

2024

Pinellas County Residential Recycling Awareness Survey



Prepared for:
**Pinellas County
Solid Waste**

Prepared by:



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The Content of the Survey and all Findings are the Property of Pinellas County Government.

CERTIFICATION

HCP ASSOCIATES, INC., hereby certifies that, except as otherwise noted in this report:

- 1. We have no present or contemplated future interest in the project that is the subject of this report.*
- 2. We have no personal interest or bias with respect to the subject matter of this report or the parties involved.*
- 3. To the best of our knowledge and belief, the statements of fact contained in this report, upon which analyses, opinions, and conclusions expressed herein are based, are true and correct.*
- 4. This report sets forth all of the limiting conditions (imposed by the terms of our assignment or by the undersigned) affecting the analyses, opinions, and conclusions contained in this report.*
- 5. The underlying assumptions are based on present circumstances and information currently available.*
- 6. Because circumstances may change and unanticipated events may occur subsequent to the date of this report, the reader must evaluate the assumptions and rationale of this report in light of the circumstances then prevailing.*
- 7. The 2024 research results detailed in the attached were obtained by HCP ASSOCIATES, INC. and are based on a telephonic survey of 800 interviews.*



Robert Allen, Vice President

May 24, 2024

Date

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Introduction

Pinellas County Solid Waste (PCSW) manages garbage as a resource at the County's Solid Waste Disposal Complex, which includes a Waste-to-Energy (WTE) facility and landfill. PCSW also provides a variety of recycling and disposal programs and resources including the [Where Does It Go? Search Tool](#) (Pinellas County). In 2020, PCSW released its 30-year Solid Waste Master Plan with the goal of achieving "zero waste to landfill by 2050." (HDR, 2020) The plan proposes a series of strategies to expand commercial and residential recycling and waste reduction programs to help extend the lifespan of the County's only landfill. Pinellas County's landfill is expected to reach full capacity by 2102. However, several threats may lower the expected lifespan of the facility.

First, Pinellas County, like many areas in the state of Florida, has experienced a significant population increase in the last 15 years. Between 2010 and 2020, Pinellas County added around 42,610 new residents, a 5% increase over that time (Austin, 2022). Furthermore, the County's population is projected to exceed one million residents by 2045 (PLANPinellas). Coupled with a strong tourism industry that saw a record amount of bed tax revenue collected in 2023 (Tracy, 2023), the influx of people into the county and the amount of waste produced will substantially shorten the lifespan of the landfill (Tracy, 2023; Bradley, 2023). One plan discussed to increase recycling and help extend the life of the solid waste facility is to implement mandatory recycling (Bowman, 2023), which was recommended in the 30-year Solid Waste Master Plan (HDR, 2020).

In addition, more waste may be taken to the County's landfill in the coming years as the County's Waste-to-Energy (WTE) facility nears capacity. Pinellas County's WTE facility is one of the largest facilities of its kind in the United States and currently processes approximately 2,700 tons of waste per day (Pinellas County, 2024). This process reduces the volume of garbage by 90%, which saves space in the County's landfill. However, the WTE facility is set to reach its capacity by 2026 and exceed capacity by 2050. Once the facility reaches capacity, any waste that cannot be processed will be taken to the landfill. While the WTE facility is a key component of reaching the goal of zero waste by 2050, it will not be the sole source of relief.

Recycling is a key component in reducing the amount of waste taken to the landfill and stabilizing the amount of waste taken to the WTE facility which will extend the lifespan of the county's landfill. In the 2021-22 Waste Composition Study, it was found that 17.6% (Program Recyclable Paper 12.7%; Program Recyclable Containers 4.9%) of incoming waste in Pinellas County were recyclable materials that could have been recycled through curbside or drop-off programs. PCSW educates the public on proper recycling and disposal to keep recyclables out of the garbage and increase the quality of recyclable materials. Capturing more quality recyclables in recycling programs means that fewer materials will be sent to the SWDC as garbage, easing the burden on the WTE facility and landfill. Some of these outreach efforts include facility tours of the Solid Waste Disposal Complex, coordinating household chemical collection events throughout the county, operating drop-off collection centers for recyclables, and managing the [Pinellas County Recycle Guide](#) and the Where Does It Go? Search Tool which outlines what materials can and cannot be recycled in the County.

Pinellas County Solid Waste established the Pinellas County Residential Recycling Awareness Survey to gauge and trend the recycling and disposal habits of Pinellas County residents. This includes understanding current participation levels, reasons why residents abstain from recycling in total or for

certain materials, and misconceptions about recycling. The survey also measures residents' awareness and knowledge of recycling in the County.

Methodology

In 2024, the residential recycling survey leveraged a telephonic methodology to gain participation within the community. This methodology allowed HCP to gain a sample that guaranteed a random and representative sampling of Pinellas County residents. The race, age, and gender of the responses were matched to the Census demographics of residents in Pinellas County. The telephonic survey calls were made with a random digital dial, calling in no particular order, ensuring the sample was truly randomized. In 2018, the survey utilized an online distribution system which was distributed primarily through Pinellas County social media channels and PCSW website. Although there was success in engaging Pinellas County residents in 2018, challenges with obtaining a representative sample required the addition of paid panel respondents and statistical weighting. This means that the participants in 2018 were more tuned into county initiatives and recycling. The 2024 methodology, like 2020, ensures that respondents have varying levels of knowledge about recycling and county government. Since the 2020 study, HCP and Pinellas County Solid Waste successfully conducted the 2021 and 2023 Commercial Recycling studies.

As with previous iterations of the study, HCP and PCSW conducted a kickoff meeting to review the previous years' questionnaire and determine the 2024 action plan. Once PCSW approved the survey, it was programmed, tested, and following a successful test, deployed.

The calls were all performed by non-automated, trained professional survey interviewers working in a supervised CATI (computer-assisted telephone interviewing) facility. Survey responses are entered by the interviewers into an electronic database, to include both closed-ended categorical responses and open-ended verbatim responses. Interviewers varied the time of day and day of the week that calls were made to help ensure a diverse sampling of residents was collected, which reflects varying personal schedules.

The interviewers called Pinellas County residents from March 21, 2024, through April 28, 2024. There was a total of 800 respondents, whose demographics matched US Census data as well as the geographic distribution of Pinellas County. The survey was completed with a $\pm 3.46\%$ margin of error. The average time to complete the survey was 12 minutes.

The survey questions have been categorized into four sections for reporting: respondent characteristics, recycling by housing type, recycling practices, and recycling awareness. Throughout the report, 2024 data are compared side-by-side with the 2018 and 2020 results, illustrating trends and shifts in sentiment. In the graphs featured in the report, the sample size is also included, denoted with 'n.' In instances where there are not 800 responses, the sample is reflective of those to whom the question was applicable and also how many answered the question.

Study Findings

The residential study provides insight for PCSW on current recycling participation rates, reasons why residents abstain from recycling, misconceptions about recycling, and levels of awareness on topics related to disposal and recycling. In addition, this report details the trends identified through the previous study.

Respondent Characteristics

The survey captured a range of respondent demographics, including gender, geography, age, household income, race/ethnicity, and the presence of children in the household. Respondents were asked to confirm the municipality in which they live to ensure that the sample was evenly distributed across the County. Respondents were also asked whether they were full-time or seasonal residents, how long they lived in Pinellas County, their highest level of education, and their current employment status. Responses to these demographic questions allow us to segment various groups of respondents and guarantee that the data is appropriately representative of the geographic and demographic makeup of Pinellas County. The US Census Bureau's American Community Survey (ACS) and the Bureau of Economic Development (BEER) data were utilized for reference and demographic comparison.

