze food if you think you will not be able to eat it in time	☐	☐	☐	☐	☐

In general, what happens to leftovers in your household? (select all that apply)

- ☐ Leftovers are eaten as another meal without alteration
- ☐ Leftovers are used as part of another meal (other food is added)
- ☐ Leftovers are composted
- ☐ Leftovers are thrown in the garbage
- ☐ Leftovers get fed to animals
- ☐ We don't have leftovers

How strongly do you agree or disagree with the following statements as they relate to your household?

	Agree	Somewhat Agree	Neither Agree Nor Disagree	Somewhat Disagree	Disagree
We are more likely to eat leftovers from a restaurant compared to leftovers from meals made at home	☐	☐	☐	☐	☐
We sometimes save leftovers even if we think that we might not eat them	☐	☐	☐	☐	☐
Saving leftovers makes me feel less guilty than throwing the food away	☐	☐	☐	☐	☐
Generally, we do not like leftovers	☐	☐	☐	☐	☐

How strongly do you agree or disagree with the following statements as they relate to your household?

	Agree	Somewhat Agree	Neither Agree Nor Disagree	Somewhat Disagree	Disagree
In the past year, my household has made an effort to reduce the amount of food we throw away	☐	☐	☐	☐	☐
My household has complete control over reducing the amount of food we throw away	☐	☐	☐	☐	☐
People around me believe my household should reduce the amount of food we throw away	☐	☐	☐	☐	☐
My household believes that reducing the amount of food we throw away would be good	☐	☐	☐	☐	☐
My household intends to reduce the amount of food we throw away	☐	☐	☐	☐	☐
Given the amount of food that is thrown away in this country, the actions of my household won't make a meaningful difference in the amount of food being wasted	☐	☐	☐	☐	☐

How strongly do you agree or disagree with the following statements as they relate to your household?

	Agree	Somewhat Agree	Neither Agree Nor Disagree	Somewhat Disagree	Disagree
Reducing my household's food waste would save energy	☐	☐	☐	☐	☐
Reducing my household's food waste would save water	☐	☐	☐	☐	☐
Reducing my household's food waste would feed hungry people	☐	☐	☐	☐	☐
Reducing my household's food waste would improve the health of my household	☐	☐	☐	☐	☐
Reducing my household's food waste would save my household money	☐	☐	☐	☐	☐
Reducing my household's food waste would decrease landfill use	☐	☐	☐	☐	☐
Reducing my household's food waste would decrease carbon emissions	☐	☐	☐	☐	☐

Survey #2 – Residential Food Waste Measurement

Thank you again for participating in this important study to understand and measure how much and what types of food are wasted in [your city] households. The following survey should take you approximately 5 to 10 minutes and will ask you questions about the basics of your household and food-related attitudes and behaviors as well as your experience completing the kitchen diary. Please complete this survey as soon as possible to receive your \$50 gift card.

Please remember that in order to receive the \$50 gift card, participants must either mail the kitchen diary (in provided postage-paid envelope) or scan the diary and email it to [email]. NRDC will not be responsible for kitchen diaries lost in the mail (if you are worried about loss of the kitchen diary, please take photos or scan the diary).

What is your participant ID? _____

(this number can be found on the front page of the provided Guidebook or Quick Start Guide)

The following set of questions will ask you about food-related topics.

Considering the food thrown away in your household in the average week, how much of that food disposal do you think could be avoided (e.g. through planning meals ahead of time, changing food shopping habits)?

- ☐ None
- ☐ A Little
- ☐ A Fair Amount
- ☐ A Lot

Do you think the amount of edible food you throw out is more than, the same as, or less than the average American?

- ☐ A Lot More
- ☐ A Little Bit More
- ☐ The Same
- ☐ A Little Bit Less
- ☐ A Lot Less

Does your household currently compost food?

