# Wisconsin Recycling Trends and Behaviors



Results from the Wisconsin DNR's Waste and Materials Management Program 2016 Household Recycling Survey

PUB-WA-1848 December 2017

# **Executive Summary**

Wisconsin's commitment to reduce, reuse and recycle is shown by its comprehensive recycling laws. The solid waste reduction, recovery and recycling law was enacted to promote the development of a waste management system and encourage the **reduction**, **reuse and recycling of Wisconsin's solid waste**. The law bans disposal and incineration of certain materials and delegates responsibility to local government responsible units for implementing municipal recycling programs to manage these materials. When the law passed in 1990, only about 17 percent of municipal solid waste was recycled. By the end of 2004, 10 years after the recycling requirements were fully implemented, studies showed the percentage had climbed to 32 percent. Today, recycling markets are expanding, creating jobs in Wisconsin and diverting waste from landfills. A separate electronics recycling law requires manufacturers of covered electronics to finance collection and recycling of electronics from households and schools. The commitment to recycling in Wisconsin remains strong, as shown by results in the 2016 Recycling Household survey.

Table 1 Materials: Materials banned from Wisconsin landfills including corrugated cardboard, paper, aluminum containers, steel/bimetal containers, glass containers, and plastic containers #1 and #2. For the eleventh time since 1990, the Wisconsin Department of Natural Resources (DNR) surveyed citizens across the state to track recycling trends and behaviors at home. The 2016 response again affirmed that knowledge of Wisconsin recycling law remains high, with respondents understanding that communities are required to have a recycling program and that recyclable items cannot be landfilled. The urban regions have led the way in providing access to curbside pickup, and only a small percent of participants cite having a barrier to

recycling. A strong majority of participants stated **they** 'always recycle,' and the rates of recycling Table 1 materials were consistently high. Respondents had a tendency to manage grass clippings and leaves by leaving them on their yards, while food scraps tended to be disposed of in household garbage. An astounding 57 percent of respondents took their unwanted drugs and pharmaceuticals to a drop-off location, which is a significant increase over only 10 percent in 2011.

The survey revealed that over half of participants have convenient access to a drop-off location for plastic bags, but more than half of respondents did not recall seeing information about recycling plastic bags and wrap over the past 12 months.

A strong majority of participants remained **either 'very committed' or 'fairly committed'** to household recycling. Despite an increase in social media and electronics in daily lives, printed newsletters and mailings remained the preferred method to receive information about recycling.

The DNR uses results from the recycling surveys to monitor trends and behaviors of Wisconsin residents when it comes to recycling and to provide guidance on where to direct resources to improve and enhance recycling among Wisconsin households. Continued strong support for the state recycling laws and programs underscore the importance of maintaining state investment in local government recycling programs and the laws around which these programs are built.

# Survey Background and Demographics

The 2016 Household Recycling Survey was the eleventh DNR-sponsored mail or telephone survey to track the progress of residential recycling in Wisconsin since the solid waste reduction, recovery and recycling law (Ch. 287, Wisconsin Statutes) was enacted in 1990. This law was put into effect to promote development of waste management systems to encourage the reduction, reuse **and recycling of Wisconsin's** solid waste. In 2016, the eight-page survey included questions on general, organic and other household waste recycling, plastic bag and wrap recycling and household electronics recycling. The questions asked about behaviors, attitudes and knowledge associated with recycling at home, including methods of recycling materials, availability of locations to recycle materials and the effectiveness and availability of outreach methods. The sample was random and statistically valid for all surveys, allowing us to project responses to the statewide population and compare results across survey years.

In February 2016, 1600 surveys were mailed to randomly selected households across the state, followed by a reminder postcard and reminder letter to non-respondents. The DNR purchased the list of names and addresses from Survey Sampling, Inc. The list was stratified by region (north/south) to create adequate representation of the less-populated northern part of the state (see Appendix B for the DNR Regions Map). This over-sampling was corrected for during survey analysis. In total, the DNR received 692 completed surveys during the two-month period, for a response rate of 49 percent after removing 187 undeliverable addresses. This was lower than in previous years, though consistent with the response rates the DNR has been receiving for other mailed surveys of the general public. In this most recent survey, and in all previous surveys, DNR Science Services provided survey analysis. A copy of the survey can be found in Appendix A.

