Iowa Department of Natural Resources

HAZARDOUS HOUSEHOLD MATERIALS & BATTERY RECYCLING STUDY

October 15, 2018

RESEARCH CONDUCTED BY

STRATEGIC MARKETING SERVICES
The University of Northern Iowa

This page left intentionally blank.

TABLE OF CONTENTS

METHODOLOGY

Project Objective

Strategic Marketing Services' objective was to assist the Iowa Department of Natural Resources (Iowa DNR) in assessing statewide residential attitudes, perceptions and knowledge about household hazardous materials including batteries, with a goal of working towards breaking down barriers to proper material management.

Project Design

Working collaboratively with the Iowa DNR, SMS refined the content of an online survey designed to collect the data required to address project objectives. Survey completions from two respondents groups were collected. The first sample was collected by SMS via a partner vendor, Qualtrics. This sample was designed to collect responses from a representative sample of Iowa residents. Specifically, all respondents were Iowa residents and a mix of geographic and urban/rural representation was sought. The sample was proportionally matched to the population demographics by age for Iowa residents aged 18 and older based on the 2017 Census population projections for the state of Iowa by Suburban Stats Inc. This quota sample targeted a 50/50 Male-Female respondent mix, as well as the following age range group percentages:

- 18-44: 45% of the respondents
- 45-64: 35% of the respondents
- 65+: 20% of the respondents

A total of 405 completed surveys were collected from this effort and included in analysis and reporting. This group of respondents is referred to as the 'Quota Sample' in the body of the report. The Quota Sample created a statistically valid sample achieving a 95 $\pm$ 4.87 percent confidence level.[1]

The second respondent group was comprised of individuals on internal DNR "customer" lists and survey access information was also distributed by DNR partners via email and social media. SMS created a second survey link for these respondents so participation from this group could be tracked separately. SMS assisted in survey deployment by providing recruitment text and a social media advertisement image. A total of 663 completed surveys were collected from this effort and included in analysis and reporting. This group of respondents are referred to as the 'DNR Sample' in the body of the report.

A total of 1,068 completed surveys were collected from the Quota Sample and DNR Sample. Aggregate data is also included in the body of the report. These 1,068 survey completions created a statistically valid sample achieving a 95 $\pm$ 3.00 percent confidence level.

Generally speaking, younger respondents often have a different view than older respondents and male respondents occasionally differ from female respondents. This was the rationale for completing a Quota sample that matches Iowa's current age and gender demographics. However, the Iowa DNR Sample was not sampled in a similar manner; more specifically, any recipient of an email invitation or social media messaging was allowed to complete the online survey. As a result, this sample is significantly skewed

[1] In other words, if we were to conduct the same survey 100 times, 95 out of the 100 administrations should yield results within $\pm$ 4.87 percent of the current data.

towards males aged 18 to 44. Therefore, SMS weighted this sample by age only to make the results more reflective of the overall Iowa population. Had the sample been kept un-weighted, the outcome, or result, of each question would have potentially skewed toward the preferences of younger respondents; but, by weighting the sample, the results will provide a better reflection of how the total population of Iowans would respond. However, the same weighting procedure could not be applied by gender to the DNR Sample due to the low number of female participants. So, it is important to note this sample group remains skewed to male respondents.

The following example helps illustrate how the weighting process was applied to the DNR Sample. In total, 390 respondents aged 18 to 44 completed the survey. To match the population of Iowa for that age demographic, only 298 responses were needed. Therefore, each response provided from someone aged 18 to 44 was given a weight of 0.764 (298/390), thus diminishing the overall "voice" of this age group. The opposite is true for older age groups: we received 72 responses from respondents aged 65 and above, but 132 were needed to match the population of Iowa for that age demographic. Therefore, each response provided from someone aged 65 or above was assigned a weight of 1.833 (132/72), to increase the overall "voice" of this age group. Similarly, 201 responses from respondents aged 45 to 64 were received, but 232 were needed. Therefore, each response from someone 45 to 64 was assigned a weight of 1.154 (232/201), to increase the overall "voice" of this age group.

- *Please note: Throughout the following report, there may be instances in the sample where a frequency of "0" may occur alongside a small percentage, or where very small discrepancies may be seen between the individual frequencies and the total for a given variable. This is caused by the combination of the weighting process and rounding. For example, each respondent that is 18 to 44 is considered as approximately three-fourths of a respondent in the weighting process; therefore, our statistical software will round down in terms of the frequency, but actually will assign a small percentage to that frequency. These are very small frequencies and percentages that only affect a small number of variables, so the effect on the overall data is minimal.*

During data analysis, SMS segmented the data by age, gender, income, education and county type (mostly urban, mostly rural, or completely rural) in order to uncover any meaningful differences between the respective groups. If any meaningful differences were found, they are noted in the body of the report. If no meaningful differences are reported, you can safely assume the aggregate data is representative of all respondents.

Significant findings were also performed among Quota Sample only respondents and DNR Sample only respondents. More confidence can be place in significant differences reported for the Quota Sample as this group is representative of the Iowa general population by age and gender. However, as already noted, the DNR Sample is skewed by both age and gender and is not representative of the Iowa general population. Significant difference testing was performed by weighting age so the results would be more reflective of Iowa population demographics. However, it is still skewed to male respondents. Therefore, significant difference findings by gender are not provided.

EXECUTIVE SUMMARY

About the Quota Sample

The Quota Sample was designed to reflect Iowa population demographics by age and gender. As a result, roughly 44% of the respondents are aged 18 to 44, 36% are aged 45 to 64 and 20% are aged 65 or more. A 50/50 mix of gender was targeted, but a 55% female and 43% male ratio was achieved. Geographically, 69% of the respondents reside in mostly urban counties, while 26% are in mostly rural and 5% in completely rural counties.

Nearly 70% of the respondents own their homes and most earned $50,000 to $99,999 (38%) or $25,000 to $49,999 (26%). Additionally, 35% have a bachelor's degree while another 20% have some college but no degree, 17% have a graduate or doctorate degree and 14% have an associate degree.

Quota Sample respondents most often utilize web/internet searches (68%) to find information about proper disposal and/or recycling of household materials or batteries that are no longer wanted or needed. Other top resources included city/regional publications (37%) and family, friends and/or neighbors (37%). However, differences among the sample based on age and gender exist. More specifically, respondents aged 18 to 44 are significantly more likely to utilize internet/web searches, social media and family, friends and/or neighbors; while respondents aged 65+ are significantly more likely to utilize city/regional publications. Gender differences such as males being significantly more likely to utilize TV advertisements and the phone book than females were also detected.

When asked which sources are utilized to determine which materials in their home or property may be hazardous, Quota Sample respondents indicated web/internet search (59%), reading package labels (52%) and family, friends and/or neighbors (33%) as being most utilized. Again age and gender significant differences can be noted. More specifically, respondents aged 18 to 44 are significantly more likely to utilize web/internet searches, social media and family, friends and/or neighbors, while respondents aged 65+ are significantly more likely to read package labeling. Male respondents reported significantly higher utilization of TV advertisements and radio advertisements; while female respondents are significantly more likely to utilize family, friends and/or neighbors.

Quota Sample respondents most often identified the following household materials as being hazardous and requiring special disposal and/or recycling: batteries (87%); automotive products (85%); and insecticides, pesticides and herbicides (77%). Among the age groups, 65+ year old respondents are significantly more likely to identify automotive products, garden fertilizers, insecticides, pesticides, and herbicides and compact fluorescent light bulbs as being hazardous. Male respondents more significantly reported cleaners as being hazardous as compared to female respondents.

Shampoos/lotions (97%), cleaners (97%) and batteries (95%) were most frequently reported as being routinely found in the Quota Sample respondents' homes. Among the age groups, 18 to 44 year olds are significantly less likely to have aerosols and automotive products in their home, while 65+ year olds are significantly more likely to report having garden fertilizer and insecticides, pesticides and herbicides. Male respondents are significantly more likely to have aerosols, automotive products and garden fertilizers as compared to female respondents.

When asked whether or not they dispose of these household items using their regular curb-side garbage and recycling services, Quota Sample respondents reported highest frequencies for automotive

products (63%), batteries (45%) and compact fluorescent light bulbs (41%). Quota Sample respondents aged 65+ are significantly more likely to report routine disposal of compact fluorescent light bulbs and male respondents are significantly more likely to report routine disposal of batteries.

Quota Sample respondent hazardous household material disposal/recycling confidence is relatively low with a mean of 58% on a scale of 0 to 100. However, Quota respondents aged 65+ are significantly more confident with a mean of 67%. Male respondents are also significantly more confident with a mean of 65%.

Quota Sample respondents identified the following batteries are hazardous and should be recycled at a special location: lithium ion rechargeable batteries (75%); lithium button-type batteries (70%); and ni-cad rechargeable batteries (66%). Among the age groups, respondents aged 18 to 44 are significantly less likely to report ni-cad rechargeable batteries as being hazardous. No significant gender differences were detected.

Just over half of Quota Sample respondents reported all of the given battery recycling preparation tasks should be performed to minimize fire risk, while another 29% indicated batteries should be removed from the device. However, nearly 14% of the respondents were not sure. Among the age groups, 18 to 44 year olds are significantly more likely to report batteries should be put in a cool, dark place for storage until transport, while significantly more 45 to 64 year olds reported being unsure. Female respondents are also significantly more likely to be unsure as compared to male respondents.

Quota Sample respondents reported the following recycling the following battery recycling frequencies: alkaline batteries (34%); lithium ion rechargeable batteries (34%); lithium button-type batteries (33%); ni-cad rechargeable batteries (30%); and rechargeable AA or AAA batteries (26%). However, 42% of the respondents reported no recycling at all. A few age and gender significant differences can be noted. They include both 45 to 64 year old respondents and female respondents being significantly more likely to report no current recycling for any of the given battery types. However, male respondents are significantly more likely to recycle lithium button-type batteries, lithium ion rechargeable batteries, ni-cad rechargeable batteries and rechargeable AA and AAA batteries.

For those Quota Sample respondents that do recycle batteries, they most often recycle them at waste management agencies (49%), followed by municipal recycling centers (28%) and battery stores (25%). Among the age groups, 18 to 44 year olds are significantly more likely to recycle batteries at a hardware store, 45 to 64 year olds at waste management facilities and 65+ year olds at municipal recycling centers. No statistically significant gender differences were found.

Top reasons for recycling among Quota Sample respondents include leaking harmful chemicals (59%), sustaining the environment (34%) and reduction in waste (32%). Respondents aged 65+ are significantly more likely to report leaking harmful chemicals as being a main reason for recycling, while respondents aged 18 to 44 cited saving energy significantly more often. Male respondents reported the conservation of natural resources significantly more often than female respondents.

For those respondent that do not recycle batteries, main reasons preventing them from doing so include not knowing where (47%) and inconvenient locations (37%). Among the age groups, respondents aged 18 to 44 are significantly more likely to report not knowing where to safely dispose or recycle household hazardous materials, including recycling batteries as being a main reason preventing separate disposal.

When all respondents were asked where their last rechargeable battery was purchased, department stores (31%) and hardware stores (24%) were most often identified. However, 19% indicated they have not recently purchased a rechargeable battery. Among the age groups, 18 to 44 year olds are significantly more likely to report making their last rechargeable battery purchase at a department store and 45 to 64 year olds are significantly more likely to report making no rechargeable battery purchases. No significant gender differences were detected.

Lastly, respondents were asked what state and local authorities could do to help motivate people in their communities to properly dispose of household waste and recycle batteries. Top responses include more public awareness/education, more convenient drop-off locations and hours, more general advertising/promotion, a monetary incentive and curbside pick-up.

QUOTA SAMPLE PROFILES

The following graphic provides demographic and behavior significant differences among Quota Sample respondents that do currently recycle batteries as compared to those that do not. However, a few demographic variables were found to have no significant impact on whether or not Quota Sample respondents recycle batteries (i.e., all segments are equally likely or unlikely to recycle batteries). These demographics included geography, 65+ year old respondents, home ownership, household income and education level.

RESPONDENTS SIGNIFICANTLY MORE LIKELY TO RECYCLE BATTERIES...

- Are 18-44 year olds significantly more often than 45-64 year olds
- Are males significantly more often than females
- Use social media, newspapers & city-regional publications as info sources significantly more often
- Use social media, TV ads & package labeling to identify hazardous materials significantly more often
- Identify garden fertilizer & compact fluorescent light bulbs as requiring special disposal or recycling significantly more often
- Have garden fertilizer in their home significantly more often
- Routinely dispose of batteries, cleaners, aerosols, automotive products, garden fertilizer, insecticide, pesticide and herbicide & compact fluorescent light bulbs using regular curbside garbage/recycling services significantly more often
- Are significantly more confident (68%) in knowing where to take household materials for proper disposal/recycling versus battery non-recyclers (44.72%)
- Identify litium button-type batteries, lithium ion rechargeable batteries, ni-cad rechargeable batteries and rechargeable AA and AAA batteries as being hazardous and requiring a special recycling location significantly more often
- Identify hardware stores, tool supply stores and department stores as a location for their last rechargeable battery purchase

It is also important to understand the profile characteristics of Quota Sample respondents that do not recycle batteries versus those that do recycle batteries. It is especially important to understand behavior patterns and primary motivations for each group. This can aid the DNR in developing promotional or educational efforts to increase awareness and recycling.