- ☐ No
- ☐ Yes, we compost at our home
- ☐ Yes, we participate in [city's] organic waste collection program
- ☐ Yes, we contribute to community or other type of composting

If your household does not currently compost, then why not? (select all that apply)

- ☐ We don't know how to compost
- ☐ We are worried about insects and other animals attracted to compost
- ☐ We are worried it will smell
- ☐ It will be too expensive to compost at home
- ☐ We don't have time to compost
- ☐ There is no room to compost at our house
- ☐ We don't waste enough food to compost
- ☐ Don't know what composting is

In general, what happens to leftovers in your household? (select all that apply)

- ☐ Leftovers are eaten as another meal without alteration
- ☐ Leftovers are used as part of another meal (other food is added)
- ☐ Leftovers are composted
- ☐ Leftovers are thrown in the garbage
- ☐ Leftovers get fed to animals
- ☐ We don't have leftovers

How strongly do you agree or disagree with the following statements as they relate to your household?

	Agree	Somewhat Agree	Neither Agree Nor Disagree	Somewhat Disagree	Disagree
In the past year, I have made an effort to reduce the amount of food thrown away in my household	☐	☐	☐	☐	☐
I have complete control over reducing the amount of food thrown away by my household	☐	☐	☐	☐	☐
People around me believe I should reduce the amount of food thrown away by my household	☐	☐	☐	☐	☐
I believe reducing the amount of food thrown away by my household would be good	☐	☐	☐	☐	☐
I intend to reduce the amount of food thrown away by my household	☐	☐	☐	☐	☐

How strongly do you agree or disagree with the following statements as they relate to your household?

	Agree	Somewhat Agree	Neither Agree Nor Disagree	Somewhat Disagree	Disagree
Given the amount of food that is thrown away in this country, my individual actions won't make a difference	☐	☐	☐	☐	☐
Measuring the food that was discarded in our household changed how much food we throw away	☐	☐	☐	☐	☐
After measuring the food that was discarded in our household, I now believe that our household wastes more food than I previously thought	☐	☐	☐	☐	☐

How strongly do you agree or disagree with the following statements as they relate to your household?

	Agree	Somewhat Agree	Neither Agree Nor Disagree	Somewhat Disagree	Disagree
Reducing my household's food waste would save energy	☐	☐	☐	☐	☐
Reducing my household's food waste would save water	☐	☐	☐	☐	☐
Reducing my household's food waste would feed hungry people	☐	☐	☐	☐	☐
Reducing my household's food waste would improve the health of my household	☐	☐	☐	☐	☐
Reducing my household's food waste would save my household money	☐	☐	☐	☐	☐
Reducing my household's food waste would decrease landfill use	☐	☐	☐	☐	☐
Reducing my household's food waste would decrease climate pollution	☐	☐	☐	☐	☐

The following set of questions will ask you about your experience completing the kitchen diary.

During the week that you completed the kitchen diary, how many times did you put your trash out for collection?

- ☐ None
- ☐ Once
- ☐ Twice
- ☐ Three Times

Do you feel like the amount of food discarded in your household during the week you participated in the study is typical of how much your household discards each week, on average?

- ☐ Yes
- ☐ No

If No, please state the reasons why the amount of food discarded in your household during that week was not typical (e.g. you ate out more than normal or had a big dinner party).

What (if anything) would have made it easier to complete the kitchen diary?

What (if anything) would have made it easier to be a participant in the study?

What did you learn (if anything) from participating in this study?

How frequently did you talk to a **member of your household** about food waste because of participating in the study?

- ☐ Never
- ☐ One Time
- ☐ A Couple of Times
- ☐ Many Times

How frequently did you talk to **someone outside of your household** about food waste because of participating in the study?

- ☐ Never
- ☐ One Time
- ☐ A Couple of Times
- ☐ Many Times

What do you think your city can do to help residents waste less food?

What suggestions do you have for the study team to improve the experience for participants in the study?

In order to receive your \$50 gift card, you must return the completed kitchen diary to us via mail or email. Have you sent in the kitchen diary yet?

- ☐ Yes, I mailed it in using the provided postage-paid envelope.
- ☐ Yes, I emailed a scanned copy of the completed kitchen diary to [email].
- ☐ No, but I plan on mailing in the kitchen diary soon.
- ☐ No, but I plan on emailing in the kitchen diary soon.