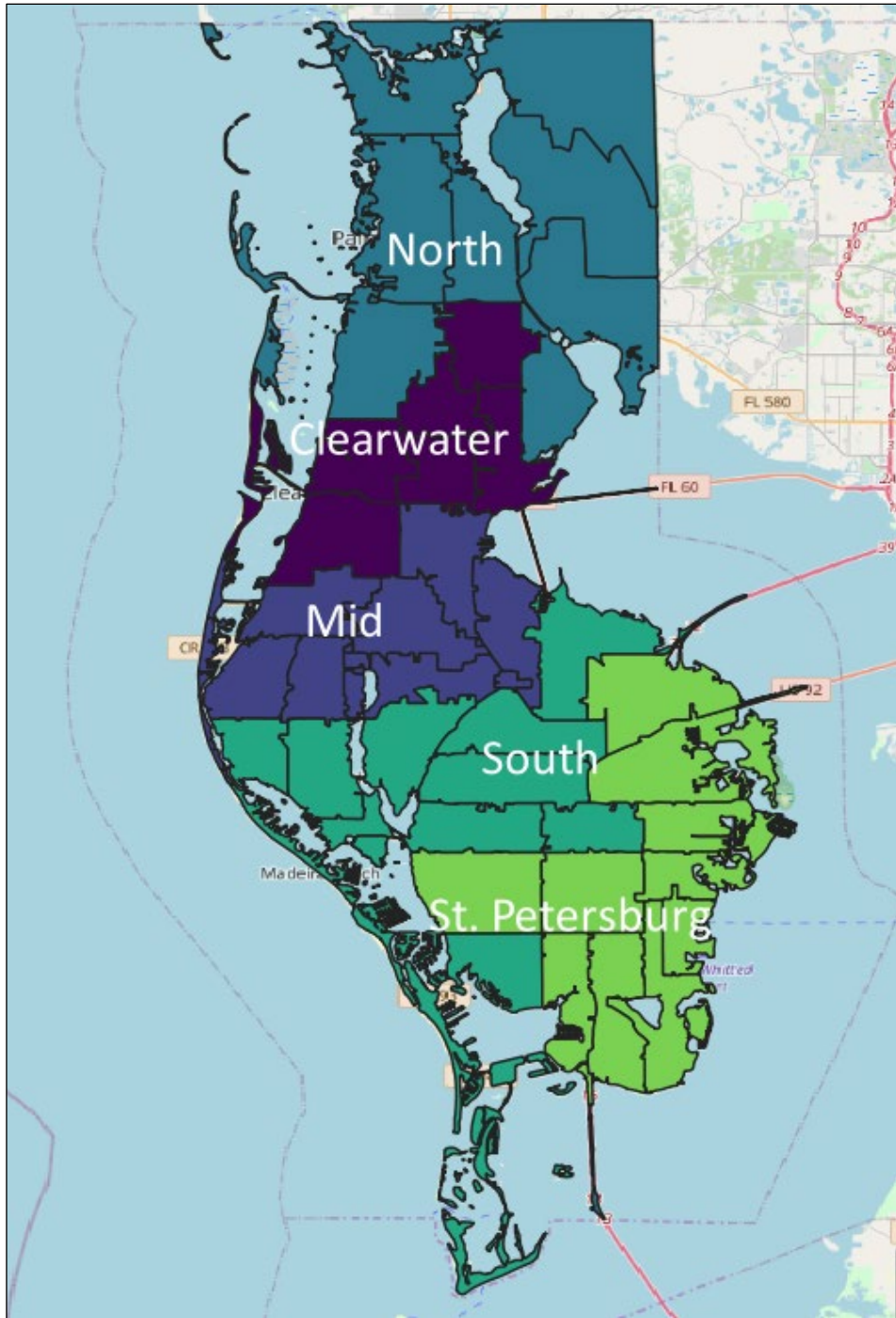
In 2018, the sample was gathered through an online survey, in which participants opted in after seeing a web link. As such, the geographic makeup of residents was not controlled for in the overall sampling process. In 2020, the methodology changed to ensure the sample represented residents in all areas of the County. The 2024 survey maintained the same methodology as 2020.

Understanding geographic differences in sentiments and behavior is important for policymakers in Pinellas County and its many municipalities. To understand whether location and sentiment correlate, the responses were divided based on location to create similarly sized groups. Due to a large portion of the respondent base living in Clearwater and St. Petersburg, each city comprises its own group. In contrast, the remaining respondents were segmented into North, Mid, and South County. A visual representation of the five regions is shown on the page below. It should be noted that zip codes and municipal boundaries do not perfectly align. City boundaries may cross multiple zip codes. Below are the cities in Pinellas County and which region they belong to for the purpose of this study.

North Municipalities: Oldsmar, Tarpon Springs, Safety Harbor, Dunedin

Mid Municipalities: Pinellas Park, Largo, Belleair, Belleair Beach, Belleair Bluffs, Belleair Shores, Indian Rocks Beach, Indian Shores

South Municipalities: St. Pete Beach, Treasure Island, Gulfport, South Pasadena, North Redington Beach, Redington Beach, Redington Shores, Seminole, Madeira Beach, Kenneth City



Description: The map above divides survey participants into five different regions of the county. Zip codes are listed next to the respective geographical area.

North: 34698, 34683, 34677, 34689, 34688, 34695, 34684, 34685, 34681

Clearwater: 33759, 33755, 33767, 33761, 33763, 33756, 33765

Mid: 33778, 33786, 33785, 33760, 33774, 33770, 33773, 33764, 33771

South: 33782, 33772, 33710, 33744, 33777, 33709, 33706, 33707, 33776, 33715, 33714, 33781, 33762, 33708

St. Petersburg: 33701, 33713, 33711, 33712, 33703, 33705, 33704, 33716, 33702

The table below compares the respondent demographics to those reported by the American Community Survey (ACS) as well as the 2020 telephonic survey and the 2018 online survey. Overall, the 2024 sample is representative of the three controlled demographics of the study: gender, age composition, and race/ethnicity. This means that the 2024 sample’s demographics are within the margin of error compared to the 2022 ACS.

What is your gender?

Demographic Categories	2018 Survey (Online)	2020 Survey (Phone)	2024 Survey (Phone)	2022 ACS	Representation
Male	44%	48%	48%	48%	Representative within the margin of error.
Female	53%	52%	52%	52%	Representative within the margin of error.
I prefer not to identify	3%	n/a	n/a	n/a	Representative within the margin of error.

Which range describes your age?

Demographic Categories	2018 Survey (Online)	2020 Survey (Phone)	2024 Survey (Phone)	2022 ACS	Representation
Under 25	8%	9%	8%	8%	Representative within the margin of error.
25 – 34	10%	14%	14%	14%	Representative within the margin of error.
35 – 44	15%	13%	13%	13%	Representative within the margin of error.
45 – 54	17%	17%	15%	15%	Representative within the margin of error.
55 – 64	21%	19%	19%	19%	Representative within the margin of error.
65+	28%	28%	30%	30%	Representative within the margin of error.

What is your race/ethnicity?

Demographic Categories	2018 Survey (Online)	2020 Survey (Phone)	2024 Survey (Phone)	2022 ACS	Representation
Caucasian/White	73%	75%	72%	72%	Representative within the margin of error.
Hispanic/Latino	10%	9%	10%	10%	Representative within the margin of error.
African American/Black	9%	10%	10%	10%	Representative within the margin of error.

Other	5%	6%	7%	7%	Representative within the margin of error.
Refused	3%	0%	0%	n/a	n/a

Other demographic variables, for which the sample was not controlled, are presented in the table below. The study is over-representative of those with household incomes over \$75,000, and households with children. It should be noted that a substantial portion of the survey (17%) refused to disclose their income.

Do you live within a city’s boundaries or in unincorporated Pinellas County?*

Demographic Categories	2018 Survey (Online)	2020 Survey (Phone)	2024 Survey (Phone)	2022 ACS	Representation
City	69%	85%	88%	72%	Overrepresented of residents living in a city.
Unincorporated	22%	11%	11%	28%	Underrepresented of residents living in unincorporated Pinellas County.
I don't know	9%	4%	1%	n/a	n/a

Which range best describes your household income?

Demographic Categories	2018 Survey (Online)	2020 Survey (Phone)	2024 Survey (Phone)	2022 ACS	Representation
Under \$25,000	13%	9%	4%	17%	Underrepresented of household incomes under \$25,000.
\$25,000 - \$49,999	22%	15%	17%	21%	Underrepresented of household incomes \$25,000 - \$49,999.
\$50,000 - \$74,999	18%	18%	24%	18%	Overrepresented of household incomes \$50,000 to \$74,999.
\$75,000 - \$99,999	15%	19%	17%	13%	Overrepresented of household incomes \$75,000 to \$99,999.
\$100,000+	25%	20%	20%	32%	Underrepresented of household incomes over \$100,000.
Refused	8%	19%	17%	n/a	n/a

Are there children aged 18 and under in your home?