DO NOT RECYCLE

- More often 45-74 year olds
- More often females
- Slightly less educated - more have high school or some college / associate degrees
- Utilize web/internet searches, family, friends and/or neighbors and city/regional publications for information about proper disposal/recycling of household materials or batteries
- Utilize web/internet searches, package labeling and family, friends and/or neighbors to determine which materials in their home or property may be hazardous
- Reported automotive products, insecticides, pesticides and herbicides, batteries and aerosols are hazardous and require special disposal/recycling
- Reported shampoos/lotions, batteries and cleaners most often as being in their home or property
- Generally do not dispose any of the household items using their regular curbside garbage/recycling services
- Not very confident in knowing where to take hazardous household materials for proper disposal/recycling (Mean = 44.72%)
- Most often identified lithium button-type and lithium ion rechargeable batteries as requiring recycling at a special location, but 19% report none of them
- Nearly half think all of the given tasks should be performed to prepare batteries for recycling to minimize fire risk

DO RECYCLE

- More often 18-44 year olds
- Equally male/female
- Slightly more educated - more bachelor's or graduate/doctorate degrees
- Utilize web/internet searches and city/regional publications for information about proper disposal/recycling of household materials or batteries
- Utilize web/internet searches and package labeling to determine which materials in their home or property may be hazardous
- Reported batteries, automotive products, insecticides, pesticides and herbicides, and compact fluorescent light bulbs are hazardous and require special disposal/recycling
- Reported shampoos/lotions, batteries and cleaners most often as being in their home or property
- Routinely dispose of automotive products and batteries using their regular curbside garbage/recycling services
- Much more confident in knowing where to take hazardous household materials for proper disposal/recycling (Mean = 67.54%)
- Most often identified lithium button-type, lithium ion rechargeable and ni-cad rechargeable batteries as requiring recycling at a special location, only 3% report none of them
- Just over half think all of the given tasks should be performed to prepare batteries for recycling to minimize fire risk

--Continued from the previous page--

DO NOT RECYCLE

- Nearly half reported a main reason for not separately disposing of household hazardous materials and recycling batteries as being not knowing where to safely dispose or recycle
- Roughly 38% said inconvenient locations prevent them from proper disposal/recycling
- Just over 25% last bought a rechargeable battery at a department store, while 27% have not purchased one recently

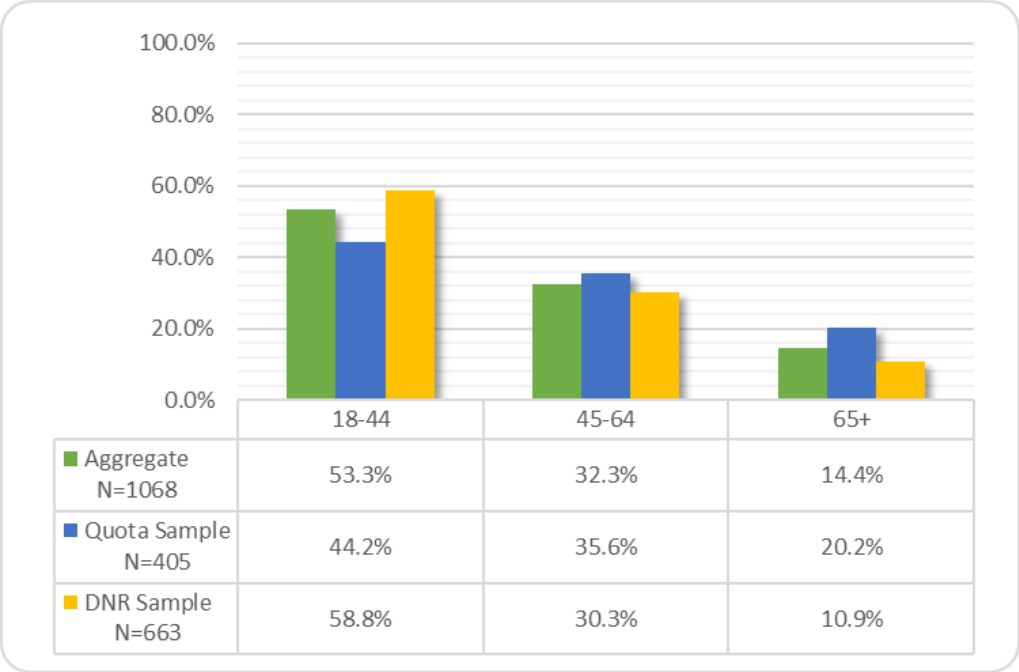
DO RECYCLE

- Nearly 60% reported a main reason for recycling batteries as being leaking of harmful chemicals into the ground and contaiminating soil and water
- Nearly one-third reported sustaining the environment for future generations and another third reported the reduction of waste sent to landfills.
- Nearly 35% last bought a rechargeable battery at a department store and 31% from a hardware store, while only 13% have not purchased one recently

SURVEY RESULTS

Demographics

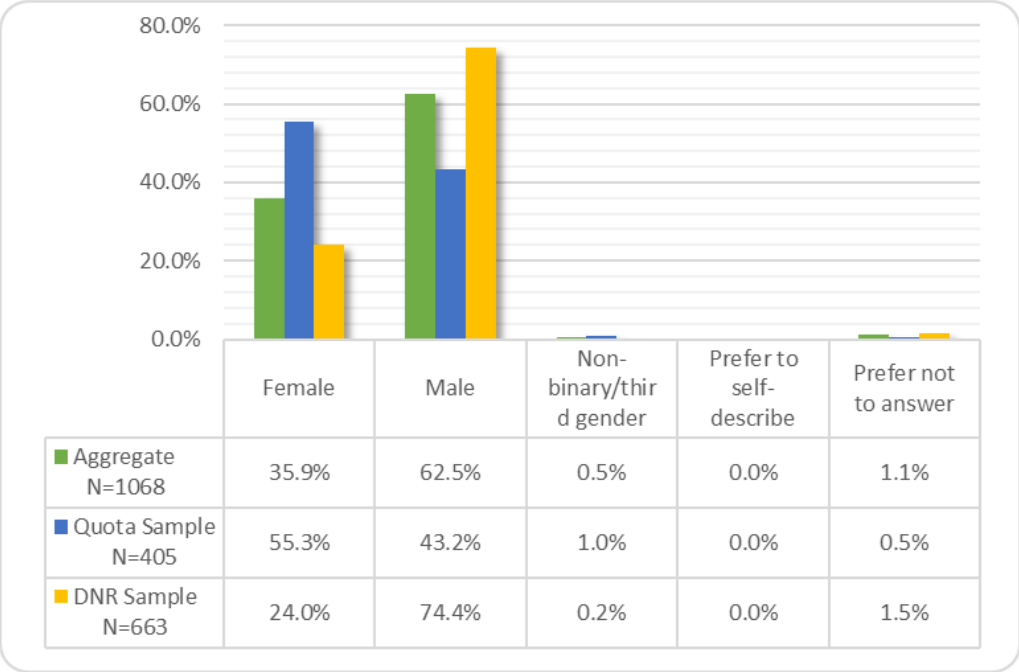
What is your age?



	18-44	45-64	65+
Aggregate N=1068	53.3%	32.3%	14.4%
Quota Sample N=405	44.2%	35.6%	20.2%
DNR Sample N=663	58.8%	30.3%	10.9%

- Aggregately, 53.5% of the respondents were 18 to 44, 32.3% were 45 to 64 and 14.4% were 65+.
- The Quota Sample was specifically designed to be representative of the Iowa population and therefore, is proportional to current age population statistics: 44.2% (45%) aged 18 to 44; 35.6% (35%) aged 45 to 64; and 14.4% (15%) aged 65+.
- The DNR Sample was not controlled and allowed any invited respondent to participate. As a result, the sample is not proportional to Iowa's population and is skewed to respondents aged 18 to 44. More specifically, the respondents aged 18 to 44 are over-represented at 58.8% and respondents aged 45 to 64 (30.3%) and 65+ (10.9%) are under-represented.
- The following statistically significant differences were detected between the Quota and DNR samples and demographic groups:
    - Quota Sample respondents included significantly more respondents aged 65+ (20.2%) as compared to DNR Sample respondents (10.9%).
    - DNR Sample respondents included significantly more respondents aged 18 to 44 (58.8%) as compared to Quota Sample respondents (44.2%).

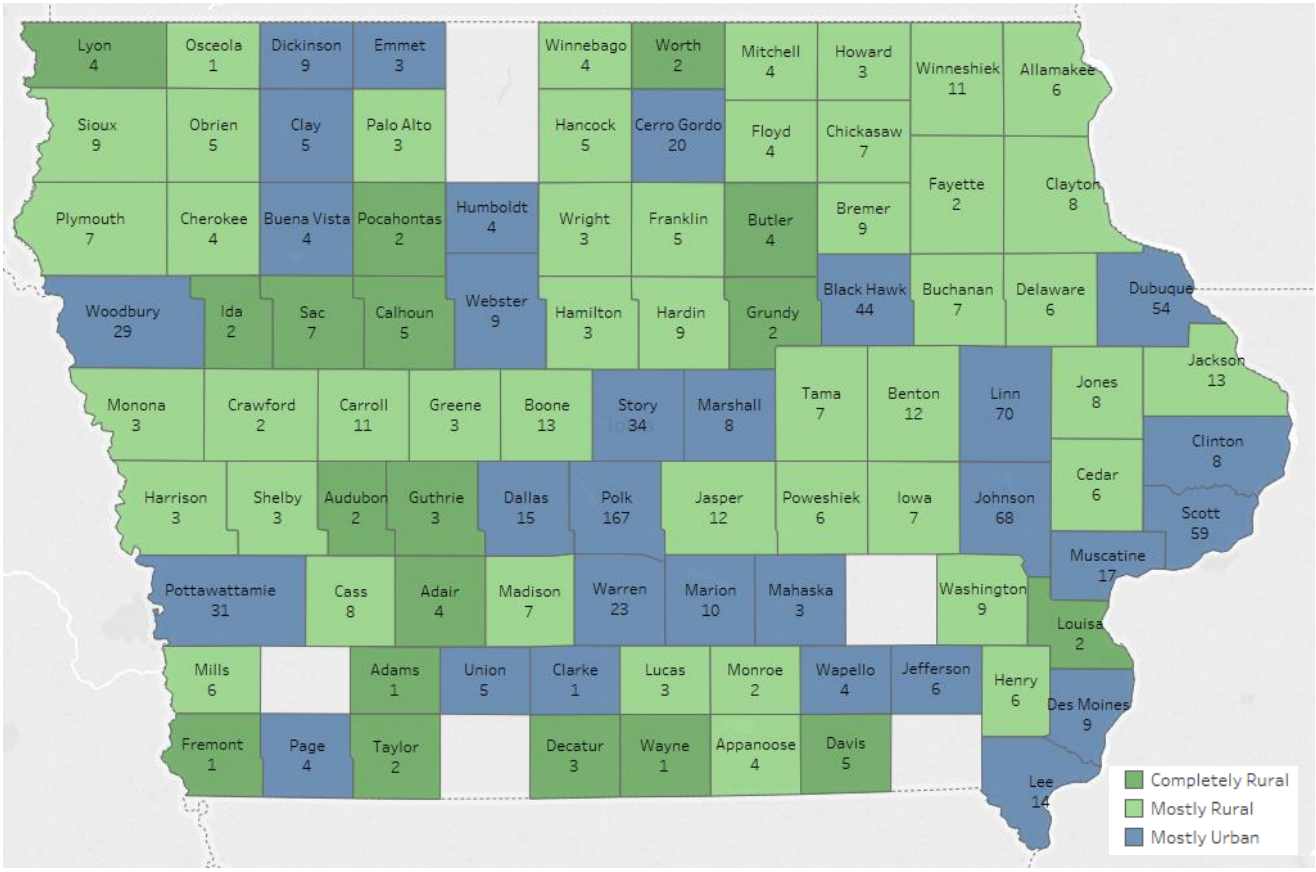
With what gender do you identify?



	Female	Male	Non-binary/third gender	Prefer to self-describe	Prefer not to answer
Aggregate N=1068	35.9%	62.5%	0.5%	0.0%	1.1%
Quota Sample N=405	55.3%	43.2%	1.0%	0.0%	0.5%
DNR Sample N=663	24.0%	74.4%	0.2%	0.0%	1.5%

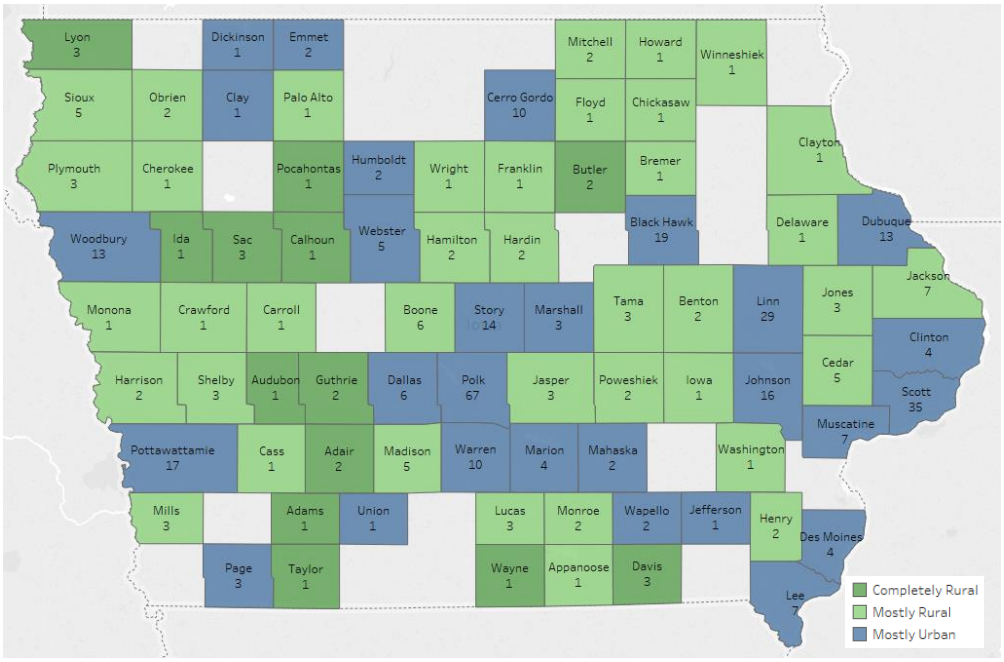
- Aggregately, 62.5% of the respondents were male and 35.9% were female. Just over one percent preferred not to answer and 0.5% specified being non-binary/third gender.
- The Quota Sample was specifically designed to be representative of the Iowa population and therefore, is more proportional to current gender population statistics. An even ratio of 50% female and 50% male was sought; however, slightly more female respondents (55.3%) were obtained as compared to male respondents (43.2%).
- The DNR Sample was not controlled and allowed any invited respondent to participate. As a result, the sample is not gender proportional and is skewed to male respondents (74.4%).
- The following statistically significant differences were detected between the Quota and DNR samples and demographic groups:
    - Quota Sample respondents included significantly more female respondents (55.3%) as compared to DNR Sample respondents (24.0%).
    - DNR Sample respondents included significantly more male respondents (74.4%) as compared to Quota Sample respondents (43.2%).
- The following statistically significant differences were detected among DNR Sample respondents:
    - DNR Sample respondents aged 18 to 44 are significantly more likely to be male (85.3%) as compared to 45 to 64 year olds (60.8%).
    - DNR Sample respondents aged 45 to 64 are significantly more likely to be female (39.2%) as compared to 18 to 44 year olds (14.7%).

What is your home zip code?