To understand how knowledge of recycling has changed since Wisconsin's recycling law took effect in 1990, the DNR compared the 2016 survey results with similar surveys that the DNR's Waste and Materials Management Program contracted with the University of Wisconsin Survey Center to conduct in 2011 and 2006. The 2011 survey was an eight-page survey concerning Wisconsin residents' opinions, behaviors and knowledge of household recycling. The UW Survey Center mailed the survey to 1,200 randomly drawn Wisconsin residential addresses in November 2011. Three full mailings and reminder postcards over two months yielded 638 completed surveys, a response rate of 53 percent. After removing ineligible or vacant addresses, the 2011 response rate was 56 percent. The DNR also compared the 2016 survey results with a phone survey on household recycling that the Bureau of Waste and Materials Management contracted with the UW Survey Center to conduct in spring 2006. The UW Survey Center completed 555 telephone interviews of adult Wisconsin residents, a 44 percent response rate when adjusted for refusals and ineligible households.

The demographics of the 2016 and 2011 survey responses are well-matched for comparisons. The percentage of respondents living in rural settings, average household size, home ownership rate and the distribution across DNR regions are very similar. There has been a trend over time toward greater numbers of older respondents and a fewer number of younger respondents. The DNR does not have detailed demographic information for the 2006 survey.

The recycling survey demographics do differ from Wisconsin demographic data for all three years, according to the U.S. Census and the Wisconsin Demographic Services Center. Eighty-five percent of 2016 respondents own their homes, while the 2015 U.S. Census estimates put Wisconsin home ownership at 67 percent. The Wisconsin Department of Administration estimated that 70 percent of Wisconsinites lived in urban areas in 2015, but only 62 percent of 2016 survey respondents did. The 2016 survey was the first to **ask respondents' gender, and that also showed a difference, with 57** percent of respondents identifying as male, compared with 50 percent in the state population as a whole in the 2010 Census. Though males were over-represented in this survey when compared to known state resident demographics, no significant differences appeared between male and female recycling behaviors, attitudes or knowledge. However, there were significant differences between younger and older respondents (those under 65 years old and those 65+). The respondents to the surveys tend to be older than the overall Wisconsin population; for example, in 2016, 32 percent of survey respondents were 65 or older, compared with 19 percent in this category in the 2010 U.S. Census. To more accurately represent the views of Wisconsin citizens, 2010 U.S. Census data was used to weight responses based on respondent age.

# General Household Waste



General Recycling Trends and Behaviors

Figure 1. The number of respondents that have curbside pick-up, by region, with subsequent percentage of participants that live in urban areas in each region.

Access to curbside recycling pick-up and home ownership were shown to be two of the strongest predictors of recycling household items. Eighty-two percent of homeowners said they always recycle, compared with 66 percent of people who rent. Eighty-three percent of survey respondents lived in a community that provides trash pick-up. Four out of five of those same communities (80 percent) also offered a curbside recycling program. Overall, curbside pick-up of household recyclable materials was available to 82 percent of survey participants.

Older people recycled more than younger people, though that may be an artifact of higher rates of home ownership. Respondents aged 18 to 44 were more likely to say they aren't sure what is recyclable or they didn't have a convenient place to recycle than were older adults. The number of common recyclables being recycled varied across DNR administrative regions of the state as influenced by the varying availability of curbside recycling programs (Figure 1). Curbside recycling options were most available in the southeastern counties, whereas fewer than half of participants in the northern region had curbside pick-up as an option. Respondents of the northern region was the lowest at six percent. Respondents in the northern and southeastern regions were most likely to throw recyclables in the trash compared with

other regions. The difference in availability of curbside recycling between regions also impacted results which tested for rural-urban differences on recycling behavior. The northern region was by and large rural and the southeastern region was mostly urban. This trend can also be see in Figure 1, as the regions are arranged from the least urban area (northern region) to the most urban area (southeast region).

Among other demographic factors, having children in the household was associated with higher participation in curbside recycling. Gender did not appear to be an important factor in recycling participation for common household items.