Thank you for completing this survey and completing your participation in the study! Your input is very valuable. **Please contact participant support at [phone or text] or [email] with any questions.**

ICI Facility Food Waste Survey

Thank you for agreeing to participate in the Food Waste Assessment Study (a project of the Natural Resources Defense Council) to estimate how much and what types of food are wasted in [your city]. As part of your participation, please fill out the following survey as completely as possible. Please note that we will not share any of this information except in aggregate and anonymized form. The information you provide will be used to help us approximate how much food of different types is discarded in selected industrial, commercial, and institutional sectors. We will also use the information collected in this survey and in the bin digs to provide specific, confidential recommendations for how your facility can reduce the amount of food going to waste. If you are not comfortable providing any of the requested information, you may decline to answer that question.

Please provide the following information for the person filling out this survey.

Name

Job Title

Organization

Preferred Method of Contact (select all that apply)

☐ Phone

☐ Email

Please provide as much information below about your facility as applies and is available.

Facility Name

Brief Description of Main Business Activities at Facility

of Employees (full-time equivalent) at Facility

of Visitors Per Week (If applicable)

of Meals Served Per Week (If applicable)

of Rooms (for accommodations)

of Seats (for venues)

of Beds (if applicable)

of Days in Operation Per Year

Projected Annual Revenue

How is your facility currently operated?

☐ Individually Operated

☐ Small Chain (10 or fewer facilities)

☐ Large Chain (more than 10 facilities)

☐ Other (please specify) _____

The following information will be used to help us estimate how much food is wasted at your facility as well as help us provide your facility with relevant recommendations. Please fill out as completely as possible.

How does your facility currently dispose of wasted food? Please include the approximate amount of waste per week being managed by each method, if known. (Check all that apply)

	Do you currently use the following method to dispose of wasted food at your facility?			What is the approximate amount of total waste per week (in pounds, tons, or cubic yards) that is being managed by this method? (Put number under appropriate unit -- choose pounds, tons, or cubic yards)		
	Yes	No	Don't Know	Pounds	Tons	Cubic Yards
Trash Collection	☐	☐	☐			
Compostable Materials Collection	☐	☐	☐			
Drain Disposal	☐	☐	☐			
Animal Feed	☐	☐	☐			
On-Site Composting	☐	☐	☐			
Other (please specify)	☐	☐	☐			
Other (please specify)	☐	☐	☐			

Please provide information on every waste receptacle that is collected for pickup by a hauler (for trash, recycling, and composting) at your facility. Provide information by bin type (e.g. toter or compactor). For example, if your facility uses five 4 cubic yard dumpsters for recycling, you only need to fill out one row for those dumpsters. However, please indicate in column 4 that there are 5 dumpsters. Please also fill out a separate row for each type of receptacle that is used for more than one disposal destination (e.g. one row for 4 cubic yard dumpsters used for recycling; another row for 4 cubic yard dumpsters used for trash). If your business sets out trash bags at the curb, please indicate how many bags you set out on pick-up day. Note: Only include the large dumpsters, not individual trash cans inside facility.

	Disposal Destination? (trash, recycling, or composting)			Type/Size of Bin/Bags?	Quantity of Bin/Bag by Type?	Typically, how full is your bin type when it gets picked up by hauler?	Pick Up Days & Times	Bin/Bag Location
	Trash	Recycling	Composting	(examples: 32 gallon toter, 10 cubic yard compactor, 4 cubic yard dumpster, 20 cubic yard rolloff, 40-gallon bag)	Number	Percentage	(example: daily at 7am)	(example: parking lot or loading dock, curb)
Waste Receptacle #1	☐	☐	☐					
Waste Receptacle #2	☐	☐	☐					
Waste Receptacle #3	☐	☐	☐					
Waste Receptacle #4	☐	☐	☐					
Waste Receptacle #5	☐	☐	☐					
Waste Receptacle #6	☐	☐	☐					
Waste Receptacle #7	☐	☐	☐					
Waste Receptacle #8	☐	☐	☐					

The following information will be used to help us provide your facility with relevant recommendations. Please fill out as completely as possible.