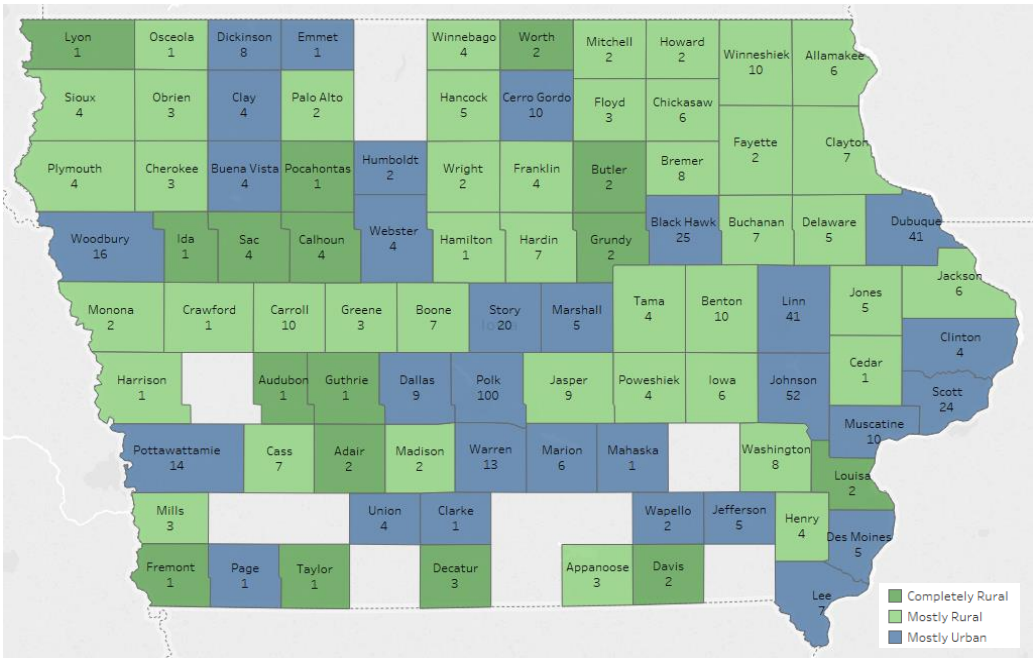


- SMS grouped respondent zip codes by county and then coded the counties as being completely rural, mostly rural or mostly urban based on US Census Bureau definitions. More specifically, counties with less than 50 percent of the population living in rural areas are classified as mostly urban; 50 to 99.9 percent are classified as mostly rural; 100 percent rural are classified as completely rural. The total number of survey completions for each county is displayed on the map
- Aggregately, 69.0% of the respondents are from mostly urban counties, 26.1% from mostly rural counties and only 4.9% from completely rural counties.

- Quota Sample respondents were distributed as follows: 73.6% mostly urban counties; 21.0% mostly rural counties; and 5.4% completely rural counties. The map below shows the number of Quota Sample survey completions by county.

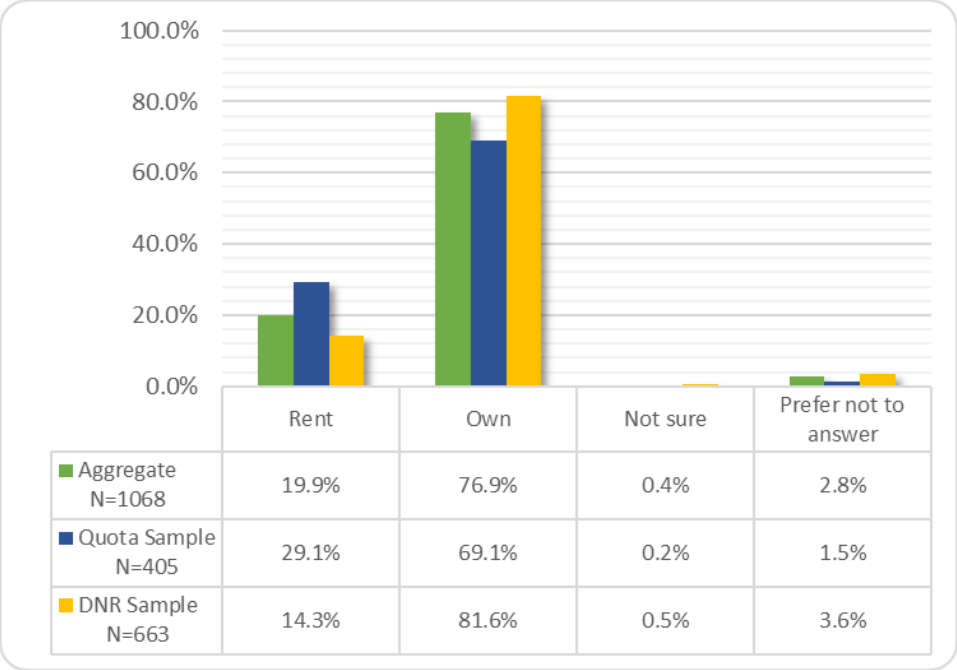


- DNR Sample respondents were distributed as follows: 66.2% mostly urban counties; 29.3% mostly rural counties; and 4.5% completely rural counties. The map below shows the number of DNR Sample survey completions by county.



- The following statistically significant difference was detected between the Quota and DNR samples and demographic groups:
    - DNR Sample respondents are significantly more likely to live in a mostly rural county (29.3%) as compared to Quota Sample respondents (21.0%).

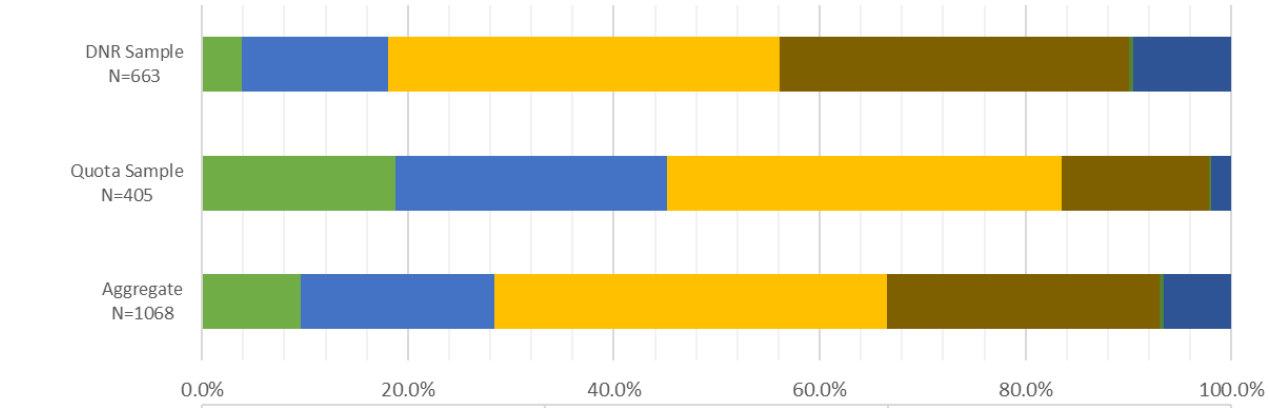
Do you currently rent or own your own home?



	Rent	Own	Not sure	Prefer not to answer
Aggregate N=1068	19.9%	76.9%	0.4%	2.8%
Quota Sample N=405	29.1%	69.1%	0.2%	1.5%
DNR Sample N=663	14.3%	81.6%	0.5%	3.6%

- Aggregately, just over three-fourths of respondents own their home rather than rent (19.9%). Almost three percent preferred not to answer and 0.4% were not sure.
- Among the Quota Sample, 69.1% reported owning their home as compared to 29.1% renting.
- Among the DNR Sample, significantly higher home ownership (81.6%) and lower home rental (14.3%) was reported.
- The following statistically significant differences were detected between the Quota and DNR samples and demographic groups:
    - Quota Sample respondents were significantly more likely to rent as compared to the DNR Sample (29.1% vs 14.3%); while DNR Sample respondents were significantly more likely to own their home than Quota Sample respondents (81.6% vs 69.1%).
- The following statistically significant difference was detected among Quota Sample respondents:
    - Quota Sample respondents in completely rural (90.9%) or mostly rural (82.4%) counties are significantly more likely to own their home as compared to respondents in mostly urban counties (63.8%).
    - Quota Sample respondents aged 18 to 44 (36.9%) are significantly more likely to rent their home as compared to respondents aged 65+ (15.9%). However, Quota respondents aged 65+ are significantly more likely to own their home (84.1%) as compared to respondents aged 18 to 44 (60.3%).
- The following statistically significant difference was detected among DNR Sample respondents:
    - DNR Sample respondents aged 45 to 64 (94.3%) and 65+ (96.2%) are significantly more likely to own their home as compared to 18 to 44 year olds (77.9%).

Which <u>one</u> category best describes your household's total income for the last year (2017)?

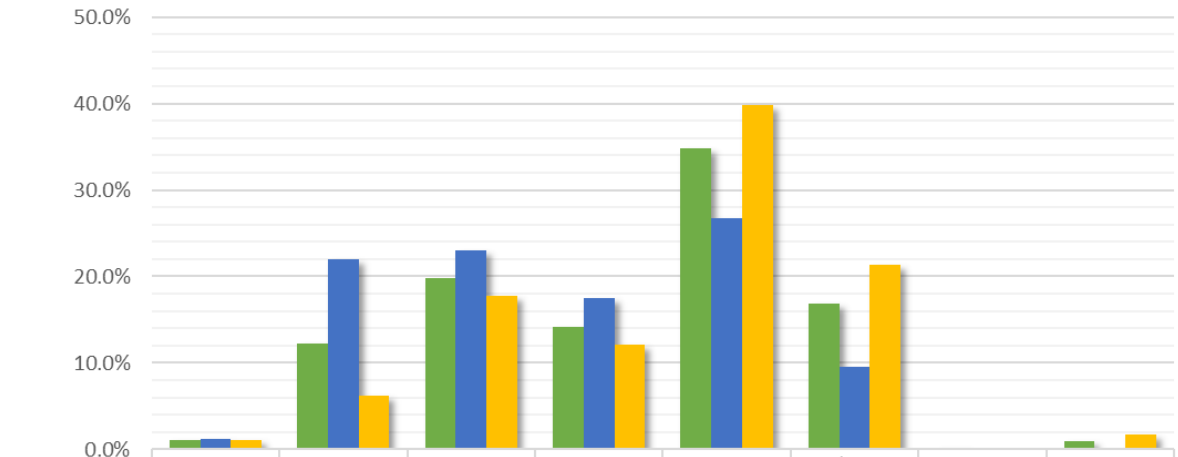


	Aggregate N=1068	Quota Sample N=405	DNR Sample N=663
Less than $25,000	9.6%	18.8%	3.9%
$25,000 to $49,999	18.8%	26.4%	14.2%
$50,000 to $99,999	38.1%	38.3%	38.0%
$100,000 or more	26.5%	14.3%	33.9%
Not Sure	0.4%	0.2%	0.5%
Prefer Not to Answer	6.6%	2.0%	9.5%

- Aggregately, 38.1% reported household total income for 2017 as being between $50,000 and $99,999 followed by 26.5% being $100,000 or more.
- Respondents from the Quota Sample also reported household total income for 2017 most often as being $50,000 to $99,999. However, respondents from this more representative sample more frequently reported lower income levels. Specifically, 26.4% reported household total income ranging from $25,000 to $49,999 and 18.8% reported less than $25,000.
- Respondents from the DNR Sample generally reported higher household total income levels with over 70% indicating household total income as being $50,000 or above.
- The following statistically significant difference was detected between the Quota and DNR samples and demographic groups:
    - Quota Sample respondents were significantly more likely to report an annual 2017 household income of less than $25,000 as compared to the DNR Sample (19.2% vs 4.4%); while DNR Sample respondents were significantly more likely to report an income of $100,000 or more than Quota Sample respondents (37.7% vs 14.6%).
- The following statistically significant differences were detected among Quota Sample respondents:
    - Female Quota Sample respondents (23.7%) are significantly more likely to report an annual household income of less than $25,000 as compared to male respondents (13.4%).
    - Quota Sample respondents that rent their home (39.0%) are significantly more likely to report an annual household income of less than $25,000 while respondents that own their home are significantly more likely to report an annual income of $50,000 or more (66.9%).

- The following statistically significant difference was detected among DNR Sample respondents:
    - DNR Sample respondents in completely or mostly urban counties (43.9%) are significantly more likely to report an annual income of $100,000 or more as compared to respondents in mostly rural counties (30.2%).

Please mark the highest level of school you have completed or the highest degree you have received. *(Please mark only <u>one</u> option)*



	Some high school	High school degree	Some college but no degree	Associate degree	Bachelor degree	Graduate or Doctorate degree	Other	Prefer not to answer
Aggregate N=1068	1.1%	12.2%	19.8%	14.1%	34.8%	16.9%	0.0%	1.0%
Quota Sample N=405	1.2%	22.0%	23.0%	17.5%	26.7%	9.6%	0.0%	0.0%
DNR Sample N=663	1.1%	6.2%	17.8%	12.1%	39.8%	21.4%	0.0%	1.7%

- Aggregately, 34.8% of the respondents reported having a bachelor's degree followed by 19.8% with some college but no degree and 16.9% with graduate or doctorate degrees.
- Among Quota Sample, nearly equal percentages of respondents reported having a bachelor's degree (26.7%), some college but no degree (23.0%) and a high school degree (22.0%). Another 17.5% reported having an associate degree and 9.6% have a graduate or doctorate degree.
- Generally the DNR Sample was more highly educated with 39.8% having a bachelor's degree and 21.4% a graduate or doctorate degree. Nearly 18% reported some college but no degree and 12.1% an associate degree.
- The following statistically significant difference was detected between the Quota and DNR samples and demographic groups:
    - Quota Sample respondents were significantly more likely to report a high school education level as compared to the DNR Sample (23.2% vs 7.4%); while DNR Sample respondents were significantly more likely to report a graduate or doctorate education level than Quota Sample respondents (21.8% vs 9.6%).
- The following statistically significant difference was detected among Quota Sample respondents:
    - Quota Sample respondents reporting an annual household income of less than $25,000 (47.4%) are significantly more likely to report having a high school or less education; while respondents reporting an income of $100,000 or more are significantly more likely to report having a bachelor's degree (41.4%) or graduate/doctorate degree (24.1%).