## Knowledge and Barriers

A majority (64 percent) of survey respondents were aware that the recycling law requires communities to have a recycling program, and 58 percent were aware that the law says that recyclable items cannot be landfilled (Figure 2). Eighty percent of survey respondents did not identify barriers to recycling. Of those who did report at least one barrier, the most common barrier was not having a convenient place to recycle (31 percent) (Figure 3). Rural respondents and respondents of northern region counties were statistically more likely to cite not having a convenient place to recycle.

The most common barrier to recycling is **'I don't have a** convenient place.**'** 



Figure 2. Were you aware the Wisconsin recycling law says...?



Figure 3. For the 20 percent of survey respondents that cited a barrier, what prevents them from recycling?

## Management of Table 1 Materials







ents reported they 'always recycle' common household recyclables. More than 90 percent of participants responded that they recycled aluminum cans, glass, plastic and steel/tin Eighty-nine containers. percent of survey respondents also reported that they recycled their corrugated cardboard and 86 percent reported that they recycled their newspaper. Recycling participation (including drop-off locations) was slightly higher in communities that offered curbside pick-up of recyclables (Figure 4). This was supported by the data in Figure 5, which represents the various methods respondents used to manage their Table 1 materials. The combination of recycling or reuse, including curbside recycling, recycling drop-off and donated or redeemed for cash consistently represented the majority of methods of disposal for Table 1 materials. Burned, put in trash and other are less preferred methods of disposal and continued to be the least frequently used methods.

Four out of five respond-

Figure 5. Disposal methods of Table 1 materials by survey respondents.

## Management of Organic Waste

Curbside pick-up of yard waste materials was available to about 45 percent of respondents; 55 percent of participants who lived in a community with both curbside waste and recycling pick-up could get yard waste picked up as well. A majority (58 percent) of respondents left their grass clippings on their lawns, regardless of whether they lived somewhere with yard waste pick-up at the curbside (Figure 6). Home composting (17 percent) and taking to a collection location (14 percent) were



Figure 6. Disposal methods of organic materials by survey respondents.

the primary disposal methods for grass clippings. When yard waste pick-up was not provided, the percentage of respondents who compost grass clippings rose to 22 percent.

Overall, 51 percent of survey participants either left their leaves on the lawn or put them in a compost pile. Forty-three percent took their leaves to the curb for pick-up or drove them to a collection facility. One in twenty disposed of their leaves by burning them. There were significant differences in the percentage of participants using a disposal method for leaves based on whether their community collects yard waste. A majority (53 percent) of those with access to yard waste collection used that option for leaves. Meanwhile, in those areas without community yard waste collection, most respondents either left their leaves on the lawn (42 percent) or composted them (28 percent).

The majority of survey participants disposed of their food waste in the trash. Composting of fruit and vegetable waste occurred in 22 percent of participant households.

## Management of Other Waste

The next set of questions asked respondents about the management of other household waste, such as potentially harmful waste and bulky items. Batteries were the most commonly present item of all the potentially harmful waste items possessed by survey respondents; nine out of ten people had batteries for disposal. About two in three (68 percent) respondents had compact florescent bulbs (CFLs) to get rid of. Over

Household Hazardous Waste: Waste material generated by households that is either flammable, corrosive, toxic, or reactive.

half of respondents had household hazardous waste (56 percent), prescription drugs (51 percent) and latex paint (51 percent) for disposal. The two least frequently occurring potentially harmful materials were



Figure 7. Disposal methods of other household waste by all respondents.

These two materials, however, were properly disposed of at drop-off locations at very high rates as

well (Figure 7). Seven in ten respondents with medical sharps used drop-off disposal locations. Two-thirds (66 percent) of those with mercury thermometers also used designated drop-off locations. Fifty-seven percent of participants took their unwanted drugs and pharmaceuticals to a drop-off location, while 24 percent threw them out and six percent flushed or poured them down a drain. Other paint (31 percent), household hazardous waste (30 percent) and latex paints (27 percent) were the items with the highest storage rates among the other materials surveyed. The two most commonly found potentially hazardous items were also the ones most likely to be thrown in the trash. Sixty percent of batteries were thrown out as well as nearly half (49 percent) of all CFLs.