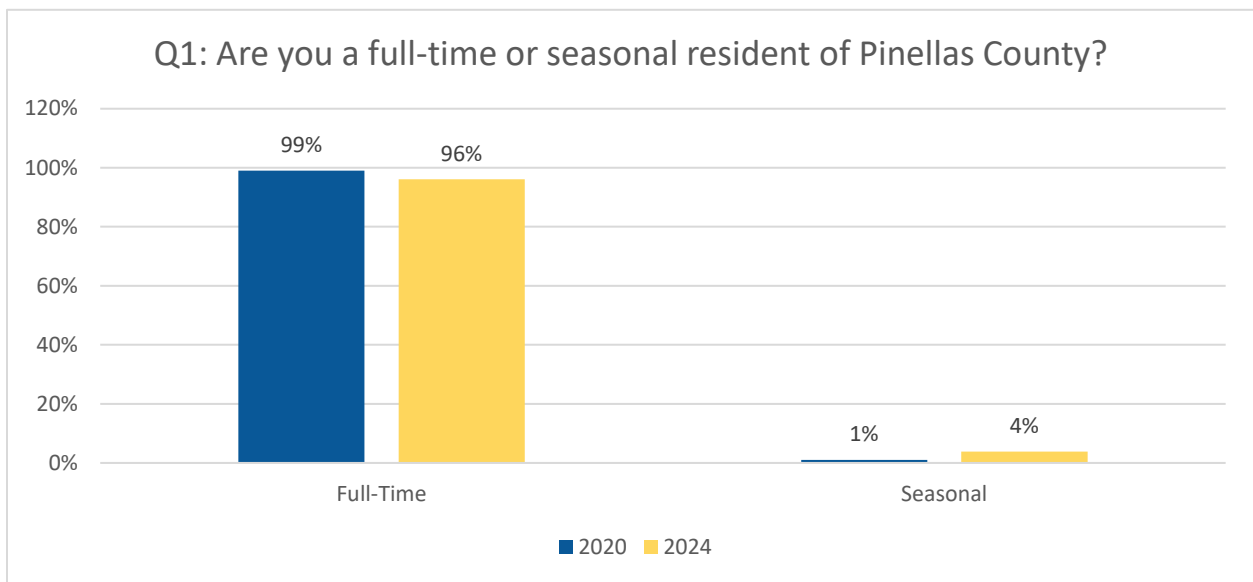
Demographic Categories	2018 Survey (Online)	2020 Survey (Phone)	2024 Survey (Phone)	2022 ACS	Representation
Yes	23%	29%	31%	16%	Overrepresented of households with Children.
No	77%	71%	69%	84%	Underrepresented of households without Children.

What is the primary language spoken in the home?

Demographic Categories	2018 Survey (Online)	2020 Survey (Phone)	2024 Survey (Phone)	2022 ACS	Representation
English	n/a	n/a	92%	88%	Overrepresented of English-speaking households
Spanish	n/a	n/a	8%	6%	Representative within the margin of error.
Other	n/a	n/a	0%	6%	Underrepresented of other languages.

**University of Florida Bureau of Economic and Business Research (BEBR) 2023 as the source rather than ACS.*

Respondents indicated whether they were full-time or seasonal residents within the county. Nearly all respondents reported that they were full-time residents (96%), with only 4% of respondents mentioning that they live in the county seasonally. This question was not asked in 2018.



Title: Q1: Are you a full-time or seasonal resident of Pinellas County?

Description: The double bar chart above shows the percentage of respondents who are full-time residents compared to seasonal residents. The percentage value for each category is as follows:

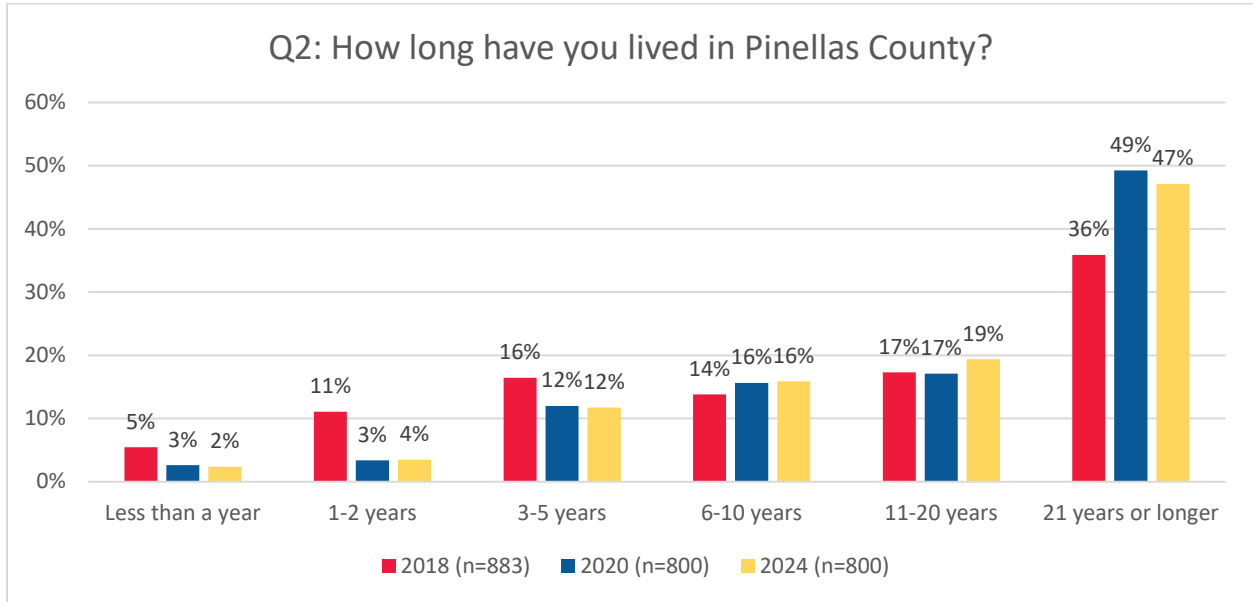
Full-time 2020: 99 percent

Full-time 2024: 96 percent

Seasonal 2020: 1 percent

Seasonal 2024: 4 percent

Like 2020, the 2024 sample contains residents who are more tenured and have lived in the area for a longer time. This contrasts with the online survey in 2018, where more respondents reported living in the county for less time. In 2018, 16% of the sample lived in the county for two or fewer years whereas only 6% of the sample in 2024 lived in the County for two years or less. In general, the length of residency was statistically similar between 2020 and 2024.

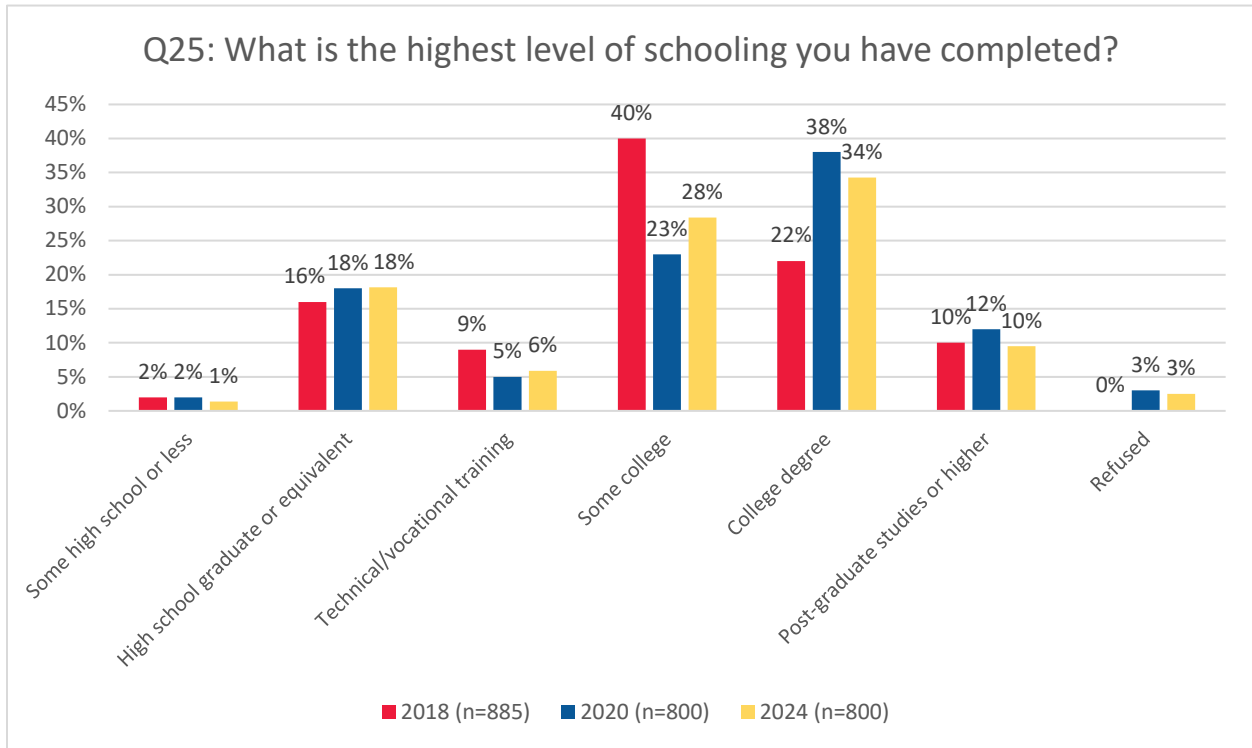


Title: Q2: How long have you lived in Pinellas County?