Which of the following sources do you utilize to find information about proper disposal and/or recycling of household materials or batteries that you no longer want or need? *(Please mark all that apply)*

	Web/internet search	City/regional publication	Family, friends, or neighbors	Newspaper	Social media	Radio advertisement	Other	TV advertisement	Not sure	Phone book
Aggregate N=1068	64.4%	33.6%	31.6%	18.5%	21.1%	9.7%	8.4%	9.0%	8.6%	5.4%
Quota Sample N=405	59.3%	37.3%	37.0%	20.2%	18.0%	6.2%	5.7%	11.4%	9.4%	9.6%
DNR Sample N=663	67.6%	31.4%	28.4%	17.5%	22.9%	11.9%	10.1%	7.5%	8.1%	2.9%

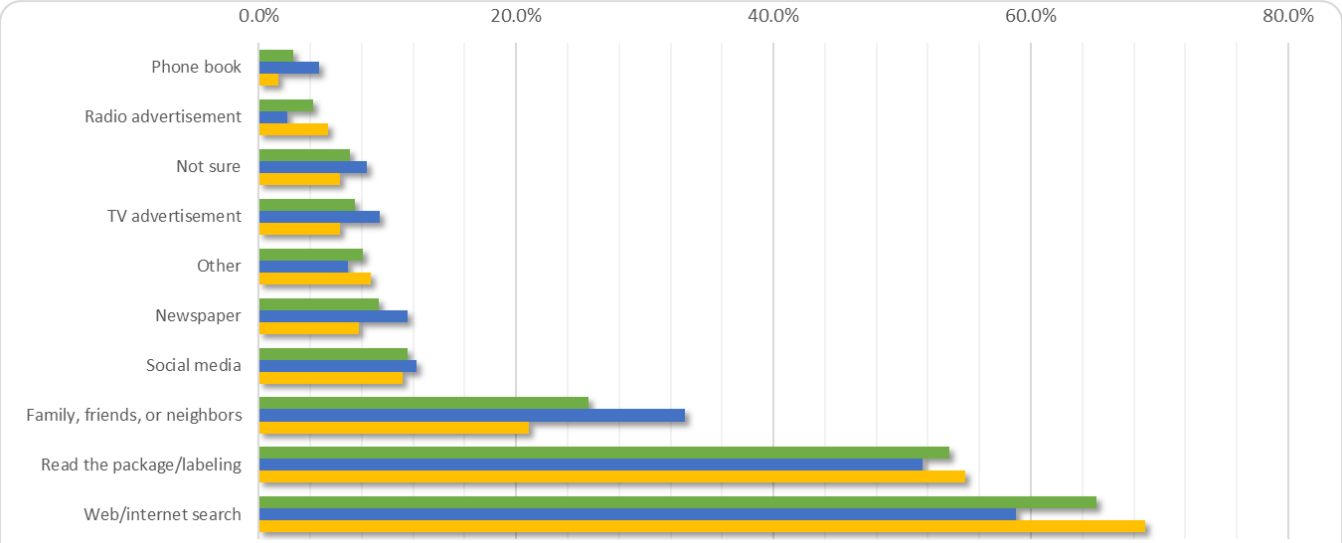
- Aggregately, respondents reported highest utilization of web/internet searches (64.4%) to find information about proper disposal and/or recycling of household materials or batteries that are no longer wanted or needed. One-third reported utilization of city/regional publications and nearly another third indicated family, friends and/or neighbors. Only 5.4% reported utilization of phone books.
- Quota Sample respondents also reported the highest utilization for web/internet searches (59.3%) followed by city/regional publications (37.3%) and family, friends and/or neighbors (37.0%). Radio advertisements (6.2%) were least utilized.
- Again, DNR Sample respondents reported the highest utilization for web/internet searches (67.6%), city/regional publications (31.4%) and family, friends and/or neighbors (28.4%). Phone book utilization (2.9%) was least utilized.
- Other information sources included:
    - City or county office – 18
    - City or county landfill – 10
    - Recycling center – 10
    - Recycling center flyers/emails/website – 9
    - I'm a recycling professional – 7
    - City or county website – 6
    - None – 6

  - Garbage/recycling provider – 5
  - Product information – 5
  - My own knowledge/research – 3
  - Workplace – 3
  - City or county mailings – 2
  - Co-workers – 2
  - Don't recycle – 2
  - ISU Extension – 1
  - Misc. advertisements – 1
  - School – 1
- The following statistically significant differences were detected between the Quota and DNR samples and demographic groups:
  - Quota Sample respondents were significantly more likely to report a high school education level as compared to the DNR Sample (23.2% vs 7.4%) while DNR Sample respondents were significantly more likely to report a graduate or doctorate education level than Quota Sample respondents (21.8% vs 9.6%).
  - DNR Sample respondents are significantly more likely to utilize web/internet searching to find information about proper disposal and/or recycling of household materials or batteries that are no longer needed (67.6%) as compared to Quota Sample respondents (59.3%).
  - Quota Sample respondents are significantly more likely to utilize the phone book to find information about proper disposal and/or recycling of household materials or batteries that are no longer needed (9.6%) as compared to DNR Sample respondents (2.9%).
  - Quota Sample respondents are significantly more likely to utilize TV advertisements to find information about proper disposal and/or recycling of household materials or batteries that are no longer needed (11.4%) as compared to DNR Sample respondents (7.5%).
  - DNR Sample respondents are significantly more likely to utilize the radio advertisements to find information about proper disposal and/or recycling of household materials or batteries that are no longer needed (11.9%) as compared to Quota Sample respondents (6.2%).
  - Quota Sample respondents are significantly more likely to utilize the family, friends, and/or neighbors to find information about proper disposal and/or recycling of household materials or batteries that are no longer needed (37.0%) as compared to DNR Sample respondents (28.4%).
- The following statistically significant differences were detected among Quota Sample respondents:
  - Quota Sample respondents aged 18 to 44 (72.1%) are significantly more likely to utilize web/internet searches to find information about proper disposal and/or recycling of household materials or batteries that are no longer needed or wanted as compared to respondents aged 45 to 64 (52.1%) and 65+ (43.9%).
  - Quota Sample respondents aged 18 to 44 (26.3%) are significantly more likely to utilize social media to find information about proper disposal and/or recycling of household materials or batteries that are no longer needed or wanted as compared to respondents aged 45 to 64 (16.0%) and 65+ (3.7%).
  - Quota Sample respondents aged 65+ (52.4%) are significantly more likely to utilize city or regional publications to find information about proper disposal and/or recycling of household materials or batteries that are no longer needed or wanted as compared to respondents aged 45 to 64 (37.5%) and 18 to 44 (30.2%).
  - Quota Sample respondents aged 18 to 44 (43.6%) are significantly more likely to utilize family, friends and/or neighbors to find information about proper disposal and/or recycling of

household materials or batteries that are no longer needed or wanted as compared to respondents aged 65+ (29.3%).
    - Male Quota Sample respondents (17.1%) are significantly more likely to utilize TV advertisements to find information about proper disposal and/or recycling of household materials or batteries that are no longer needed or wanted as compared to female respondents (6.7%).
    - Male Quota Sample respondents (7.4%) are significantly more likely to utilize the phone book to find information about proper disposal and/or recycling of household materials or batteries that are no longer needed or wanted as compared to female respondents (2.7%).
    - Quota Sample respondents that own their home (41.1%) are significantly more likely to utilize city or regional publications delivered to their home to find information about proper disposal and/or recycling of household materials or batteries that are no longer needed or wanted as compared to respondents that rent their home (27.1%).
    - Quota Sample respondents that rent their home (44.1%) are significantly more likely to utilize family, friends and/or neighbors to find information about proper disposal and/or recycling of household materials or batteries that are no longer needed or wanted as compared to respondents that own their home (34.3%).
    - Quota Sample respondents that own their home (55.0%) are significantly more likely to read packaging/labeling to find information about proper disposal and/or recycling of household materials or batteries that are no longer needed or wanted as compared to respondents that rent their home (44.9%).
    - Quota Sample respondents that own their home (6.1%) are significantly more likely to utilize a phone book to find information about proper disposal and/or recycling of household materials or batteries that are no longer needed or wanted as compared to respondents that rent their home (1.7%).
    - Quota Sample respondents reporting an income of $100,000 or more (53.41%) are significantly more likely to utilize city or regional publications to find information about proper disposal and/or recycling of household materials or batteries that are no longer needed or wanted as compared to respondents reporting an income of less than $25,000 (21.1%).

- The following statistically significant differences were detected among DNR Sample respondents:
    - DNR Sample respondents aged 18 to 44 (71.5%) and 45 to 64 (67.7%) are significantly more likely to utilize web/internet searches to find information about proper disposal and/or recycling of household materials or batteries that are no longer needed or wanted as compared to 65+ year olds (45.8%).
    - DNR Sample respondents aged 18 to 44 (25.5%) and 45 to 64 (20.8%) are significantly more likely to utilize social media to find information about proper disposal and/or recycling of household materials or batteries that are no longer needed or wanted as compared to 65+ year olds (13.6%).
    - DNR Sample respondents aged 65+ (37.4%) are significantly more likely to utilize newspapers to find information about proper disposal and/or recycling of household materials or batteries that are no longer needed or wanted as compared to 18 to 44 olds (10.4%) and 45 to 64 year olds (23.7%).
    - DNR Sample respondents aged 65+ (47.0%) are significantly more likely to utilize city or regional publications to find information about proper disposal and/or recycling of household materials or batteries that are no longer needed or wanted as compared to 18 to 44 olds (28.9%) and 45 to 64 year olds (31.0%).

Which of the following sources do you utilize to determine which materials in your home or on your property may be hazardous? *(Please mark all that apply)*



	Web/internet search	Read the package/labeling	Family, friends, or neighbors	Social media	Newspaper	Other	TV advertisement	Not sure	Radio advertisement	Phone book
Aggregate N=1068	65.1%	53.7%	25.6%	11.6%	9.3%	8.1%	7.5%	7.1%	4.2%	2.7%
Quota Sample N=405	58.8%	51.6%	33.1%	12.3%	11.6%	6.9%	9.4%	8.4%	2.2%	4.7%
DNR Sample N=663	68.9%	54.9%	21.0%	11.2%	7.8%	8.7%	6.3%	6.3%	5.4%	1.5%

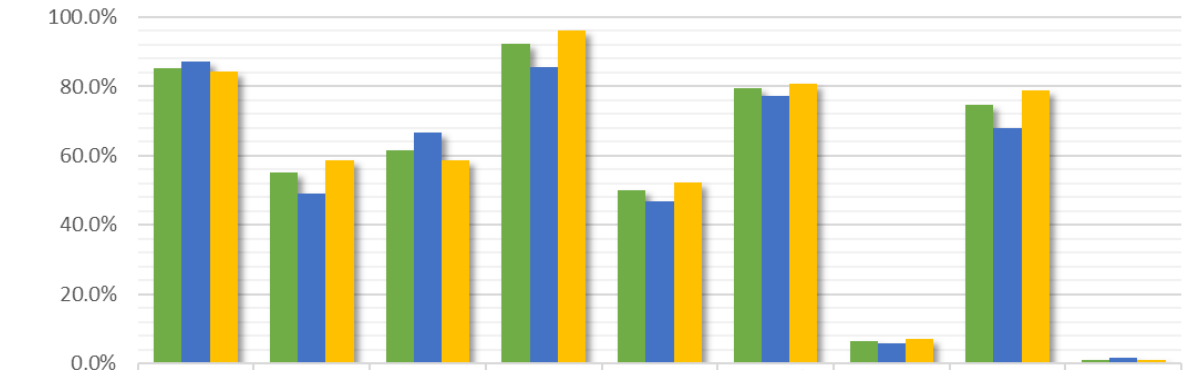
- Aggregately, nearly two-thirds of the respondents utilize web/internet searches and 53.7% reported reading package/labels to determine which materials in their home or on their property may be hazardous. One-fourth reported utilization of family, friends and/or neighbors while only 2.7% indicated using phone and 4.2% indicated radio advertisements.
- Both the Quota and DNR Sample respondents also indicated web/internet searches as the top resource followed by reading the package/label and family, friends and/or neighbors. However, Quota Sample respondents reported higher utilization of family, friends and/or neighbors, newspapers and TV advertisements, while DNR Sample respondents indicated higher utilization of radio advertisements and phone books.
- Other sources mentioned included:
    - City or county landfill – 12
    - I'm a recycling professional – 8
    - Product information – 8
    - Recycling center flyers/emails/website – 8
    - City or county office – 7
    - City or county website/flyers – 7
    - Recycling center – 5
    - Workplace – 5
    - Common knowledge/sense – 4
    - Garbage/recycling provider – 4

  - Local TV news – 4
  - My own knowledge/research – 3
  - None – 3
  - City or county mailings – 2
  - Co-workers – 1
  - Don't recycle – 1
  - ISU Extension – 1
  - School – 1
  - State agencies – 1
- The following statistically significant differences were detected between the Quota and DNR samples and demographic groups:
  - DNR Sample respondents are significantly more likely to utilize web/internet searching to determine which materials in their home or on their property may be hazardous (68.9%) as compared to Quota Sample respondents (28.8%).
  - Quota Sample respondents are significantly more likely to utilize phone books to determine which materials in their home or on their property may be hazardous (4.7%) as compared to DNR Sample respondents (1.5%).
  - Quota Sample respondents are significantly more likely to utilize newspapers to determine which materials in their home or on their property may be hazardous (11.6%) as compared to DNR Sample respondents (7.8%).
  - Quota Sample respondents are significantly more likely to utilize radio advertisements to determine which materials in their home or on their property may be hazardous (5.4%) as compared to DNR Sample respondents (2.2%).
  - Quota Sample respondents are significantly more likely to utilize family, friends and/or neighbors to determine which materials in their home or on their property may be hazardous (33.1%) as compared to DNR Sample respondents (21.0%).
- The following statistically significant differences were detected among Quota Sample respondents:
  - Quota Sample respondents aged 18 to 44 (70.9%) are significantly more likely to utilize web/internet searches to determine which materials in their home or on their property may be hazardous as compared to respondents aged 65+ (32.9%).
  - Quota Sample respondents aged 18 to 44 (17.3%) are significantly more likely to utilize social media to determine which materials in their home or on their property may be hazardous as compared to respondents aged 65+ (4.9%).
  - Quota Sample respondents aged 65+ (63.4%) are significantly more likely to read packaging/labeling to determine which materials in their home or on their property may be hazardous as compared to respondents aged 18 to 44 (45.8%).
  - Quota Sample respondents aged 18 to 44 (42.5%) are significantly more likely to utilize family, friends and/or neighbors to determine which materials in their home or on their property may be hazardous as compared to respondents aged 65+ (19.5%).
  - Male Quota Sample respondents (14.3%) are significantly more likely to utilize TV advertisements to determine which materials in their home or on their property may be hazardous as compared to female respondents (5.4%).
  - Male Quota Sample respondents (4.0%) are significantly more likely to utilize radio advertisements to determine which materials in their home or on their property may be hazardous as compared to female respondents (0.9%).