There were a number of statistically significant findings related to disposal of potentially harmful materials. For example, rural respondents were more likely to throw away batteries compared with urbanites, and households with children threw away batteries 64 percent of the time compared to a 58 percent rate among those without children. Meanwhile, adults ages 18 to 44 were significantly more likely to throw away CFLs, household hazardous waste and drugs/pharmaceuticals than were older respondents. Households with children threw away their pharmaceuticals 42 percent of the time, compared to a 17 percent rate for those without kids. The percentage of people who chose to throw away pharmaceuticals and household hazardous waste was highest among respondents of southeastern counties. There were no significant patterns among demographic segments with respect to disposal behaviors of medical sharps.

A majority (57 percent) of survey participants had the need to get rid of a large appliance in the 12 months prior to receiving the survey. Disposal of construction waste, carpeting and mattresses were much

less common. Among bulk items, large appliances were reused or recycled about 94 percent of the time. Most large appliances were returned to the retailer (46 percent) and another 23 percent were picked up. Fifty-eight percent of construction waste was sent to the landfill (40 percent) or burned (18 percent). Carpeting wound up in the trash 43 percent of the time and was burned seven percent of the time.

# Plastic Bags and Wrap Waste

The 2016 survey contained a new section with questions on plastic bags and wrap recycling. These questions asked about household management and information on recycling of these materials. A majority of respondents were unsure if their community allowed plastic bags and/or wrap to be mixed in with other recyclables; 50 percent of respondents said they were 'unsure,' 21 percent said 'yes' their community does allow mixing of plastic bags and/or wrap and 29 per-



Figure 8. Accessibility of drop-off locations for plastic bags and wrap.



cent chose 'no.' More than half of respondents said they do have a convenient Figure 9. Disposal methods for plastic shopping bags and plastic wrap by survey participants.

place such as a grocery store, retail store or dry cleaner to recycle plastic bags. About 39 percent of

respondents we**re unsure about how to recycle plastic bags/wrap or don't** know if they have a convenient place to recycle bags (Figure 8). In the 12 months prior to this survey, respondents typically reused their plastic shopping bags and disposed of their other plastic bags or wrap in the trash (Figure 9). Nearly all respondents had accrued plastic bags and other bags/wrap which they intended to dispose of. Less than 5 percent of respondents said they did not have any plastic bags or other bags/wrap to recycle.



Almost half (48 percent) of reported respondents they reuse their plastic bags in some way. Thirtyeight percent of respondents recycled their plastic shopping bags with or without reuse in curbside and drop-off locations. For other bags/plastic wrap, however, respondents stated putting them in the trash is their most disposal common method (56 percent). As compared to plastic retail bags, a smaller percentage of people, 28 per-

Figure 10. Do you recall seeing information about recycling plastic bags or wrap in the last 12 months?

cent, recycled their other plastic bags/wrap in curbside and drop-off locations (Figure 9). Respondents who do not have curbside pickup of recyclables took their bags and wrap to recycling locations and at higher rates than people who had curbside recycling. Interestingly, respondents did not differ in choosing to dispose of other bags/wrap in the trash based on access to curbside recycling. For those that were not able to recycle their bags curbside, 50 percent reused their bags, 38 percent dropped them off at a recycling location and nine percent placed them in the trash.

Seventy-two percent of participants did not recall seeing information on plastic bag and wrap recycling in the last 12 months, while only 12 percent recalled seeing that information (Figure 10).

# Electronics Recycling



Wisconsin's electronics recycling law requires the Department of Natural Resources to promote public participation in E-Cycle Wisconsin through education and outreach activities. To fulfill this mandate effectively and to help inform program administration and policy, the DNR has conducted four statewide household surveys since 2010, ask-ing residents what they have done with unwanted electronics, how many electronics are in their homes, what makes it difficult to recycle electronics and other related questions. The DNR also asked questions related to electronics recycling on a 2006 recycling survey, the results of which allow for some comparison with conditions before the law's 2010 implementation. The detailed results of the 2016 survey can be found in DNR publication PUB-WA-1830, *Wisconsin Residents and Electronics Recycling, May 2017*.