Description: The bar graph above shows the percentage trending of the residents’ tenure living in Pinellas County in 2018, 2020, and 2024. The percentage value for each category is as follows:

- Less than a year in 2018: 5 percent
- Less than a year in 2020: 3 percent
- Less than a year in 2024: 2 percent
- 1 to 2 years in 2018: 11 percent
- 1 to 2 years in 2020: 3 percent
- 1 to 2 years in 2024: 4 percent
- 3 to 5 years in 2018: 16 percent
- 3 to 5 years in 2020: 12 percent
- 3 to 5 years in 2024: 12 percent
- 6 to 10 years in 2018: 14 percent
- 6 to 10 years in 2020: 16 percent
- 6 to 10 years in 2024: 16 percent
- 11 to 20 years in 2018: 17 percent
- 11 to 20 years in 2020: 17 percent
- 11 to 20 years in 2024: 19 percent
- 21 years or longer in 2018: 36 percent
- 21 years or longer in 2020: 49 percent
- 21 years or longer in 2024: 47 percent

Respondents also confirmed the highest level of education they have completed. About a third (34%) have a college degree. In the 2024 sample, there was a significant increase in the number of residents who stated they have “some college” education compared to 2020 (28% in 2024; 23% in 2020). Only 3% of the respondent base refused to respond.



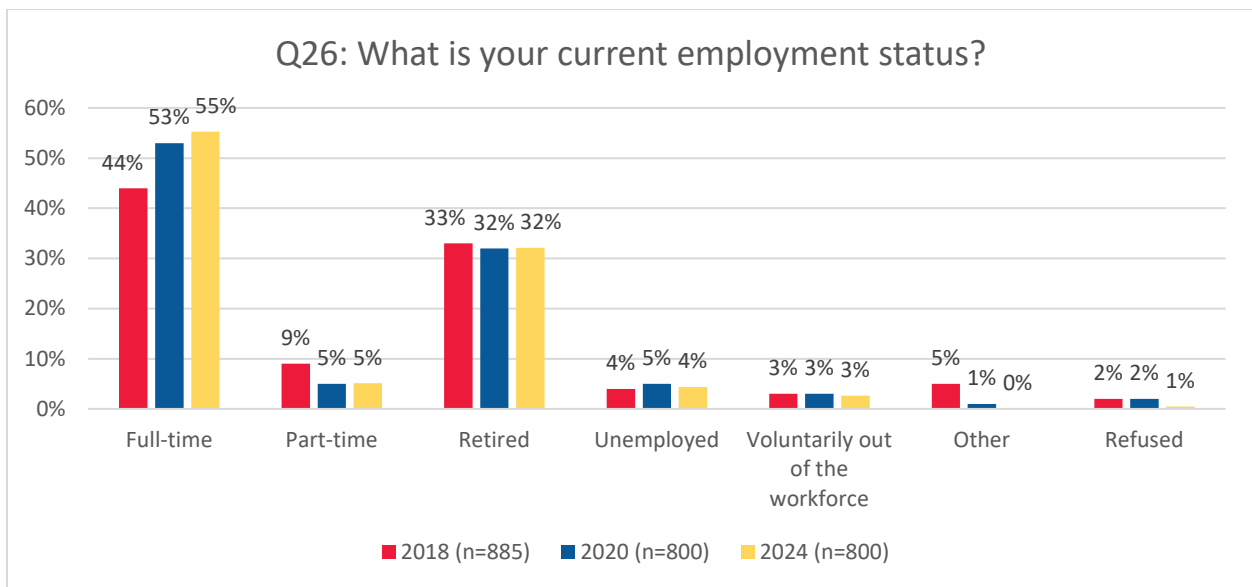
Title: Q25: What is the highest level of schooling you have completed?

Description: The triple bar graph above shows the percentage trending of the residents’ highest level of education they completed. The percentage value for each category is as follows:

- Some high school or less in 2018: 2 percent
- Some high school or less in 2020: 2 percent
- Some high school or less in 2024: 2 percent
- High school graduate or equivalent in 2018: 16 percent
- High school graduate or equivalent in 2020: 18 percent
- High school graduate or equivalent in 2024: 18 percent
- Technical or vocational training in 2018: 9 percent
- Technical or vocational training in 2020: 5 percent
- Technical or vocational training in 2024: 5 percent
- Some college in 2018: 40 percent
- Some college in 2020: 23 percent
- Some college in 2024: 28 percent
- College degree in 2018: 22 percent
- College degree in 2020: 38 percent

College degree in 2024: 38 percent
 Postgraduate studies or higher in 2018: 10 percent
 Postgraduate studies or higher in 2020: 12 percent
 Postgraduate studies or higher in 2024: 12 percent
 Refused in 2018: 0 percent
 Refused in 2020: 3 percent
 Refused in 2024: 3 percent

A majority of respondents (55%) report being employed full-time with another third (32%) of the sample stating they are retired. Furthermore, refusal rates for employment status remain low, with only 1% of respondents refusing to identify. Overall, employment status in 2024 is statistically similar to the 2020 sample.



Title: Q26: What is your current employment status?

Description: The triple bar graph above shows the percentage trending of the residents’ current employment status. The percentage value for each category is as follows:

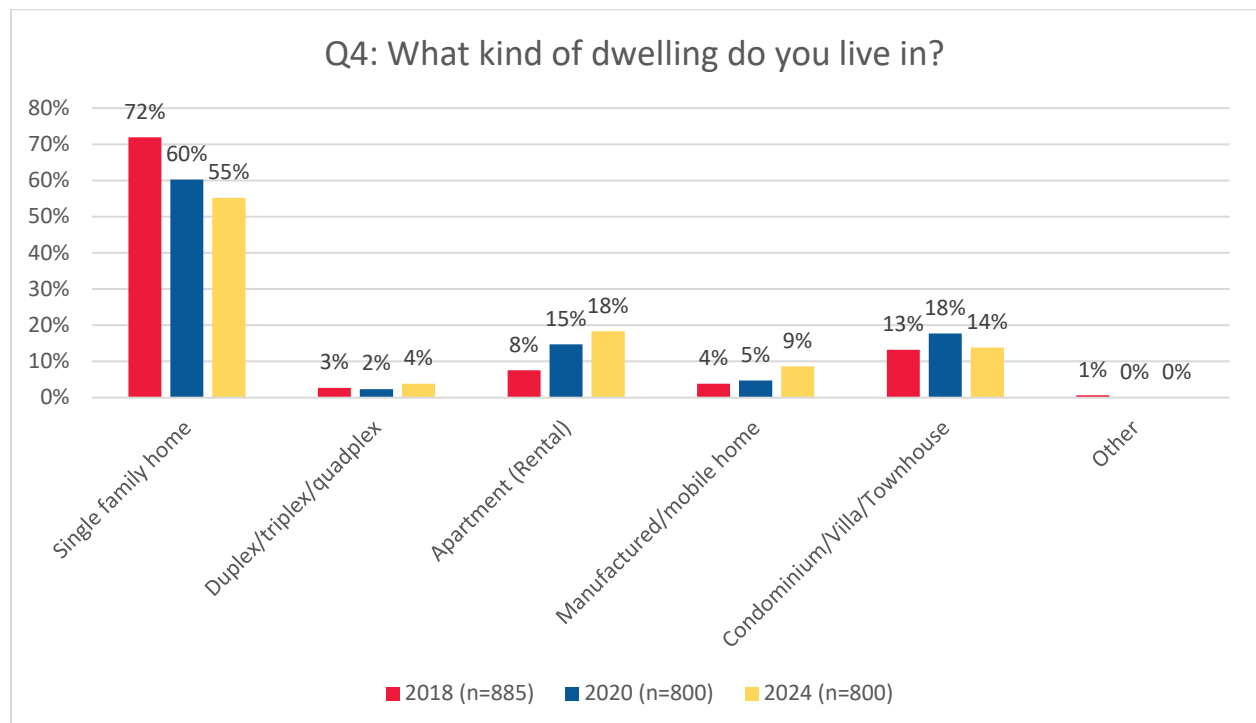
Full-time in 2018: 44 percent
 Full-time in 2020: 53 percent
 Full-time in 2024: 55 percent
 Part-time in 2018: 9 percent
 Part-time in 2020: 5 percent
 Part-time in 2024: 5 percent
 Retired in 2018: 33 percent
 Retired in 2020: 32 percent
 Retired in 2024: 32 percent
 Unemployed in 2018: 4 percent
 Unemployed in 2020: 5 percent

Unemployed in 2024: 4 percent
 Voluntarily out of the workforce in 2018: 3 percent
 Voluntarily out of the workforce in 2020: 3 percent
 Voluntarily out of the workforce in 2024: 3 percent
 Other in 2018: 5 percent
 Other in 2020: 1 percent
 Other in 2024: 0 percent
 Refused in 2018: 2 percent
 Refused in 2020: 2 percent
 Refused in 2024: 1 percent

Recycling by Housing Type

The next section of questions is segmented by housing type. Those who live in single-family housing answer questions about curbside recycling, whereas those who live in multifamily housing discuss recycling at their complex. To funnel residents to the appropriate questions, those who select “single-family home” or “duplex/triplex/quadplex” proceed to the single-family section. The remaining housing types go to the multifamily section. Multifamily housing in this study includes those living in a “condominium/villa/townhouse,” “apartment,” “manufactured/mobile home,” and “other.”