  - Female Quota Sample respondents (36.6%) are significantly more likely to utilize family, friend and/or neighbors to determine which materials in their home or on their property may be hazardous as compared to male respondents (27.4%).

- The following statistically significant differences were detected among DNR Sample respondents:
  - DNR Sample respondents aged 18 to 44 (72.8%) and 45 to 64 (67.7%) are significantly more likely to utilize web/internet searches to determine which materials in their home or on their property may be hazardous as compared to respondents aged 65+ (51.5%).
  - DNR Sample respondents aged 65+ (69.7%) are significantly more likely to read packaging/labels to determine which materials in their home or on their property may be hazardous as compared to respondents aged 18 to 44 (50.0%) and 45 to 64 (59.1%).
  - DNR Sample respondents aged 65+ (28.0%) are significantly more likely to utilize a newspaper to determine which materials in their home or on their property may be hazardous as compared to respondents aged 18 to 44 (10.3%) and 45 to 64 (2.7%).
  - DNR Sample respondents aged 65+ (13.6%) are significantly more likely to utilize TV advertisements to determine which materials in their home or on their property may be hazardous as compared to respondents aged 18 to 44 (6.0%) and 45 to 64 (4.3%).
  - DNR Sample respondents aged 65+ (11.4%) are significantly more likely to utilize radio advertisements to determine which materials in their home or on their property may be hazardous as compared to respondents aged 18 to 44 (4.7%) and 45 to 64 (5.2%).
  - DNR Sample respondents with a graduate or doctorate degree are significantly more likely to utilize newspapers to find information about proper disposal and/or recycling of household materials or batteries that are no longer needed or wanted as compared to respondents with a bachelor's degree (18.6%) and some college or associate degree (16.9%).

Which of the following household materials do you think are hazardous and require special disposal or recycling? *(Please mark all that apply)*



	Batteries	Cleaners	Aerosol cans	Automotive products	Garden fertilizer	Insecticide, pesticide, or herbicide	Shampoo/ lotions	Compact fluorescent light bulbs	None of these
Aggregate N=1068	85.4%	55.1%	61.7%	92.2%	50.1%	79.4%	6.6%	74.8%	1.1%
Quota Sample N=405	87.2%	48.9%	66.7%	85.7%	46.7%	77.3%	5.7%	68.1%	1.5%
DNR Sample N=663	84.3%	58.8%	58.7%	96.2%	52.2%	80.7%	7.1%	78.9%	0.9%

- Aggregately, respondents most reported automotive products (92.2%), batteries (85.4%), insecticides, pesticides and herbicides (79.4%) and compact fluorescent light bulbs (74.8%) as being hazardous and requiring special disposal or recycling. Other frequently reported household materials included aerosol cans (61.7%), cleaners (55.1%) and garden fertilizer (50.1%), while shampoo/lotion (6.6%) was least reported.
- Both the Quota and DNR Sample followed aggregate trends; however, DNR Sample respondents reported automotive products (96.2%), compact fluorescent light bulbs (78.9%) and cleaners (58.8%) at a higher frequency than Quota Sample respondents.
- The following statistically significant differences were detected between the Quota and DNR samples and demographic groups:
    - DNR Sample respondents are significantly more likely to report cleaners as being hazardous and requiring special disposal or recycling (58.8%) as compared to Quota Sample respondents (48.9%).
    - Quota Sample respondents are significantly more likely to report aerosol cans as being hazardous and requiring special disposal or recycling (66.7%) as compared to DNR Sample respondents (58.7%).
    - DNR Sample respondents are significantly more likely to report automotive products as being hazardous and requiring special disposal or recycling (96.2%) as compared to Quota Sample respondents (85.7%).
    - DNR Sample respondents are significantly more likely to report garden fertilizer as being hazardous and requiring special disposal or recycling (52.2%) as compared to Quota Sample respondents (46.7%).

  - DNR Sample respondents are significantly more likely to report compact fluorescent light bulbs as being hazardous and requiring special disposal or recycling (78.9%) as compared to Quota Sample respondents (68.1%).

- The following statistically significant differences were detected among Quota Sample respondents:
  - Quota Sample respondents aged 65+ (95.1%) are significantly more likely to identify automotive products as being hazardous and require special disposal or recycling as compared to respondents aged 18 to 44 (78.8%).
  - Quota Sample respondents aged 65+ (57.3%) are significantly more likely to identify garden fertilizer as being hazardous and require special disposal or recycling as compared to respondents aged 18 to 44 (38.0%).
  - Quota Sample respondents aged 65+ (92.7%) and 45 to 64 (84.7%) are significantly more likely to identify insecticides, pesticides or herbicides as being hazardous and require special disposal or recycling as compared to respondents aged 18 to 44 (64.2%).
  - Quota Sample respondents aged 65+ (80.5%) are significantly more likely to identify compact fluorescent light bulbs as being hazardous and require special disposal or recycling as compared to respondents aged 18 to 44 (60.3%).
  - Male Quota Sample respondents (54.3%) are significantly more likely to identify cleaners as being hazardous and require special disposal or recycling as compared to female respondents (45.1%).
  - Quota Sample respondents that own their home (50.4%) are significantly more likely to identify garden fertilizer as being hazardous and require special disposal or recycling as compared to respondents that rent their home (39.0%).
  - Quota Sample respondents that own their home (71.4%) are significantly more likely to identify compact fluorescent light bulbs as being hazardous and require special disposal or recycling as compared to respondents that rent their home (59.3%).

Please tell us if you routinely have any of the following items in your home or on your property.

	Aggregate N=1068	Quota Sample N=405	DNR Sample N=663
Batteries	Yes – 96.5% No – 3.2% Not sure – 0.3%	Yes – 94.8% No – 4.4% Not sure – 0.7%	Yes – 97.6% No – 2.4% Not sure – 0.0%
Cleaners	Yes – 97.4% No – 2.4% Not sure – 0.2%	Yes – 96.8% No – 2.7% Not sure – 0.5%	Yes – 97.7% No – 2.3% Not sure – 0.0%
Aerosols	Yes – 76.1% No – 20.3% Not sure – 3.6%	Yes – 67.9% No - 26.7% Not sure – 5.4%	Yes – 81.1% No – 16.4% Not sure – 2.4%
Automotive products	Yes – 78.6% No – 20.2% Not sure – 1.2%	Yes – 67.9% No – 29.6% Not sure – 2.5%	Yes – 85.1% No – 14.5% Not sure – 0.5%
Garden fertilizer	Yes – 50.0% No – 47.9% Not sure – 2.1%	Yes – 37.5% No – 59.0% Not sure – 3.5%	Yes – 57.6% No – 41.2% Not sure – 1.2%
Insecticide, pesticide or herbicide	Yes – 73.4% No – 24.9% Not sure – 1.7%	Yes – 63.2% No – 33.8% Not sure – 3.0%	Yes – 79.6% No – 19.5% Not sure – 0.9%
Shampoos/lotions	Yes – 97.8% No – 1.8% Not sure – 0.4%	Yes – 96.8% No – 2.5% Not sure – 0.7%	Yes – 98.5% No – 1.4% Not sure – 0.2%
Compact fluorescent light bulbs	Yes – 69.3% No – 25.4% Not sure – 5.3%	Yes – 63.0% No – 29.4% Not sure – 7.7%	Yes – 73.2% No – 22.9% Not sure – 3.9%

- Aggregately, respondents reported having shampoo/lotions (97.8%), cleaners (97.4%) and batteries (96.5%) in their home or on their property most often. Other items typically found in respondents' homes include automotive products (78.6%), aerosols (76.1%), insecticides, pesticides and herbicides (73.4%) and compact fluorescent light bulbs (69.3%). Half of respondents indicated garden fertilizer.
- Among the two sample groups, shampoos/lotions, cleaners and batteries were most frequently reported; however, DNR Sample respondents reported aerosols, automotive products and compact fluorescent light bulbs with more frequency than the Quota Sample.
- The following statistically significant differences were detected between the Quota and DNR samples and demographic groups:
    - DNR Sample respondents are significantly more likely to report routinely having aerosol cans in their home or on their property (81.1%) as compared to Quota Sample respondents (67.9%).
    - DNR Sample respondents are significantly more likely to report routinely having automotive products in their home or on their property (85.1%) as compared to Quota Sample respondents (67.9%).
    - DNR Sample respondents are significantly more likely to report routinely having garden fertilizer in their home or on their property (79.6%) as compared to Quota Sample respondents (63.2%).

  - DNR Sample respondents are significantly more likely to report routinely having insecticide, pesticide or herbicide in their home or on their property (81.1%) as compared to Quota Sample respondents (67.9%).
  - DNR Sample respondents are significantly more likely to report routinely having compact fluorescent light bulbs in their home or on their property (73.2%) as compared to Quota Sample respondents (63.0%).

- The following statistically significant differences were detected among Quota Sample respondents:
  - Quota Sample respondents aged 45 to 64 (81.3%) and 65+ (80.5%) are significantly more likely to report having aerosols in their home or on their property as compared to respondents aged 18 to 44 (51.4%).
  - Quota Sample respondents aged 45 to 64 (78.5%) are significantly more likely to report having automotive products in their home or on their property as compared to respondents aged 18 to 44 (60.9%).
  - Quota Sample respondents aged 65+ (53.7%) are significantly more likely to report having garden fertilizer in their home or on their property as compared to respondents aged 18 to 44 (29.1%).
  - Quota Sample respondents aged 45 to 64 (70.1%) and 65+ (76.8%) are significantly more likely to report having insecticides, pesticides or herbicides in their home or on their property as compared to respondents aged 18 to 44 (51.4%).
  - Male Quota Sample respondents (74.3%) are significantly more likely to report having aerosols in their home or on their property as compared to female respondents (63.4%).
  - Male Quota Sample respondents (74.9%) are significantly more likely to report having automotive products in their home or on their property as compared to female respondents (62.9%).
  - Male Quota Sample respondents (46.3%) are significantly more likely to report having garden fertilizer in their home or on their property as compared to female respondents (31.3%).
  - Quota Sample respondents that own their home (74.6%) are significantly more likely to report having automotive products in their home or on their property as compared to respondents that rent their home (53.4%).
  - Quota Sample respondents that own their home (46.1%) are significantly more likely to report having garden fertilizer in their home or on their property as compared to respondents that rent their home (18.6%).
  - Quota Sample respondents that own their home (71.8%) are significantly more likely to report having insecticides, pesticides and herbicides in their home or on their property as compared to respondents that rent their home (44.9%).
- The following statistically significant differences were detected among DNR Sample respondents:
  - DNR Sample respondents in mostly rural counties (89.8%) are significantly more likely to report having aerosols in their home or on their property as compared to respondents in mostly urban counties (78.6%).
  - DNR Sample respondents in mostly rural counties (92.9%) are significantly more likely to report having automotive products in their home or on their property as compared to respondents in mostly urban counties (81.8%).
  - DNR Sample respondents aged 65+ (69.7%) are significantly more likely to report having garden fertilizer in their home or on their property as compared to respondents 18 to 44 years old (52.7%).

- DNR Sample respondents with some college or an associate degree (90.3%) and a bachelor's degree (82.6%) are significantly more likely to report having aerosols in their home or on their property as compared to respondents with a graduate or doctorate degree (69.7%).

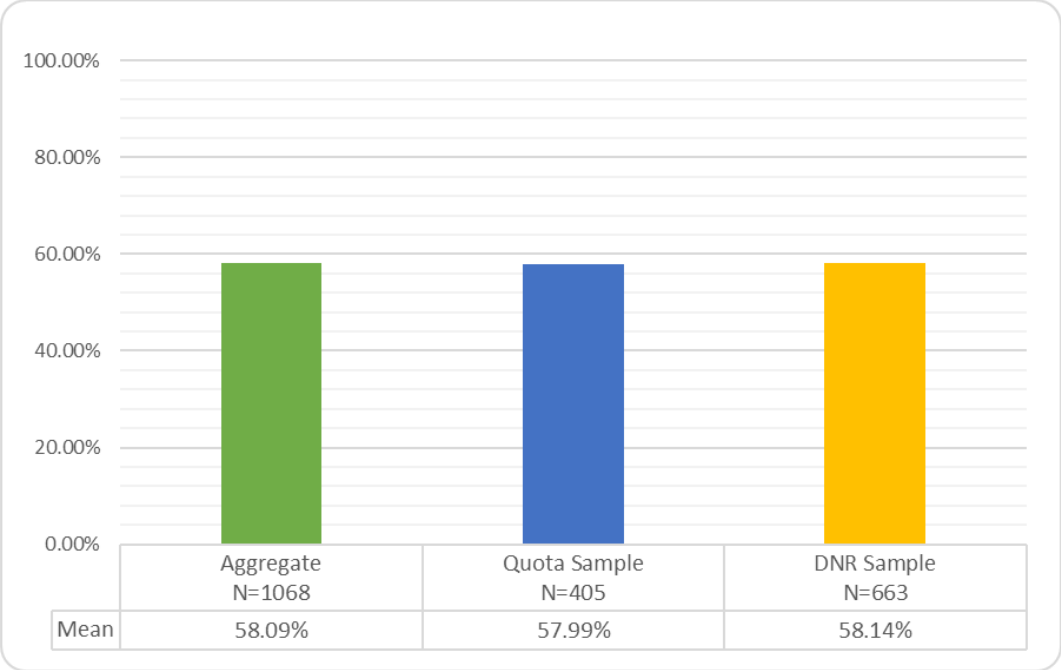
Please tell us whether or not you routinely dispose of these items using your regular curb-side garbage and recycling services.