# Commitment and Outreach Preferences

## Commitment to Recycling

The survey data indicated a very strong commitment to recycling among survey participants. Almost all respondents (93 percent) answered that they are either 'very committed' or 'fairly committed' to recycling. A majority of respondents (55 percent) stated they are 'very committed' to recycling (Figure 11). Given the very high percentages of people committed to recycling, it is not surprising that commitment levels did not statistically differ among most demographic seq-



#### Figure 11. Survey participants' commitment to recycling.

ments within the state. The one exception is that homeowners reported higher levels of commitment and engage in recycling more often than do renters.

## Outreach Preferences

Ninety-six percent of survey respondents indicated they want information about recycling. Print newsletters or other mailings were by far (68 percent) the most preferred way to receive information (Figure 12). Utility bill inserts (32 percent) and websites (22 percent) were the next most frequently selected options. There were no age differences in preferred outreach methods for the following communication channels: radio, TV, community events, utility bill inserts or print newsletters.





There were significant age differences in preferences for web, social media and newspapers. Not surprisingly adults aged 18 to 44 were more likely to check websites than were senior citizens. Conversely, seniors were more likely to indicate newspapers than were adults aged 18 to 44. Finally, women were significantly more likely than men to prefer social media for information.

# Conclusions

Wisconsin has a strong history of recycling and composting, and the results of this survey provide insight into continuing this success. Almost 2 million tons of material is kept out of Wisconsin landfills and incinerators every year through recycling and composting. Recycling and composting are good for the economy, providing thousands of jobs and reusing valuable materials that would otherwise go to waste. Reducing waste through recycling and composting is also good for the environment, reducing consumption of resources, reducing air pollution and saving energy.

93 percent of respondents are committed to recycling. This survey provided useful information on trends and behaviors related to household recycling. Barriers to recycling remained low and are related to convenience as opposed to a lack of knowledge or a lack of support for recycling. Knowledge of Wisconsin's recycling law remained high. Table 1 materials continued to be recycled at significant rates, and curbside pick-up played a large role in the recycling of those materials. While very little yard waste was burned or put in the trash, the main management technique for food scraps tended to be 'put in trash,' showing that improvements can be made in increasing knowledge related to food scraps management. A majority of people did seek alternative methods to dispose of other household waste, but some items, such as CFLs, could see an increase in recycling with more awareness of recycling methods.

Results from the plastic bags and wrap questions showed uncertainty in the knowledge of management of this material. Participants were not aware of all the different types of plastic bags and wrap which can be recycled or where to do so. It also showed that the majority of respondents have not been engaged in outreach associated with recycling plastic bags and wrap over the past year, and thus, these activities should be increased to improve awareness of recycling opportunities for plastic bags and wrap.

The outreach and commitment to recycling questions provided beneficial information about how communities and haulers can best reach their customers. Nearly all respondents indicated they wanted infor-



mation about recycling, and printed newsletters and other mailings remain popular across all age groups, while younger respondents did state they would be more likely to check websites than seniors. The DNR has a wide variety of publications related to recycling for various audiences available to order or print at <u>http://dnr.wi.gov/topic/Recycling/Outreach.html</u>.

Monitoring program performance over time is a valuable and informative tool. The DNR is committed to sharing this information with others and using it to make continued improvements to Wisconsin's recycling program.

# Appendix A 2016 Household Recycling Survey



Please complete this survey to the best of your ability and return in the provided envelope at your earliest convenience.

This survey will ask you questions about your **typical recycling behavior at home**. We understand that it may be challenging to define your one most typical behavior, so consider "the most typical" behavior to be the one that you do the majority of the time.

Thank you for cooperating with this survey. Your response will be most helpful.