Single-family participation slightly decreased in 2024 (from 62% in 2020 to 59% in 2024) while multifamily participation subsequently increased (from 38% in 2020 to 41% in 2024).



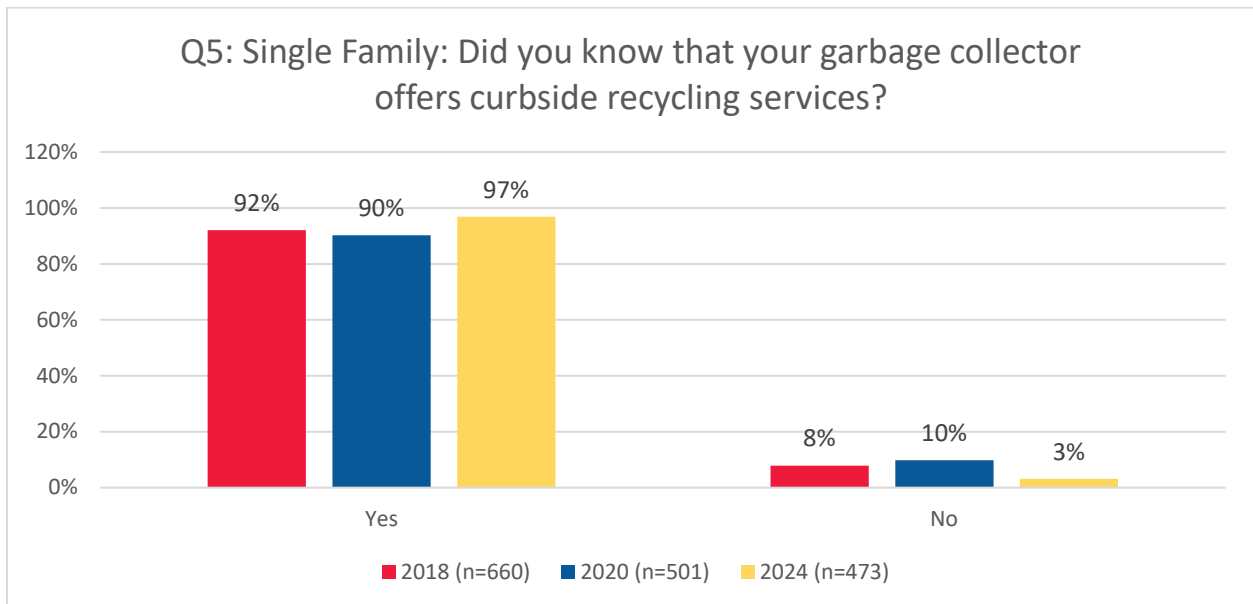
Title: Q4: What kind of dwelling do you live in?

Description: The double bar graph above shows the percentage trending of the residents’ type of dwelling. The percentage value for each category is as follows:

Single-family home in 2018: 72 percent
 Single-family home in 2020: 60 percent
 Single-family home in 2020: 55 percent
 Duplex or triplex or quadplex in 2018: 3 percent
 Duplex or triplex or quadplex in 2020: 2 percent
 Duplex or triplex or quadplex in 2020: 4 percent
 Apartment (rental) in 2018: 8 percent
 Apartment (rental) in 2020: 15 percent
 Apartment (rental) in 2020: 18 percent
 Manufactured or mobile home in 2018: 4 percent
 Manufactured or mobile home in 2020: 5 percent
 Manufactured or mobile home in 2024: 9 percent
 Condominium or villa or townhouse in 2018: 13 percent
 Condominium or villa or townhouse in 2020: 18 percent
 Condominium or villa or townhouse in 2024: 14 percent
 Other in 2018: 1 percent
 Other in 2020: 0 percent
 Other in 2020: 0 percent

Single-Family

Those living in a single-family home or a duplex/triplex/quadplex were first asked if they knew their garbage collector offers curbside recycling services. Only 3% of Pinellas County residents are unaware of this. This is a notable and statistically significant decrease in the number of single-family residents unaware of curbside recycling services, which is a sign of increased awareness across the county.

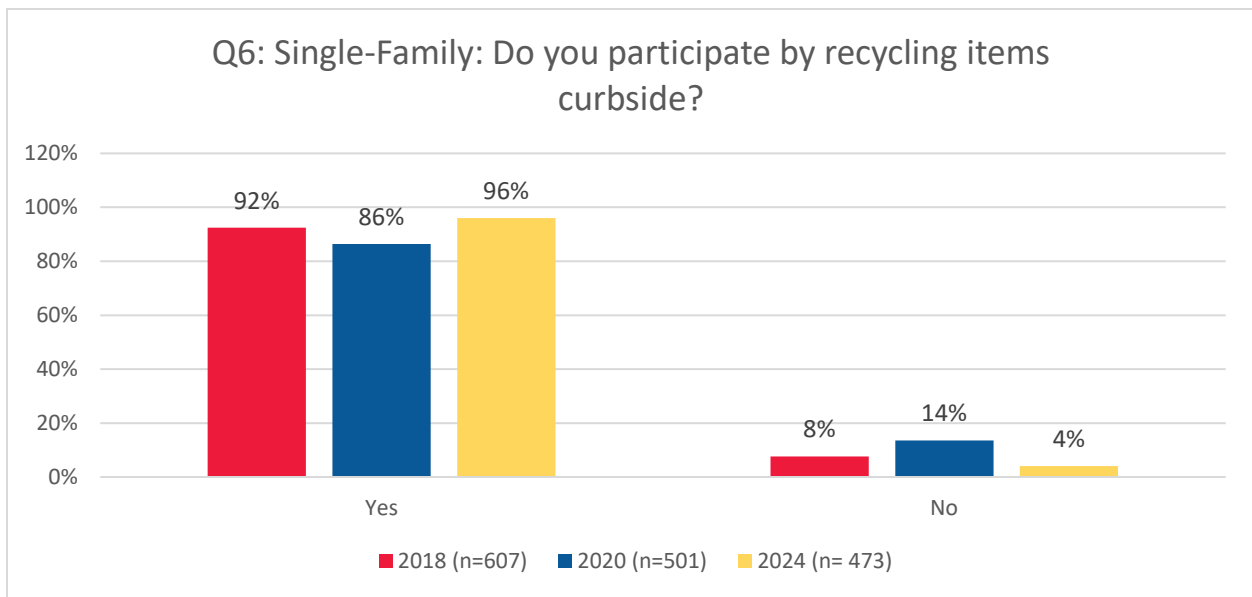


Title: Q5: Single-Family: Did you know that your garbage collector offers curbside recycling services?

Description: The triple bar graph above shows the percentage trending of single-family housing residents who are aware that their garbage collector offers curbside recycling services. The percentage value for each category is as follows:

- Aware in 2018: 92 percent
- Aware in 2020: 90 percent
- Aware in 2024: 97 percent
- Unaware in 2018: 8 percent
- Unaware in 2020: 10 percent
- Unaware in 2024: 3 percent

While all single-family residents have recycling available to them, there are still residents who do not utilize the service. However, compared to 2020, single-family housing participation in curbside recycling has significantly increased. In 2024, 96% of single-family households report recycling items curbside. This is a 10-percentage point increase from 2020 when only 86% of respondents stated they participated. A detailed look at unincorporated respondents is further discussed in the Unincorporated Recycling Participation section.