	Aggregate	Quota Sample	DNR Sample
Batteries	Yes – 40.6% No – 56.2% Not sure – 3.2% N=1031	Yes – 44.5% No – 51.6% Not sure – 3.9% N=384	Yes – 38.3% No – 58.9% Not sure – 2.8% N=647
Cleaners	Yes – 17.3% No – 78.4% Not sure – 4.3% N=1040	Yes – 19.6% No – 75.5% Not sure – 4.8% N=392	Yes – 15.9% No – 80.1% Not sure – 4.0% N=648
Aerosols	Yes – 20.8% No – 76.4% Not sure – 2.9% N=813	Yes – 24.0% No – 72.7% Not sure – 3.3% N=275	Yes – 19.1% No – 78.3% Not sure – 2.6% N=538
Automotive products	Yes – 64.5% No – 33.0% Not sure – 2.5% N=839	Yes – 62.9% No – 33.8% Not sure – 3.3% N=275	Yes – 65.2% No – 32.6% Not sure – 2.1% N=564
Garden fertilizer	Yes – 22.3% No – 71.2% Not sure – 6.6% N=534	Yes – 27.0% No – 65.1% Not sure – 7.9% N=152	Yes – 20.4% No – 73.6% Not sure – 6.0% N=382
Insecticide, pesticide or herbicide	Yes – 29.7% No – 66.3% Not sure – 4.0% N=784	Yes – 32.0% No – 62.5% Not sure – 5.5% N=256	Yes – 28.6% No – 68.2% Not sure – 3.2% N=528
Shampoos/lotions	Yes – 7.0% No – 90.7% Not sure – 2.3% N=1045	Yes – 10.2% No – 87.0% Not sure – 2.8% N=392	Yes – 5.1% No – 93.0% Not sure – 2.0% N=653
Compact fluorescent light bulbs	Yes – 43.2% No – 52.8% Not sure – 3.9% N=740	Yes – 41.2% No – 52.2% Not sure – 6.7% N=255	Yes – 44.3% No – 53.2% Not sure – 2.5% N=485

- Aggregately, respondents most frequently reported routine disposal of automotive products (64.5%) followed by compact fluorescent light bulbs (43.2%) and batteries (40.6%) using regular curb side garbage or recycling services.
- Both sample groups reported high routine disposal of automotive products and moderate disposal of compact fluorescent light bulbs and batteries. However, Quota Sample respondents reported a high level of frequency for the disposal of garden fertilizers, aerosols, cleaners and shampoos/lotions as compared to the DNR Sample.
- The following statistically significant difference was detected between the Quota and DNR samples and demographic groups:
    - Quota Sample respondents are significantly more likely to report routinely disposing of shampoos/lotions by delivering them to a hazardous materials facility or recycling center (10.2%) as compared to DNR Sample respondents (5.1%).

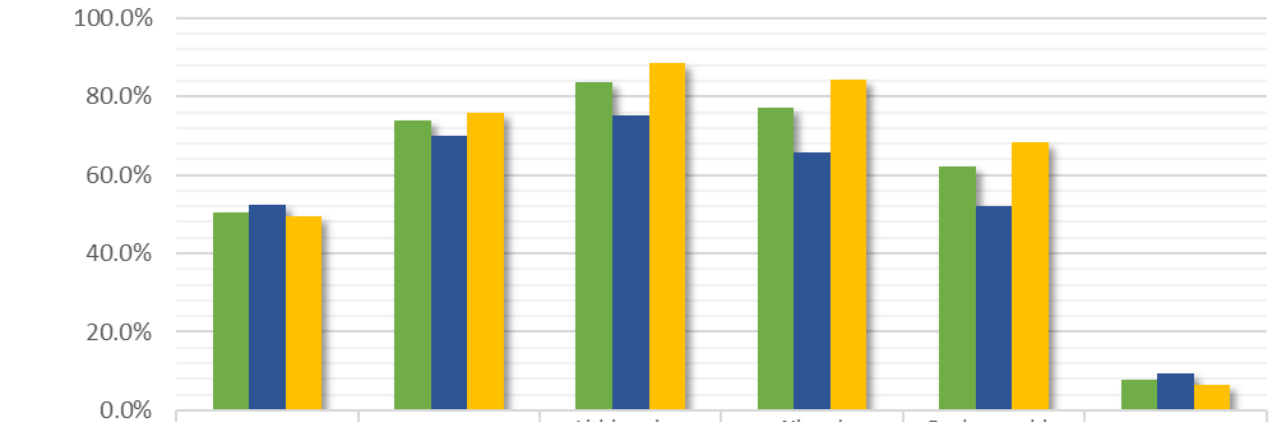
- The following statistically significant differences were detected among Quota Sample respondents:
    - Quota Sample respondents aged 65+ (62.7%) are significantly more likely to report routine disposal of compact fluorescent light bulbs as compared to respondents aged 18 to 44 (35.2%) and 45 to 64 (36.5%).
    - Male Quota Sample respondents (53.9%) are significantly more likely to report routine disposal of batteries as compared to female respondents (36.2%).
    - Quota Sample respondents that own their home (47.6%) are significantly more likely to report routine disposal of compact fluorescent light bulbs as compared to respondents that rent their home (25.0%).
- The following statistically significant differences were detected among DNR Sample respondents:
    - DNR Sample respondents in mostly urban counties (51.4%) are significantly more likely to report routine disposal of compact fluorescent light bulbs as compared to respondents in mostly rural counties (39.5%).
    - DNR Sample respondents aged 45 to 64 (53.1%) and 65+ (58.6%) are significantly more likely to report routine disposal of batteries by delivering them to a hazardous materials facility or recycling center as compared to 18 to 44 year olds (26.9%).
    - DNR Sample respondents aged 45 to 64 (34.2%) and 65+ (42.9%) are significantly more likely to report routine disposal of insecticides, pesticides and herbicides by delivering them to a hazardous materials facility or recycling center as compared to 18 to 44 year olds (22.5%).
    - DNR Sample respondents aged 45 to 64 (54.5%) and 65+ (57.0%) are significantly more likely to report routine disposal of compact fluorescent light bulbs by delivering them to a hazardous materials facility or recycling center as compared to 18 to 44 year olds (36.7%).
    - DNR Sample respondents with a graduate or doctorate degree (61.5%) are significantly more likely to report routine disposal of compact fluorescent light bulbs by delivering them to a hazardous materials facility or recycling center as compared to respondents with some college or an associate degree (42.4%) or a bachelor's degree (40.4%).

How would you describe your level of confidence in knowing where to take hazardous household materials for proper disposal and/or recycling? *(Please mark your level of confidence using a scale of 0 to 100, where 0 is not at all confident and 100 is total confidence.)*



- Aggregately, respondents reported being 58.09% confident in knowing where to take hazardous household materials for proper disposal and/or recycling. Almost no differences can be noted for the Quota Sample (57.99%) and the DNR Sample (58.14%).
- No statistically significant differences were detected between the Quota and DNR samples and demographic groups.
- The following statistically significant difference was detected among Quota Sample respondents:
    - Quota Sample respondents aged 65+ (66.77%) are significantly more confident in knowing where to take hazardous household materials for proper disposal and/or recycling as compared to respondents aged 18 to 44 (52.64%).
    - Male Quota Sample respondents (65.23%) are significantly more confident in knowing where to take hazardous household materials for proper disposal and/or recycling as compared to female respondents (52.22%).
- The following statistically significant difference was detected among DNR Sample respondents:
    - DNR Sample respondents aged 45 to 64 (65.82%) and 65+ (70.44%) are significantly more confident in knowing where to take hazardous household materials for proper disposal and/or recycling as compared to respondents aged 18 to 44 (51.96%).
    - DNR Sample respondents with a graduate or doctorate degree (67.07%) are significantly more confident in knowing where to take hazardous household materials for proper disposal and/or recycling as compared to respondents with some college or an associate degree (58.23%).

Which of the following batteries should be recycled at a special location because they are considered hazardous? *(Please mark all that apply)*

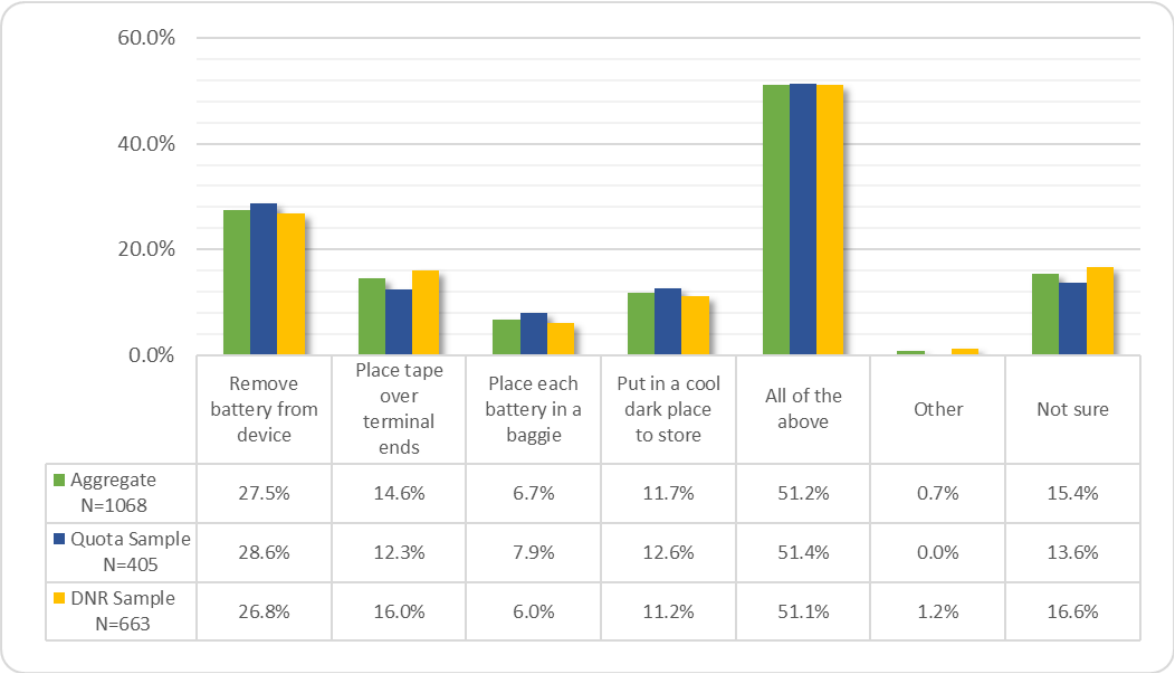


	Alkaline batteries	Lithium button-type batteries	Lithium ion rechargeable batteries	Ni-cad rechargeable batteries	Rechargeable AA, AAA, etc. batteries	None of these
Aggregate N=1068	50.6%	73.8%	83.6%	77.2%	62.3%	7.7%
Quota Sample N=405	52.3%	70.1%	75.3%	65.7%	52.1%	9.4%
DNR Sample N=663	49.5%	76.0%	88.7%	84.3%	68.5%	6.6%

- Aggregately, respondents reported most often that lithium ion rechargeable batteries (88.7%), ni-cad rechargeable batteries (77.2%) and lithium button-type batteries (73.8%) should be recycled at a special location because they are considered hazardous. Additionally, nearly two-thirds indicated rechargeable AA and AAA and just over one-half think alkaline batteries should be recycled at a special location. Only 7.7% thought none of the battery types required special recycling.
- Both of the sample groups followed the aggregate trend; however, DNR respondents reported lithium-button-type batteries, lithium ion rechargeable batteries, ni-cad rechargeable batteries and rechargeable AA and AAA batteries as needing to be recycled at a special location with greater frequency than Quota Sample respondents.
- The following statistically significant differences were detected between the Quota and DNR samples and demographic groups:
    - DNR Sample respondents are significantly more likely to report lithium ion rechargeable batteries should be recycled at a special location (88.7%) as compared to Quota Sample respondents (75.3%).
    - DNR Sample respondents are significantly more likely to report ni-cad rechargeable batteries should be recycled at a special location (84.3%) as compared to Quota Sample respondents (65.7%).
    - DNR Sample respondents are significantly more likely to report rechargeable AA or AAA batteries should be recycled at a special location (68.5%) as compared to Quota Sample respondents (52.1%).

- The following statistically significant difference was detected among Quota Sample respondents:
    - Quota Sample respondents aged 45 to 64 (72.2%) and 65+ (70.7%) are significantly more likely to report ni-cad rechargeable batteries should be recycled at a special location as compared to respondents aged 18 to 44 (58.1%).
- The following statistically significant difference was detected among DNR Sample respondents:
    - DNR Sample respondents in mostly rural counties (55.1%) are significantly more likely to identify alkaline batteries should be recycled at a special location as compared to respondents in mostly urban counties (44.5%).

Some batteries pose a fire risk if not handled properly. Which of the following tasks can be performed to properly prepare batteries for recycling to minimize fire risk? *(Please mark all that apply)*

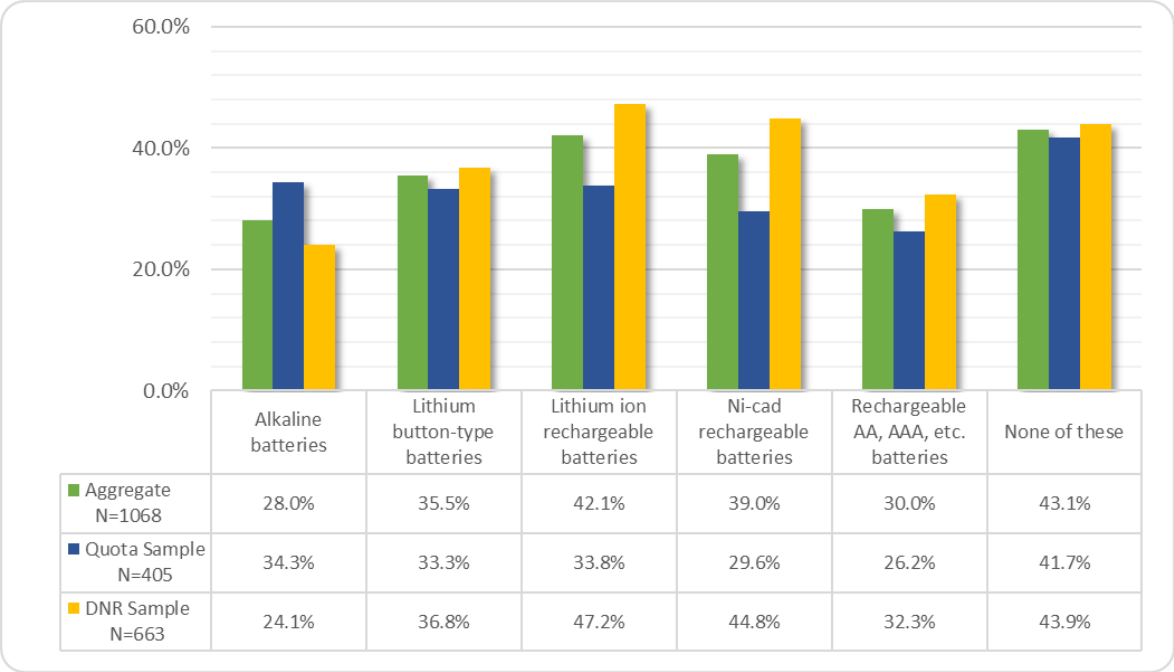


	Remove battery from device	Place tape over terminal ends	Place each battery in a baggie	Put in a cool dark place to store	All of the above	Other	Not sure
Aggregate N=1068	27.5%	14.6%	6.7%	11.7%	51.2%	0.7%	15.4%
Quota Sample N=405	28.6%	12.3%	7.9%	12.6%	51.4%	0.0%	13.6%
DNR Sample N=663	26.8%	16.0%	6.0%	11.2%	51.1%	1.2%	16.6%

- Just over half of the aggregate respondents indicated all of the given tasks should be performed to properly prepare batteries for recycling to minimize fire risk. Other frequent responses included removing the battery from the device (27.5%) and placing tape over the terminal ends (14.6%); however, 15.4% reported not being sure which of the tasks should be performed.
- The sample groups followed aggregate trends with half of each group reporting all tasks should be performed followed by removing the battery from a device.
- Other tasks mentioned included:
  - All of the above is overkill, but work. There are other methods.
  - Careful storage in a plastic container with inert fill to prevent ignition or movement.
  - Clear non-conductive tape over terminals/contacts.
  - I don't store them.
  - Apathy is the real problem, not ignorance. We need to teach people to care more than we need to teach people how to do it.
  - Fire proof containers.
- No statistically significant differences were detected between the Quota and DNR samples and demographic groups.
- The following statistically significant differences were detected among Quota Sample respondents:
  - Quota Sample respondents aged 18 to 44 (64.7%) are significantly more likely to report batteries should be put in a cool dark place to store for transport as compared to respondents aged 45 to 64 (23.5%) and 65+ (11.8%).