| n the last 12 months, did your community of   | fer (o                         | neck one                             | for each li                              | nej                |  |  |   |
|---|--------------------------------|--------------------------------------|--|--------------------|--|--|---|
| curbside pickup of trash?<br>curbside pickup of yard waste like grass<br>curbside pickup of recyclable materials  | s clippin<br>like bot          | gs, brush<br>ttles, cans             | and leaves<br>and paper                  | Yes<br>0<br>?<br>0 | №000                                   | Unsure<br>O<br>O<br>O  |   |
| n the last 12 months, what did you typically<br>wanted? If you did not have an item, please o<br>check the ONE most typical disposal metho                                      | do with<br>check N<br>d for ea | each of t<br>A for Not<br>ach item a | he followir<br>Applicable<br>af.)        | ng househ          | old iter                               | ns that you  | i no longer   |
|   |                                |                                      |  |                    |  |  | /   |
|   |                                |                                      |  | /                  | /                                      |  | on location cast  |
|   |                                |                                      | trast                                    | /                  | 1                                      | yoling collection  | on location   |
|   | N                              | A PU                                 | tin the trast                            | ned Tool           | toarec                                 | Joing collecti   | on location<br>adeemed for cash<br>urbside recycling                                    |
| a. Cardboard  | N<br>O                         | A PU                                 | tin the trast                            | ned Tool           | to a rac                               | Joing collection   | on location<br>adeemed for cash<br>urbside recycling<br>Other                           |
| <ul><li>a. Cardboard</li><li>b. Newspaper, magazines and other paper</li></ul>  | 0 0 4                          | A PU<br>O O                          | tin the trast                            | ned Tool           | to a rec                               | Joing collection   | on location<br>adeemed for cash<br>urbside recycling<br>Urbside recycling               |
| <ul> <li>a. Cardboard</li> <li>b. Newspaper, magazines and other paper</li> <li>c. Glass containers</li> </ul>  | × 0 0 0                        | A 0 0 0                              | tin the trast<br>But<br>O                | ned Took           | 10 0 0 0                               | Joing collection   | on location<br>edeemed for cash<br>urbside recycling<br>Urbside recycling               |
| <ul> <li>a. Cardboard</li> <li>b. Newspaper, magazines and other paper</li> <li>c. Glass containers</li> <li>d. Aluminum containers</li> </ul>                                  | 0 0 0 0 M                      | A 0 0 0 0                            | Atin the trast                           | ned Took           | 10 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 | Joing collection   | on location<br>adeemed for cash<br>urbside recycling<br>Other                           |
| <ul> <li>a. Cardboard</li> <li>b. Newspaper, magazines and other paper</li> <li>c. Glass containers</li> <li>d. Aluminum containers</li> <li>e. Steel/tin containers</li> </ul> | 00000                          | 400000                               | tin the trast<br>But<br>O<br>O<br>O<br>O | ned took           | 10 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 | Joing collecting colle | en location<br>adeemed for cash<br>urbside recycling<br>Urbside recycling<br>Other<br>O |

3) It may not always be possible for you to recycle the items listed in question 2 above. Please indicate all the reasons, if any, which prevent you from recycling these items. (check all that apply)

| I always recycle                                | 0 |
|---|---|
| I am not sure what is recyclable                | 0 |
| I don't always know how to recycle              | 0 |
| I do not have the time, it takes too long       | 0 |
| I do not have a convenient place to recycle     | 0 |
| I sometimes forget to recycle                   | 0 |
| It is just easier to throw things in the trash  | 0 |
| I do not think there's an environmental benefit | 0 |
| Some other reason                               | 0 |
|   |   |

4) Wisconsin's state recycling law has been in place since 1990. The recycling law requires communities to have recycling programs, and bans recyclable items from the trash. Before reading the preceding statement, were you aware that Wisconsin law says... (check one for each line)

|   | Yes | No |
|---|-----|----|
| communities must have recycling programs?                         | 0   | 0  |
| recyclable bottles, cans and paper cannot be landfilled as trash? | 0   | 0  |

 In the last 12 months, what did you typically do with each of the following items? Choose NA for not applicable if you do not have a yard or any of that particular item.

(check your ONE most typical disposal method for each item a.-d.)

| tencer your one most typical apposition      | thou | in cut | /           | ash     | 1       | ost is      | AND        | lection location |
|--|------|--------|-------------|---------|---------|-------------|------------|------------------|
| a. Grass clippings                           | 0    | NA P   | ut in the t | urned H | ome com | urbside pic | ok to a cr | effition my      |
| b. Leaves                                    | 0    | 0      | 0           | 0       | 0       | 0           | 0          | 0                |
| c. Meats, dairy and oilyfood scraps          | 0    | 0      | 0           | 0       | 0       | 0           | 0          | 0                |
| d. Other food scraps (fruits and vegetables) | 0    | 0      | 0           | 0       | 0       | 0           | 0          | 0                |