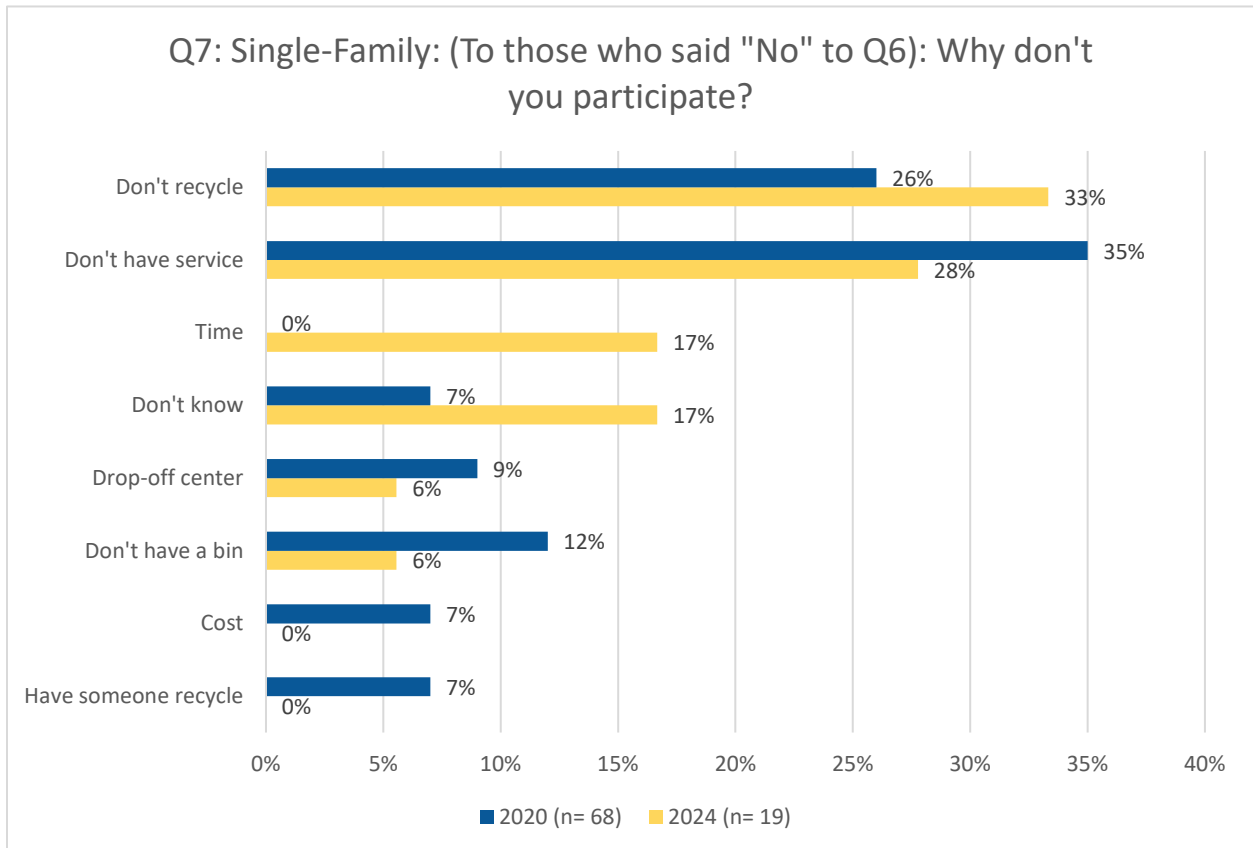


Title: Q6: Single-Family: Do you participate by recycling items curbside?

Description: The triple bar graph above shows the percentage trending of the single-family household residents that participate in recycling curbside. The percentage value for each category is as follows:

- Recycle curbside in 2018: 92 percent
- Recycle curbside in 2020: 86 percent
- Recycle curbside in 2024: 96 percent
- Do not recycle curbside in 2018: 8 percent
- Do not recycle curbside in 2020: 14 percent
- Do not recycle curbside in 2024: 4 percent

The respondents who do not participate in curbside recycling were asked why they do not participate in recycling. The question was open-ended and classified into different categories. The most common reason cited as to why they do not participate is because they just do not recycle for some reason (33%). Over a fourth (28%) of respondents stated they do not have the service available to them. Respondents also mentioned that they go to a drop-off center (6%), do not have a bin (6%), and do not have the time (17%). However, this only represented 19 respondents, which further illustrates how many single-family households do recycle. A full list of verbatim responses can be found in [Appendix D](#).



Title: Q7: Single-Family: (To those who said "No" to Q6): Why don't you participate?

Description: The bar graph above shows the percentage trending of single-family residents' reasons why they do not participate in curbside recycling. The percentage value for each category is as follows:

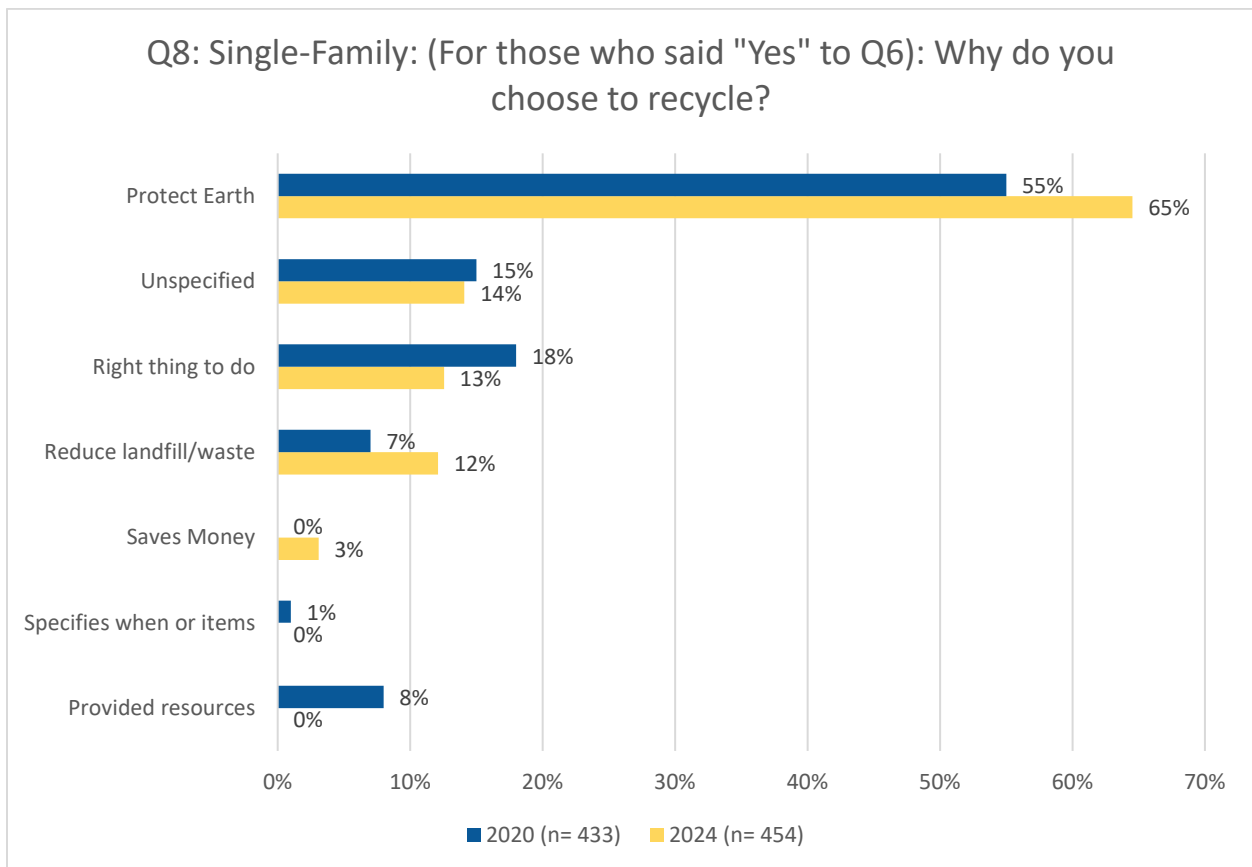
- Don't recycle in 2020: 26 percent
- Don't recycle in 2024: 33 percent
- Don't have service in 2020: 35 percent
- Don't have service in 2024: 28 percent
- Time in 2020: 0 percent
- Time in 2024: 17 percent
- Don't know in 2020: 7 percent
- Don't know in 2024: 17 percent
- Drop-off center in 2020: 9 percent

Drop-off center in 2024: 6 percent
 Don't have a bin in 2020: 12 percent
 Don't have a bin in 2024: 6 percent
 Cost in 2020: 7 percent
 Cost in 2024: 0 percent
 Have someone recycle in 2020: 7 percent
 Have someone recycle in 2024: 0 percent

Respondents that do recycle curbside were asked why they recycle in an open-ended question. The responses were coded into categories in the graph below. The “unspecified” category includes general responses about why they recycle, such as to protect “the future” or “resources.” These responses are broader than protecting “natural resources” or protecting “the Earth.”

The verbatim responses can be viewed in [Appendix D](#).

“Protecting the Earth” was again the most cited reason for recycling with 65% of respondents stating this or something similar. More respondents in 2024 (12% in 2024 from 7% in 2020) mentioned reducing what is going to landfills or garbage bins as a reason to recycle. Additionally, a small percentage (3%) of respondents mentioned the financial savings recycling produces. These respondents were not specific about whether that was savings they received or perceived financial savings in general, but this was not a response seen in 2020.



Title: Q8: Single-Family: (For those who said "Yes" to Q6): Why do you choose to recycle?