  - Quota Sample respondents aged 45 to 64 (21.5%) and 65+ (17.1%) are significantly more likely to report being unsure about how to properly prepare batteries for recycling to minimize fire risk as compared to respondents aged 18 to 44 (5.6%).
  - Female Quota Sample respondents (17.4%) are significantly more likely to report being not sure which tasks could be performed to properly prepare batteries for recycling to minimize fire risk as compared to male respondents (8.6%).
  - Quota Sample respondents that rent their home (57.6%) are significantly more likely to report all of the given tasks could be performed to properly prepare batteries for recycling to minimize fire risk as compared to respondents that own their home (47.9%).
- The following statistically significant differences were detected among DNR Sample respondents:
  - DNR Sample respondents aged 65+ (29.0%) are significantly more likely to report being not sure which tasks could be performed to properly prepare batteries for recycling to minimize fire risk as compared to respondents aged 18 to 44 (15.8%) and 45 to 64 (13.4%).
  - DNR Sample respondents with some college or an associate degree (30.9%) and a graduate or doctorate degree (30.1%) are significantly more likely to report current recycling of alkaline batteries as compared to respondents with a bachelor's degree (19.0%).
  - DNR Sample respondents with a graduate or doctorate degree (52.9%) are significantly more likely to report current recycling of lithium button-type batteries as compared to respondents with a bachelor's degree (33.2%) and some college or an associate degree (38.1%).

Which of the following batteries do you currently recycle? *(Please mark all that apply)*

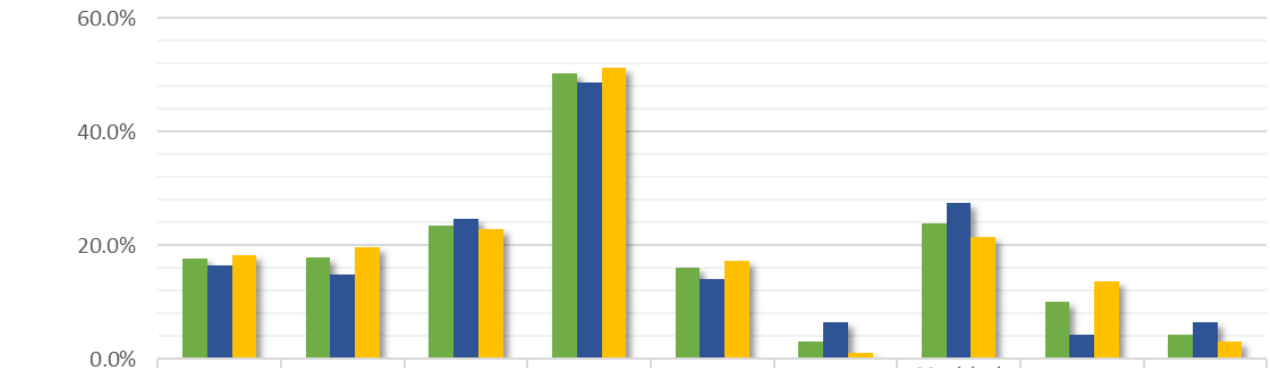


	Alkaline batteries	Lithium button-type batteries	Lithium ion rechargeable batteries	Ni-cad rechargeable batteries	Rechargeable AA, AAA, etc. batteries	None of these
Aggregate N=1068	28.0%	35.5%	42.1%	39.0%	30.0%	43.1%
Quota Sample N=405	34.3%	33.3%	33.8%	29.6%	26.2%	41.7%
DNR Sample N=663	24.1%	36.8%	47.2%	44.8%	32.3%	43.9%

- When asked to identify which batteries they currently recycle, 43.1% reported they recycle none. However, 42.1% reported they currently recycle lithium ion rechargeable batteries, 39.0% recycle ni-cad rechargeable batteries and 35.5% recycle lithium button-type batteries.
- Among the sample groups, DNR Sample respondents reported much higher current recycling frequency for lithium ion rechargeable batteries, ni-cad rechargeable batteries and rechargeable AA and AAA batteries as compared to Quota Sample respondents.
- The following statistically significant differences were detected between the Quota and DNR samples and demographic groups:
    - Quota Sample respondents are significantly more likely to report currently recycling alkaline batteries (34.3%) as compared to DNR Sample respondents (24.1%).
    - DNR Sample respondents are significantly more likely to report currently recycling lithium ion rechargeable batteries (47.2%) as compared to Quota Sample respondents (33.8%).
    - DNR Sample respondents are significantly more likely to report currently recycling ni-cad rechargeable batteries (44.8%) as compared to Quota Sample respondents (29.6%).
    - DNR Sample respondents are significantly more likely to report currently recycling rechargeable AA or AAA batteries (32.3%) as compared to Quota Sample respondents (26.2%).
- The following statistically significant differences were detected among Quota Sample respondents:
    - Quota Sample respondents in mostly urban (32.9%) and mostly rural counties (43.5%) are significantly more likely to currently recycle alkaline batteries than respondents in completely rural counties (18.3%).
    - Quota Sample respondents aged 45 to 64 (50.0%) are significantly more likely to report no current recycling of any of the given items as compared to respondents aged 18 to 44 (36.3%) and 65+ (39.0%).

  - Male Quota Sample respondents (39.4%) are significantly more likely to currently recycle lithium button-type batteries as compared to female respondents (29.0%).
  - Male Quota Sample respondents (40.0%) are significantly more likely to currently recycle lithium ion rechargeable batteries as compared to female respondents (28.6%).
  - Male Quota Sample respondents (36.0%) are significantly more likely to currently recycle ni-cad rechargeable batteries as compared to female respondents (24.1%).
  - Male Quota Sample respondents (34.3%) are significantly more likely to currently recycle rechargeable AA or AAA batteries as compared to female respondents (20.1%).
  - Female Quota Sample respondents (47.3%) are significantly more likely to report no current recycling of any of the given items as compared to male respondents (34.9%).
- The following statistically significant differences were detected among DNR Sample respondents:
  - DNR Sample respondents in mostly urban counties (42.8%) are significantly more likely to report current recycling of lithium button-type batteries as compared to respondents in mostly rural counties (34.5%).
  - DNR Sample respondents in mostly urban counties (51.7%) are significantly more likely to report current recycling of lithium ion rechargeable batteries as compared to respondents in mostly rural counties (45.7%).
  - DNR Sample respondents aged 45 to 64 (45.3%) and 65+ (47.0%) are significantly more likely to report current recycling of lithium button-type batteries as compared to respondents 18 to 44 year old (30.5%).
  - DNR Sample respondents aged 45 to 64 (51.7%) and 65+ (53.0%) are significantly more likely to report current recycling of ni-cad rechargeable batteries as compared to respondents 18 to 44 year old (39.6%).
  - DNR Sample respondents aged 45 to 64 (40.9%) are significantly more likely to report current recycling of rechargeable AA or AAA batteries as compared to respondents 18 to 44 year old (28.5%) and 65+ year olds (29.0%).
  - DNR Sample respondents aged 18 to 44 (51.0%) are significantly more likely to report no current recycling of any of the given items as compared to respondents aged 45 to 64 (33.2%) and 65+ (34.8%).

Where do you typically go to recycle batteries? *(Please mark all that apply)*

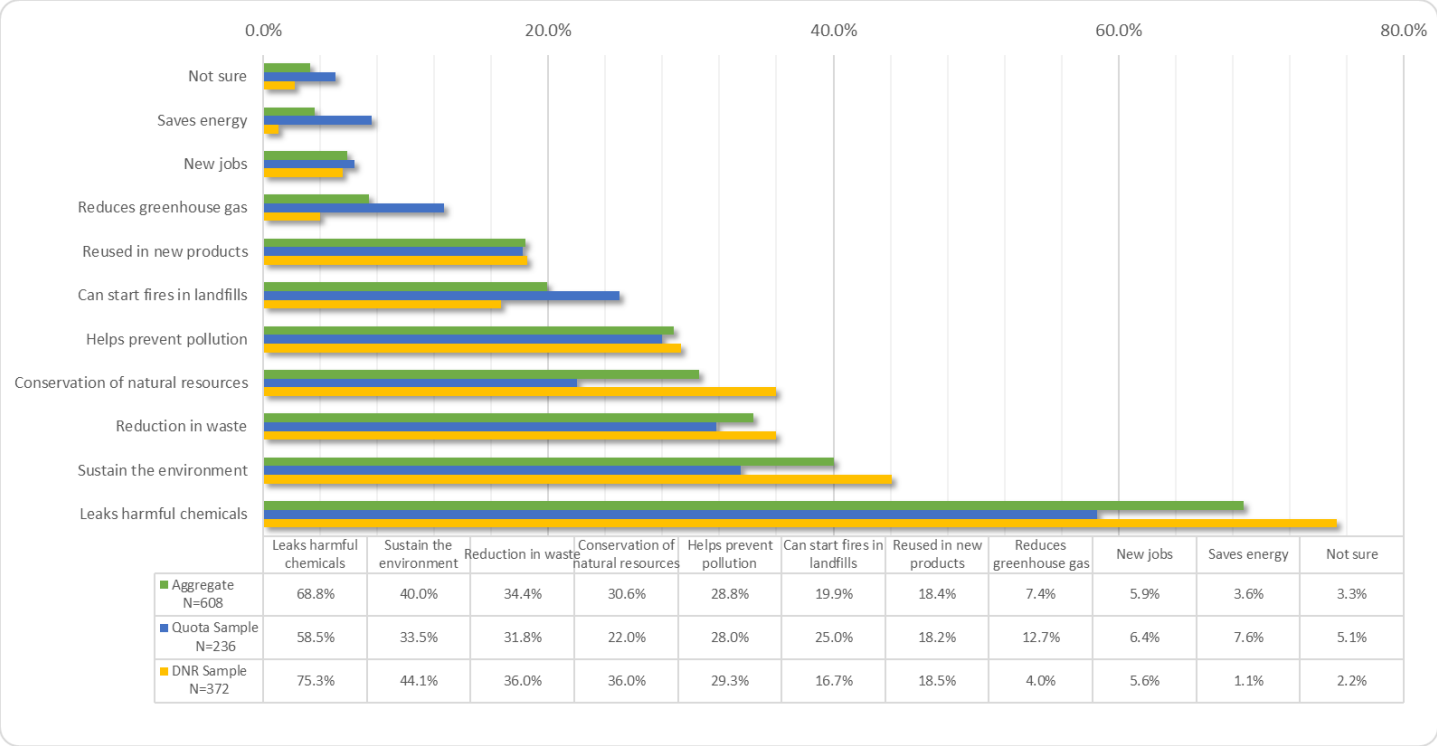


	Hardware store	Technology store	Battery Store	Waste mgt. agency	Auto parts store	Fire dept.	Municipal recycling center	Other	Not sure
Aggregate N=608	17.6%	17.8%	23.5%	50.3%	16.0%	3.1%	23.8%	10.0%	4.3%
Quota Sample N=236	16.5%	14.8%	24.6%	48.7%	14.0%	6.4%	27.5%	4.2%	6.4%
DNR Sample N=372	18.3%	19.6%	22.8%	51.3%	17.2%	1.1%	21.5%	13.7%	3.0%

- Aggregately, respondents reported recycling batteries most often at waste management agencies (50.3%) followed by municipal recycling centers (23.8%) and battery stores (23.5%). Only 3.1% recycle batteries at fire departments and 4.3% are not sure.
- The sample groups generally followed the aggregate trend; however, Quota Sample respondents reported recycling batteries at fire departments (6.4%) more frequently than DNR Sample respondents (1.1%).
- Other locations reported for battery recycling included:
  - Workplace – 25
  - Scrap metal yard – 5
  - Special city or county pick-up/drop-off days – 5
  - Stockpile at home until another location can be found – 4
  - Library – 2
  - Ag dealership – 1
  - Auto repair shop – 1
  - Church – 1
  - City hall – 1
  - Hospital – 1
  - Out of state – 1
  - TV station – 1
  - University – 1
- No statistically significant differences were detected between the Quota and DNR samples and demographic groups.

- The following statistically significant differences were detected among Quota Sample respondents:
    - Quota Sample respondents in mostly urban counties (29.3%) are significantly more likely to recycle batteries at a battery store as compared to respondents in mostly rural (11.8%) and completely rural (9.1%) counties.
    - Quota Sample respondents aged 18 to 44 (23.7%) are significantly more likely to recycle batteries at a hardware store as compared to respondents aged 45 to 64 (8.3%) and 65+ (12.0%).
    - Quota Sample respondents aged 45 to 64 (23.7%) are significantly more likely to recycle batteries at a waste management facility as compared to respondents aged 18 to 44 (41.2%) and 65+ (48.0%).
    - Quota Sample respondents aged 65+ (42.0%) are significantly more likely to recycle batteries at a municipal recycling center as compared to respondents aged 18 to 44 (16.7%).
    - Quota Sample respondents that rent their home (23.4%) are significantly more likely to recycle batteries at a technology store as compared to respondents that own their home (11.8%).
    - Quota Sample respondents that own their home (31.8%) are significantly more likely to recycle batteries at a municipal recycling center as compared to respondents that rent their home (17.2%).
- The following statistically significant differences were detected among DNR Sample respondents:
    - DNR Sample respondents in mostly urban counties (27.4%) are significantly more likely to recycle batteries at a battery store as compared to respondents in mostly rural counties (12.8%).
    - DNR Sample respondents in mostly rural counties (23.9%) are significantly more likely to recycle batteries at an auto parts store as compared to respondents in mostly urban counties (12.8%).
    - DNR Sample respondents aged 45 to 64 (57.4%) and 65+ (61.6%) are significantly more likely to recycle batteries at a waste management agency as compared to respondents aged 18 to 44 (44.5%).
    - DNR Sample respondents aged 45 to 64 (27.7%) and 65+ (27.9%) are significantly more likely to recycle batteries at a municipal recycling center as compared to respondents aged 18 to 44 (15.8%).