6) In the last 12 months, what did you typically do with each of the following household items that you no longer wanted? If you did not have an item please check NA for not applicable. (check your ONE most typical disposal method for each item a.-h.)

|  |    |      | /            | /                        | r designat | eitern drain |
|--|----|------|--------------|--------------------------|------------|--------------|
| Item   | NA | Puli | in the trash | a retailer of<br>drop of | site to.   | ored Other   |
| a. Household batteries   | 0  | 0    | 0            | 0                        | 0          | 0            |
| b. Fluorescent bulbs (including CFL)                                   | 0  | 0    | 0            | 0                        | 0          | 0            |
| c. Mercury thermometers or thermostats                                 | 0  | 0    | 0            | 0                        | 0          | 0            |
| d. Medical sharps (e.g., needles, lancets)                             | 0  | 0    | 0            | 0                        | 0          | 0            |
| e. Pharmaceuticals or medicines  | 0  | 0    | 0            | 0                        | 0          | 0            |
| f. Latex paint   | 0  | 0    | 0            | 0                        | 0          | 0            |
| g. Other paint   | 0  | 0    | 0            | 0                        | 0          | 0            |
| h. Household hazardous waste (e.g.,<br>pesticides, solvents, cleaners) | 0  | 0    | 0            | 0                        | 0          | Q            |

7) In the last 12 months, what did you typically do with each of the following household items that you no longer wanted? If you did not have an item, please check NA for not applicable. (check your ONE most typical disposal method for each item a.-d.)



#### PLASTIC BAGS & WRAP

The following questions pertain to recycling plastic wrap (such as wrap around cases of toilet paper, napkins, paper towels and water bottles) and plastic bags (such as those used for shopping, newspapers, bread and dry cleaning).

8) When you recycle at home, does your community allow you to include plastic bags and/or wrap with the rest of your recyclables?

()Yes ()No OUnsure

9) Do you have a convenient drop-off location where you can bring plastic shopping bags and other plastic bags and wrap for recycling (such as a grocery store, retail store, dry cleaner)? (check one)

#### OI don't know

- O No, there is no convenient drop-off location
- O Yes, but not sure what types of plastic can go in the bin
- Yes, for plastic shopping bags only
- O Yes, for all plastic bags and wrap
- 10) In the last 12 months, what did you typically do with each of the following materials? If you did not have one of these items, please check NA for not applicable.

(check your ONE most typical disposal method for each item a.-b.)



11) In the last 12 months, do you recall seeing any information about recycling plastic bags or wrap?

○ Yes, I am certain

- OI think so but am not certain
- No, I do not recall

#### HOUSEHOLD ELECTRONICS

12) In the last 12 months, where did you purchase a TV, tablet or computer? (check all that apply)

- I did not purchase a TV, tablet or computer in the last 12 months. → Skip to Question 14
- I purchased online, for in-store pickup
- I purchased online, for home delivery
- In person, at a store retail location
- O Somewhereelse \_\_\_\_\_\_

13) What was the name of the store or website where you most recently purchased a household computer,

tablet or TV?

14) Do you know where you can recycle electronics?

- O Yes, I am certain
- OI think so but am not certain
- O No, I do not know

15) Please think about all the TVs, computers and cell phones in your home that are working and not working, in use and not in use (include those in your basement, attic or garage). In the table below, please indicate the number of these electronics in your home. Enter the number that are currently in use in the first column and the number that are currently never used (including broken items) in the second column. If you do not have an item in your home, please enter 0. Do not include electronics owned by an employer.

| Item   | Number<br>in use | Number<br>not in use |
|--|------------------|----------------------|
| Cell phones                                      | 1.1              |                      |
| Computers (laptop, desktop, netbook) and tablets |                  |                      |
| Televisions                                      |                  |                      |

16) In the last 12 months, what did you do with each electronic item you no longer wanted? If you did not have a particular item, please check NA for Not Applicable.

(check the ONE most typical disposal method for each item a.-c.)