Description: The bar graph above shows the percentage trending of single-family residents’ reasons why they participate in curbside recycling. The percentage value for each category is as follows:

- Protect Earth in 2020: 55 percent
- Protect Earth in 2024: 65 percent
- Unspecified in 2020: 15 percent
- Unspecified in 2024: 14 percent
- Right thing to do in 2020: 18 percent
- Right thing to do in 2024: 13 percent
- Reduce landfill or waste in 2020: 7 percent
- Reduce landfill or waste in 2024: 12 percent
- Saves money in 2020: 0 percent
- Saves money in 2024: 3 percent
- Specifies when or items in 2020: 1 percent
- Specifies when or items in 2024: 0 percent
- Provided resources: 8 percent
- Provided resources: 0 percent

Curbside recyclers were then asked about the types of materials they recycle. Plastic bottles and jugs (98%) and cardboard (97%) were the most cited materials recycled. The material the largest share of recyclers reported they did not recycle was glass bottles and jars. This has been the lowest category across the last three studies. However, more than 9 in 10 respondents reported recycling all the materials mentioned, highlighting the ubiquity of recycling what they can.

Some respondents also mentioned they recycled some products and materials not mentioned in the chart. They included other plastic items, motor oil, and batteries. A full list of verbatim responses is available in [Appendix D](#).

Q9: Single-family: Do you recycle the following items curbside? “Yes”

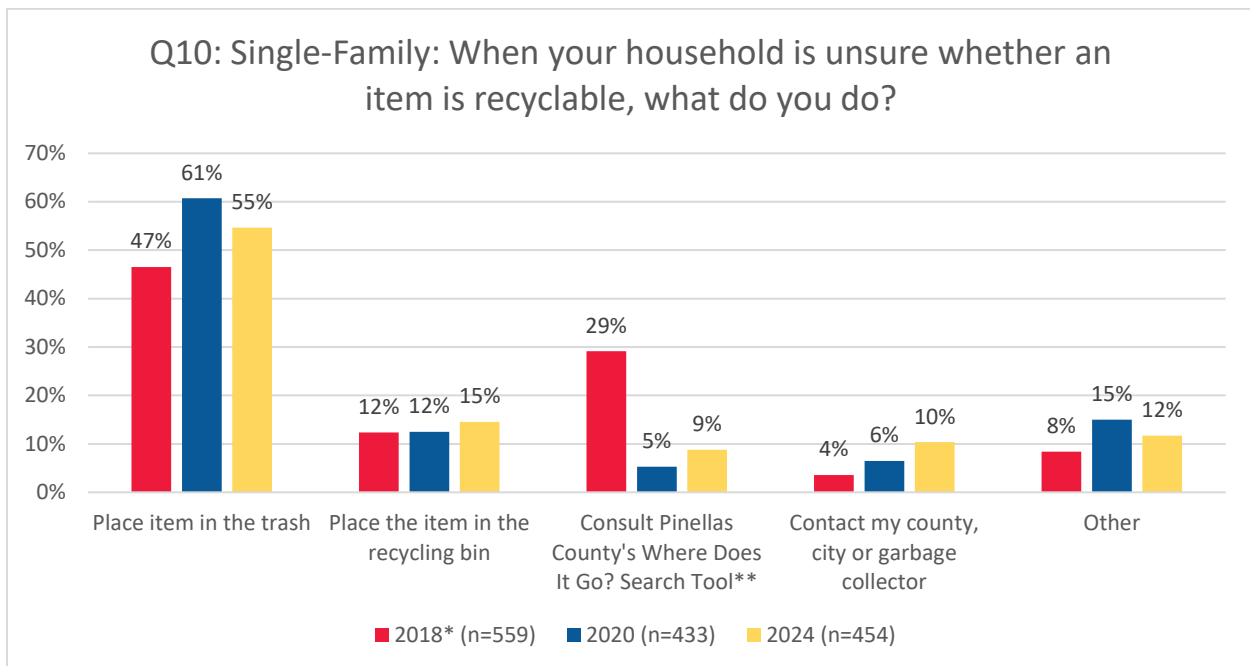
Material type	2018 (n=561)	2020 (n=433)	2024 (n=454)
Metal cans (Aluminum, tin, & steel cans in 2018)	91%	95%	96%
Cardboard	92%	97%	97%
Cartons	75%	94%	96%
Glass bottles and jars	87%	93%	94%
Paper	90%	95%	96%

Plastic bottles and jugs	91%	97%	98%
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In 2024, respondents who indicated they did not recycle glass bottles and jars were given a follow-up question to ask why they did not. Most indicated that they reuse or repurpose them at home (56%). A large segment (40%) of these respondents report they do not use glass bottles or jars. Some (4%) were not aware that glass bottles and jars were recyclable. A full list of verbatim responses is available in [Appendix D](#).

While it is important to recycle, it is also important to recycle correctly. Those who recycle were asked what they do with an item if they are unsure whether the item is recyclable. A majority (55%) state that they place the item in the trash if they are unsure if it can be recycled. This was a significant drop from 2020 when 61% placed the item in the trash if they were unsure. There was a small, but significant increase in the number of respondents who placed the item in the recycling bin (+3 percentage points) and contacted the county, city, or garbage collector (+4 percentage points).

This year, 9% of respondents report that they consult Pinellas County’s Where Does It Go? Search Tool. This was an increase from the percentage of respondents who viewed the County’s A to Z guide for recycling and disposal (which is now the Where Does It Go? Search Tool) in 2020. In 2018, 29% of respondents reported utilizing the tool if they were unsure whether an item was recyclable. The drastic shift in the Where Does It Go? Search Tool’s usage may be due to the shift in survey methodology. Since the 2018 sample was gathered through an online survey, these respondents were more likely to be aware of PCSW. When the survey shifted to a randomized, telephonic methodology, this meant that participants had more varying levels of awareness about PCSW.



Title: Q10: Single-Family: When your household is unsure whether an item is recyclable, what do you do?

Description: The triple bar graph above shows the percentage trending of what single-family residents who recycle do if they are unsure about whether an item can be recycled or not. The percentage value for each category is as follows:

Place item in the trash in 2018: 47 percent

Place item in the trash in 2020: 61 percent

Place item in the trash in 2024: 55 percent

Place item in the recycling bin in 2018: 12 percent

Place item in the recycling bin in 2020: 12 percent

Place item in the recycling bin in 2024: 15 percent

Consult Pinellas County's A to Z guide for recycling and disposal in 2018: 29 percent

Consult Pinellas County's A to Z guide for recycling and disposal in 2020: 5 percent

Consult Pinellas County's Where Does It Go? Search Tool in 2024: 9 percent

Contact my county, city, or garbage collector in 2018: 4 percent

Contact my county, city, or garbage collector in 2020: 6 percent

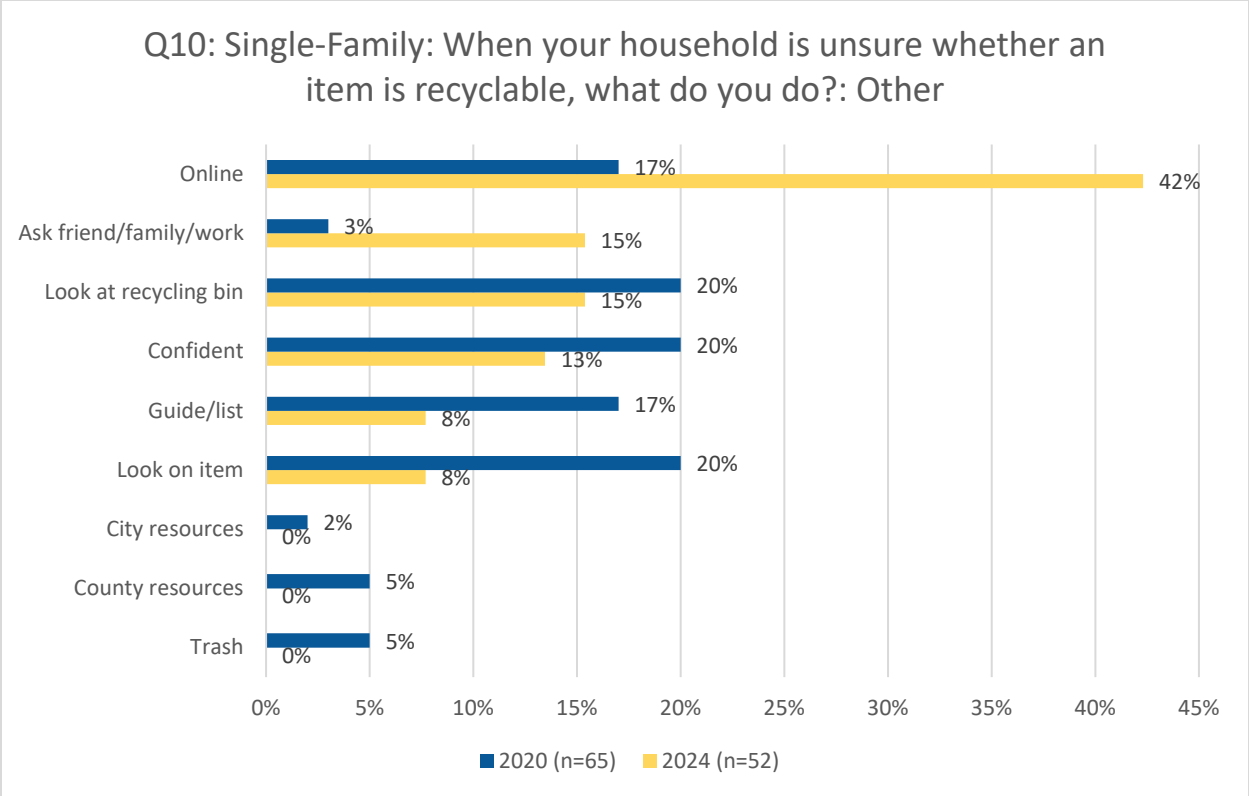
Contact my county, city, or garbage collector in 2024: 10 percent