What are the main reasons you recycle batteries? *(Select up to 3 options)*



	Leaks harmful chemicals	Sustain the environment	Reduction in waste	Conservation of natural resources	Helps prevent pollution	Can start fires in landfills	Reused in new products	Reduces greenhouse gas	New jobs	Saves energy	Not sure
Aggregate N=608	68.8%	40.0%	34.4%	30.6%	28.8%	19.9%	18.4%	7.4%	5.9%	3.6%	3.3%
Quota Sample N=236	58.5%	33.5%	31.8%	22.0%	28.0%	25.0%	18.2%	12.7%	6.4%	7.6%	5.1%
DNR Sample N=372	75.3%	44.1%	36.0%	36.0%	29.3%	16.7%	18.5%	4.0%	5.6%	1.1%	2.2%

- Aggregately, respondents cited leaking harmful chemicals (68.8%) most often followed by sustaining the environment (40.0%), reduction in waste (34.4%), conservation of natural resources (30.6%) and helping prevent pollution (28.8%) as being the main reason they recycle batteries. Saving energy (3.6%), new jobs (5.9%) and reducing greenhouse gas (7.4%) were reported least.
- Both sample groups generally followed aggregate trends, but some differences can be noted. More specifically, DNR Sample respondents reported their main reason for recycling as being leaks harmful chemicals, sustaining the environment and conservation of natural resources with greater frequency as compared to Quota Sample respondents. Conversely, Quota Sample respondents cited can start fires, reduces greenhouse gas and saves energy more often as compared to DNR Sample respondents.
- No statistically significant differences were detected between the Quota and DNR samples and demographic groups.
- The following statistically significant differences were detected among Quota Sample respondents:
    - Quota Sample respondents in completely rural counties (36.4%) are significantly more likely to report reducing greenhouse gas emissions that contribute to global climate change as a main reason to recycle batteries as compared to respondents in mostly urban (10.9%) and mostly rural (13.7%).
    - Quota Sample respondents aged 65+ (72.0%) are significantly more likely to report the leaking harmful chemicals into the ground and contaminating soil and water as a main reason to recycle batteries as compared to respondents aged 18 to 44 (50.9%).

- Quota Sample respondents aged 18 to 44 (11.4%) are significantly more likely to report saving energy as a main reason to recycle batteries as compared to respondents aged 65+ (0.0%).
- Male Quota Sample respondents (26.3%) are significantly more likely to report the conservation of natural resources as a main reason to recycle batteries as compared to female respondents (16.1%).
- Quota Sample respondents that rent their home (14.1%) are significantly more likely to report the creation of new, well-paying jobs in the recycling and manufacturing industries as a main reason to recycle batteries as compared to respondents that own their home (3.5%).

- The following statistically significant difference was detected among DNR Sample respondents:
  - DNR Sample respondents in mostly rural counties (26.6%) are significantly more likely to report reuse in new products as a main reason to recycle batteries as compared to respondents in mostly urban (15.0%).
  - DNR Sample respondents aged 18 to 44 (18.5%) and 45 to 64 (18.7%) are significantly more likely to report starting fires in landfills as a main reason to recycle batteries as compared to respondents aged 65+ (4.7%).
  - DNR Sample respondents aged 18 to 44 (39.0%) and 45 to 64 (37.4%) are significantly more likely to report conservation of natural resources as a main reason to recycle batteries as compared to respondents aged 65+ (20.9%).

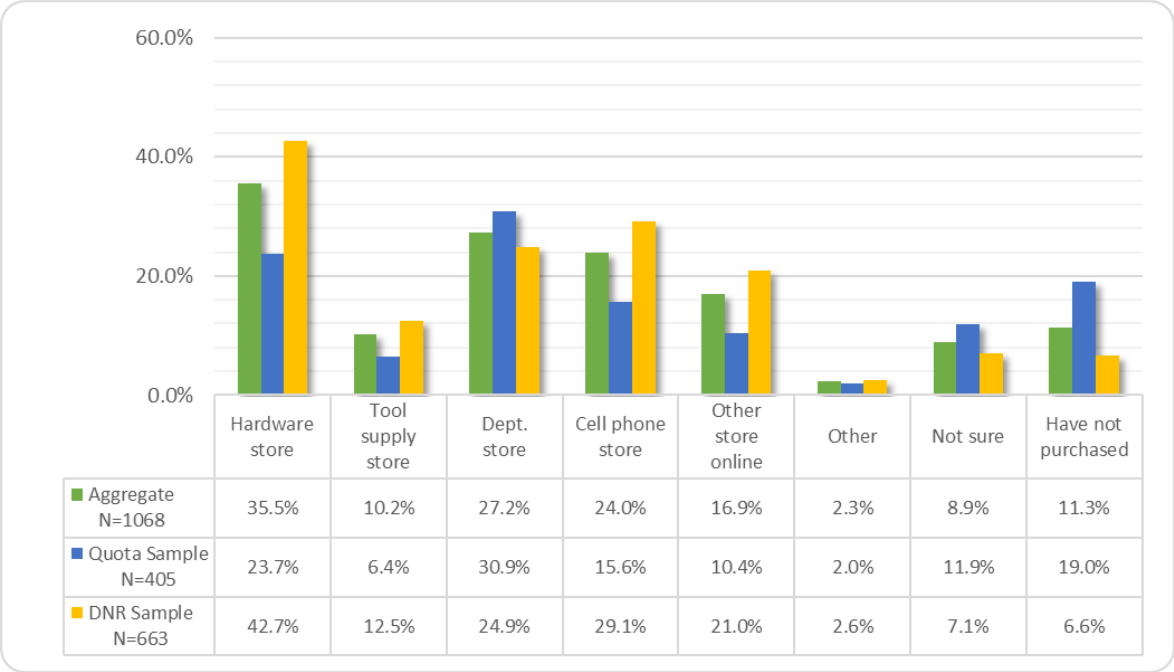
What are main reasons that prevent you from separately disposing of household hazardous materials, including recycling batteries? *(Select up to 3 options)*

	Don't know where	Location inconvenient	Hours inconvenient	No good reason	Don't want to store them	Other	No deposit or refund	Not sure	Don't want them in my car/truck
Aggregate N=460	58.7%	37.6%	18.7%	15.9%	12.6%	11.1%	10.0%	7.2%	3.0%
Quota Sample N=169	47.3%	36.7%	14.8%	17.8%	11.2%	11.2%	10.1%	12.4%	2.4%
DNR Sample N=291	65.3%	38.1%	21.0%	14.8%	13.4%	11.0%	10.0%	4.1%	3.4%

- Respondents reporting they do not currently recycle hazardous household materials, including batteries were asked to identify the main reason preventing them from doing so. Aggregately, not knowing where (58.7%) and an inconvenient location (37.6%) were most often identified followed by inconvenient hours (18.7%), no good reason (15.9%) and not wanting to store them (12.6%).
- The two sample groups again generally followed aggregate trends; however, differences can be noted. More specifically, DNR Sample respondents reported not knowing where and inconvenient hours with greater frequency than Quota Sample respondents. Conversely, greater percentages of Quota Sample respondents indicated no good reason and being not sure as their main reason preventing them from recycling.
- Other reasons provided by respondents included:
    - Didn't know they should be recycled – 10
    - No recycling programs in my area – 8
    - Don't use very many batteries – 6
    - No longer accepted at my recycling location – 4
    - Recycling costs – 4
    - Don't care to recycle – 3
    - Disabled, unable to drive/travel – 2
    - Don't want to drive to multiple recycling locations or long distance – 2

  - Not allowed in regular garbage/recycling – 2
  - New to the area – 1
  - Store them and forgot to recycle – 1
  - Too cumbersome – 1
  - Usually burn them – 1
- No statistically significant differences were detected between the Quota and DNR samples and demographic groups.
- The following statistically significant difference was detected among Quota Sample respondents:
  - Quota Sample respondents aged 18 to 44 (61.5%) are significantly more likely to report not knowing where to safely dispose or recycle of household hazardous materials, including recycling batteries as being a main reason preventing separate disposal as compared to respondents aged 45 to 64 (36.1%) and 65+ (43.8%).

Where did you last purchase a product with a rechargeable battery (e.g., Ni-cad or lithium ion)? *(Please mark all that apply)*



	Hardware store	Tool supply store	Dept. store	Cell phone store	Other store online	Other	Not sure	Have not purchased
Aggregate N=1068	35.5%	10.2%	27.2%	24.0%	16.9%	2.3%	8.9%	11.3%
Quota Sample N=405	23.7%	6.4%	30.9%	15.6%	10.4%	2.0%	11.9%	19.0%
DNR Sample N=663	42.7%	12.5%	24.9%	29.1%	21.0%	2.6%	7.1%	6.6%

- Aggregately, 35.5% of respondents last purchased a product with a rechargeable battery from a hardware store, department store (27.2%) or cell phone store (24.0%). However, nearly 20% reported being unsure (8.9%) or not having purchased any (11.3%).
- While aggregate trends exist among the sample groups, several differences can be noted. Specifically, DNR Sample respondents reported purchases from hardware stores, cell phone stores and other stores online with greater frequency than the Quota sample. Conversely, the Quota Sample respondents cited their last purchases as being from a department store more frequency. Additionally, a larger percentage of Quota Sample respondents reporting they have not purchased a product with a rechargeable battery.
- Other locations mentioned included:
    - Battery store – 6
    - Automotive store – 3
    - Dollar General – 2
    - Other family members buys batteries for our home – 1
    - Best Buy – 1
    - Bike store – 1
    - Hobby store – 1
    - Home Depot – 1
    - I don’t remember – 1
    - Office supply store – 1
    - Rummage sale – 1
    - Vape shop – 1

- No statistically significant differences were detected between the Quota and DNR samples and demographic groups.
- The following statistically significant differences were detected among Quota Sample respondents:
    - Quota Sample respondents aged 18 to 44 (40.8%) are significantly more likely to report making their last rechargeable battery purchase at a department store as compared to respondents aged 65+ (14.6%).
    - Quota Sample respondents aged 45 to 64 (22.9%) and 65+ (26.8%) are significantly more likely to report making no rechargeable battery purchases as compared to respondents aged 18 to 44 (12.3%).
    - Quota Sample respondents that own their home (26.8%) are significantly more likely to report making their last rechargeable battery purchase at a hardware store as compared to respondents that rent their home (17.8%).
    - Quota Sample respondents that rent their home (37.3%) are significantly more likely to report making their last rechargeable battery purchase at a department store as compared to respondents that own their home (27.9%).
- The following statistically significant differences were detected among DNR Sample respondents:
    - DNR Sample respondents aged 18 to 44 (26.5%) and 45 to 64 (26.3%) are significantly more likely to report making their last rechargeable battery purchase at a department store as compared to respondents 65+ (11.4%).
    - DNR Sample respondents aged 65+ (26.3%) are significantly more likely to report making no rechargeable battery purchases as compared to respondents 18 to 44 (5.7%) and 45 to 64 (5.6%).
    - DNR Sample respondents aged with some college or an associate degree (13.8%) and a bachelor's degree (11.2%) are significantly more likely to report making their last rechargeable battery purchase at a tool supply store as compared to respondents with a graduate or doctorate degree (7.8%).

What could state and local authorities do to help motivate people in your community to properly dispose of household hazardous waste and recycle batteries?

- All valid responses were categorized by general topic and are displayed in the table below. Full, un-edited verbatim comments are available in the survey data file.

	Count
Public Awareness/Education	**346**
Publicize information on what, how, where, and why hazardous material and battery recycling is important	143
Better awareness and education for the public	134
More signage/directions where to take batteries	32
More education in schools targeting kids/youth	10
Utility bill inserts	8
Better online resources	7
Community based messaging, education and partnerships	6
Big box store promotions	6
Drop-Off Locations	**343**
More convenient and easily accessible drop-off locations	111
More drop-off disposal/recycling sites	72
Pop-up recycling locations or drop boxes (monthly, bi-monthly, etc.)	44
Community or local collection sites (City Hall, Post Office, Library, Fire station, etc.)	44
Drop boxes at retailer locations (Walmart, Gas Stations, Grocery Stores, etc.)	25
Extend evening and weekend hours at facilities	16
Hazardous disposal site in every county	10
More bins at collection sites	6
Year-round receptacles at transfer stations and recycle centers.	5
Easily available list of drop-off locations	4
24/7 drive-through drop off sites	4
Include mail-in supplies with Li-ion Batteries	1
Clean facilities that do not smell	1
Advertising/Promotions	**198**
More/better advertising	48
Flyers/letters in the mail with information	41
Social media advertisements and information	25
Regular television and radio advertisements	22
Informational websites	16
Newspaper advertisements	12
Public Service Announcements	10
Television news stories	6
Billboard advertisements	5
Newsletters	5

Host events	4
Community recycle promotions	2
Appear at the State Fair	2
Monetary incentives/fines	**97**
Monetary incentives	37
Charge a deposit on batteries	32
Free/low cost recycling	13
Rebate slips or cents-off coupons	7
Fines/citations for improper disposal	6
Tax reduction	2
Pick Up	**97**
Curbside pickup	76
Free curbside pick-up days throughout the year	21
Battery Disposal	**43**
Easier battery disposal in general	36
Recycling centers should accept all batteries	7
N/A, No Idea, Don't Know, Not Sure, None	**44**
Regulation/Guideline Enforcement	**16**
Create and enforce hazardous waste disposal laws	4
Mandate all recycling locations must accept hazardous waste and batteries	3
Better product labeling	3
More consistency on definition of hazardous waste	2
Punish illegal hazardous waste disposal	2
Recycling should be a requirement, not recycling should be illegal	2