What would you consider the biggest barriers to decreasing the amount of food that your facility discards? (select all that apply)

- ☐ Don't know how to reduce food waste
- ☐ Not enough staff time
- ☐ Food waste reduction is too expensive
- ☐ We're focused on other organizational priorities
- ☐ Our food waste is too limited to worry about
- ☐ Trash services are currently inexpensive
- ☐ Haven't considered it
- ☐ Other (please specify) _____

What would you consider the biggest barriers to increasing the amount of food you divert from landfill by using alternative methods (e.g. composting or animal feed)? (select all that apply)

- ☐ Lack of access to collection services for composting or animal feed
- ☐ Not enough staff time to identify alternatives to landfilling
- ☐ Alternatives to landfill are too expensive
- ☐ Trash services are currently inexpensive
- ☐ Not enough physical space in waste collection area for alternative disposal
- ☐ Haven't considered it
- ☐ Other (please specify) _____

What types of food, if any, does your facility generally throw away? (select all that apply)

- ☐ Prep scraps (e.g. trim waste)
- ☐ Inedible food parts (e.g. egg shells)
- ☐ Expired or past-date food items
- ☐ Spoiled food items
- ☐ Leftover prepared foods
- ☐ Foods that have not been cooked or prepared (e.g. whole bananas or whole loaves of bread)
- ☐ Plate waste (post-consumer waste)
- ☐ Little to no food is wasted
- ☐ Other (please specify) _____

Of the foods that you waste, which represents the highest amount wasted by weight? (select one)

- ☐ Prep scraps (e.g. trim waste)
- ☐ Inedible food parts (e.g. egg shells)
- ☐ Expired or past-date food items
- ☐ Spoiled food items
- ☐ Leftover prepared foods
- ☐ Foods that have not been cooked or prepared (e.g. whole bananas or whole loaves of bread)
- ☐ Plate waste (post-consumer waste)
- ☐ Little to no food is wasted
- ☐ Other (please specify) _____

Does your organization/facility currently donate food?

- ☐ Yes
- ☐ No

If your facility donates food, please provide the following information:

Frequency of Food Donation Per Month

General Types of Food Donated (example: prepared foods, produce, bakery items)

Approximate Quantity (Lbs.) Donated Per Month

Organization(s) That Your Organization Donates To

Does your organization have a written policy about donating food?

- ☐ Yes
- ☐ No
- ☐ Not Sure

What would you consider the biggest barriers to donating surplus food? (select all that apply)

- ☐ We don't know of an organization that could receive our excess food
- ☐ It takes too much time for staff to prepare food for donation
- ☐ Lack of cold storage for holding food to be donated
- ☐ Fear of liability
- ☐ Fear of harming our brand image
- ☐ No surplus foods to donate
- ☐ We haven't considered donating surplus food
- ☐ Other (please specify) _____

Does your organization specifically track the amount and types of food wasted at your facility?

- ☐ Yes
- ☐ No

If you answered yes to the previous question (indicating that your organization tracks the amount and types of food wasted at your facility), is your method of tracking food waste...

- ☐ Electronic
- ☐ Paper-based

If your organization's method of tracking food waste is electronic, what system do you currently use?

- ☐ LeanPath
- ☐ Proprietary Software
- ☐ Other (please specify) _____

Does your organization currently repurpose excess or leftover food internally? (e.g. using leftovers in the next day's meals)?

- ☐ Yes
- ☐ No

Is your organization interested in learning more about ways to reduce the amount of food wasted at your facility?

- ☐ Yes
- ☐ No

Is your organization interested in learning more about ways to donate additional food?

- ☐ Yes
- ☐ No

Please describe any other ways that your organization manages surplus food that were not captured in this survey.

Thank you for participating in the NRDC Food Waste Assessment Study. If you have any questions about this survey, please contact us at [email].