Exchanged/returned to retailer Gave away to family/friends Putintrash Recycled Sold NA Item a. Cell phone 0 b. Computers (laptop, desktop,  $\bigcirc$ 0  $\bigcirc$ ( ) $( \cdot )$  $\bigcirc$ netbook) and tablets c. Televisions

- 17) In the last 12 months was there ever a time when you wanted to recycle electronics but were unable to do so? ○ Yes  $\bigcirc$  No  $\rightarrow$  Skip to question 19
- 18) Which ONE of the following best describes why you were unable to recycle the electronics? (check ONE)

| It was too expensive to recycle electronics               | 0 |
|---|---|
| I didn't know where or how to recycle electronics         | 0 |
| I don't have a convenient place to recycle electronics    | 0 |
| I was concerned about my data security                    | 0 |
| I didn't have the time, it takes too long                 | 0 |
| It was just easier to throw things in the trash           | 0 |
| I was unable to transport items to the recycling location | 0 |
| Some other reason   | 0 |

19) In October 2009, Wisconsin passed a state electronics recycling law. The law bans many electronics from being put in the trash. The law also created a manufacturer-funded program called E-Cycle Wisconsin, to make it easier and more affordable to recycle certain electronics. Before reading the above statement, had you heard about.... (check one for each line)

| Wisconsin's landfill and incinerator ban on electronics?        |
|---|
| E-Cycle Wisconsin, the statewide electronics recycling program? |

| Yes | No |
|-----|----|
| 0   | O  |
| Õ   | Õ  |

20) In the last 12 months, where do you recall hearing about the electronics disposal ban, E-Cycle Wisconsin or where to recycle electronics? (check all that apply)

| O A movie theater advertisement         |
|---|
| <ul> <li>Onlineadvertisement</li> </ul> |
| O From mycommunity                      |
| ○ Radioadvertisement                    |
| O From mywaste hauler                   |
| Other                                   |
|   |

#### BACKGROUND INFORMATION

These last few questions will help us compare your answers with those of other respondents. All responses are confidential and will not be connected with your name.

| 1) | How would | you rate yo | ur commitment to | recycling? | (check one) |
|----|-----------|-------------|------------------|------------|-------------|
|----|-----------|-------------|------------------|------------|-------------|

| O Not at all committed |         | O Fairly committed |  |  |
|------------------------|---------|--------------------|--|--|
| O Not too committed    | Oursure | O Very committed   |  |  |

 Information on how and what to recycle should be provided by your municipality and recycling hauler. What is the best way for your community or hauler to provide you with information? (check your top TWO preferences from the list below)

|    | I do not want any information about recycling   | 🔘 social media                                    |
|----|---|---|
|    | 🔿 website/internet  | ) at community events                             |
|    | ○ print newsletter orother mailing  | Otelevision                                       |
|    | 🔿 utility bill inserts  | ⊖radio  |
|    | ⊖ newspaper   | O other   |
| 3) | Do you rent or own the home you live in?  |   |
|    | $\bigcirc \text{Rent} \qquad \bigcirc \text{Own} \rightarrow \text{Skip to Question 5}$     | $\bigcirc$ Other $\rightarrow$ Skip to Question 5 |
| 4) | Does your landlord or management company (check one for each line)                          |   |
|    | give you a place to set out recyclables? O  |   |
| 5) | In which Wisconsin county is your primary residence located?                                |   |
|    | County  |   |
| 6) | How would you describe the place where you live?  |   |
|    | ORural, farm ORural, non-farm OUrba   | an/Suburban                                       |
| 7) | What is your current age?   |   |
| 8) | Are you: OMale OFemale  |   |
| 9) | In the last 12 months, how many people usually lived in your household, including yourself? |   |
|    | People  |   |

ADDITIONAL COMMENTS

The space below can be used to offer any additional comments about recycling.

Thank you for completing this questionnaire. Please return it at your earliest convenience in the provided stamped, return envelope.

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Wisconsin Department of Natural Resources Waste and Materials Management Program Wisconsin Recycling Trends and Behaviors PUB-WA-1848, December 2017

# Appendix B

## DNR Regions Map





PUB-WA-1848 2017 Wisconsin Department of Natural Resources Waste and Materials Management Program

#### P.O. Box 7921, Madison, WI 53707 | (608) 266-2111 | DNRRecycling@wisconsin.gov

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