Other in 2018: 8 percent

Other in 2020: 15 percent

Other in 2024: 12 percent

In 2024, there was a 3-percentage point decrease in those who responded with "other" as the response for what to do when they are unsure if an item is recyclable or not. Those who selected "other" were categorized and put into the graph below. Respondents most often utilized online sources to look up what can be recycled. The same percentage (15%) of respondents state they ask a friend, family member, or colleague and look at the recycling bin. A smaller percentage (13%) mention they are confident in what is recyclable and what is not while only 8% either reference a guide/list or look at the item. A list of verbatim responses is available in [Appendix D](#).



Title: Q10: Single-Family: When your household is unsure whether an item is recyclable, what do you do?: Other

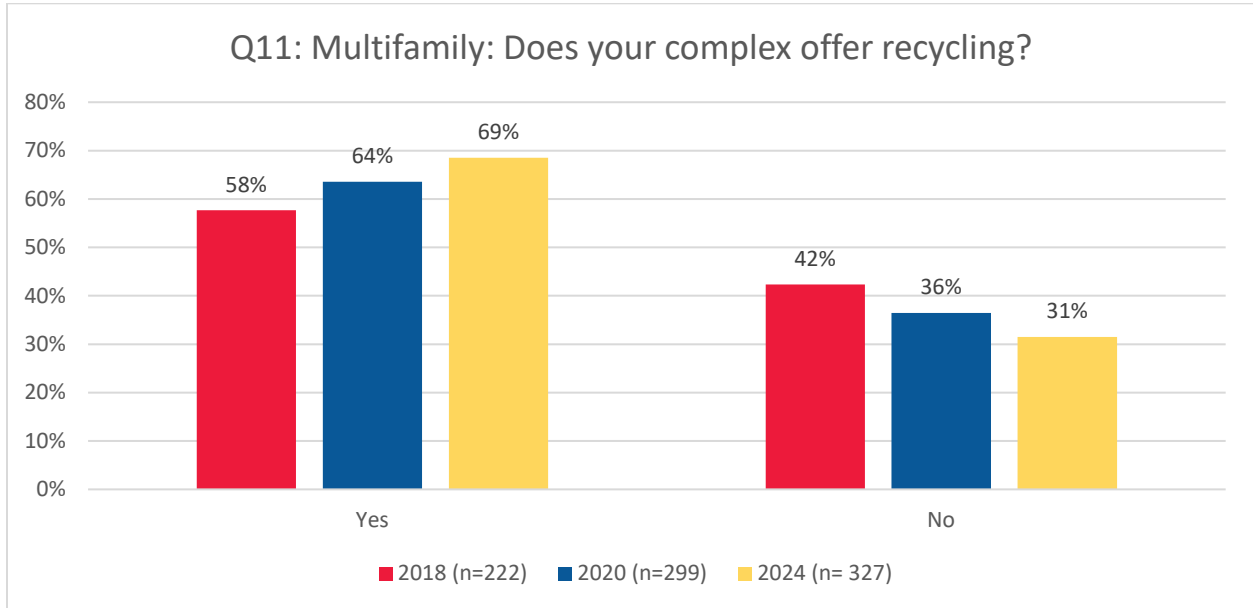
Description: The double bar graph above shows the percentage trending of what single-family residents that recycle do if they are unsure about whether an item can be recycled or not, who selected “Other”. The percentage value for each category is as follows:

- Online in 2020: 17 percent
- Online in 2024: 42 percent
- Ask friend/family/work in 2020: 3 percent
- Ask friend/family/work in 2024: 15 percent
- Look at recycling bin in 2020: 20 percent
- Look at recycling bin in 2024: 15 percent
- Confident in 2020: 20 percent
- Confident in 2024: 13 percent
- Guide/List in 2020: 17 percent
- Guide/List in 2024: 8 percent
- Look on item in 2020: 20 percent
- Look on item in 2024: 8 percent
- City Resource in 2020: 2 percent
- City Resource in 2024: 0 percent
- County Resource in 2020: 5 percent
- County Resource in 2024: 0 percent
- Trash in 2020: 5 percent

Trash in 2024: 0 percent

Multifamily

Those who live in multifamily housing were asked a similar set of questions about recycling in their shared dwellings. Nearly 7 in 10 multifamily residents (69%) said that their complex or community offers recycling services. This represents a significant increase in those living in multifamily housing who have recycling offered to them. A detailed look at unincorporated respondents is further discussed in the Unincorporated Recycling Participation section.



Title: Q11: Multifamily: Does your complex offer recycling?

Description: The triple bar graph above shows the percentage trending of multifamily housing residents who live in a complex that offers recycling. The percentage value for each category is as follows:

Multifamily residences offering recycling at their complex in 2018: 58 percent

Multifamily residences offering recycling at their complex in 2020: 64 percent

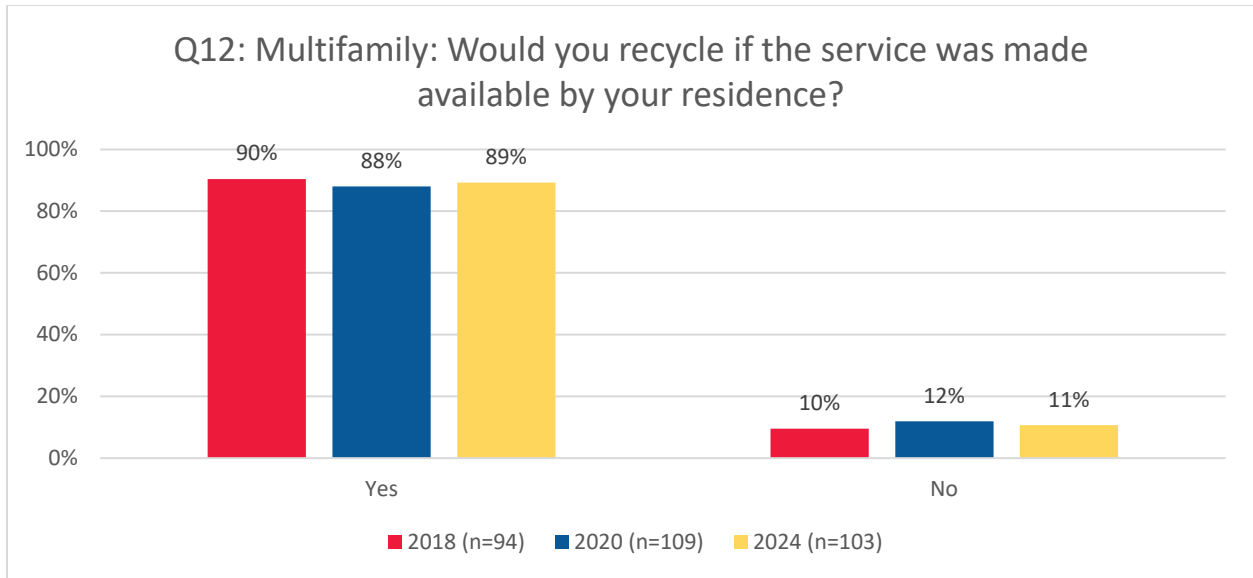
Multifamily residences offering recycling at their complex in 2024: 69 percent

Multifamily residences that do not offer recycling at their complex in 2018: 42 percent

Multifamily residences that do not offer recycling at their complex in 2020: 36 percent

Multifamily residences that do not offer recycling at their complex in 2024: 31 percent

Multifamily residents who are not offered recycling at their complex (31%) were asked whether they would recycle if available. Nearly nine in ten (89%) would utilize the service. This is statistically similar to 2020 (88%) and 2018 (90%).



Title: Q12: Multifamily: Would you recycle if the service was made available by your residence?

Description: The double bar graph above shows the percentage trending of multifamily housing residents who do not have recycling at their complex and were asked if they would participate if it were available at their residence. The percentage value for each category is as follows:

Would recycle if service made available in 2018: 90 percent

Would recycle if service made available in 2020: 88 percent

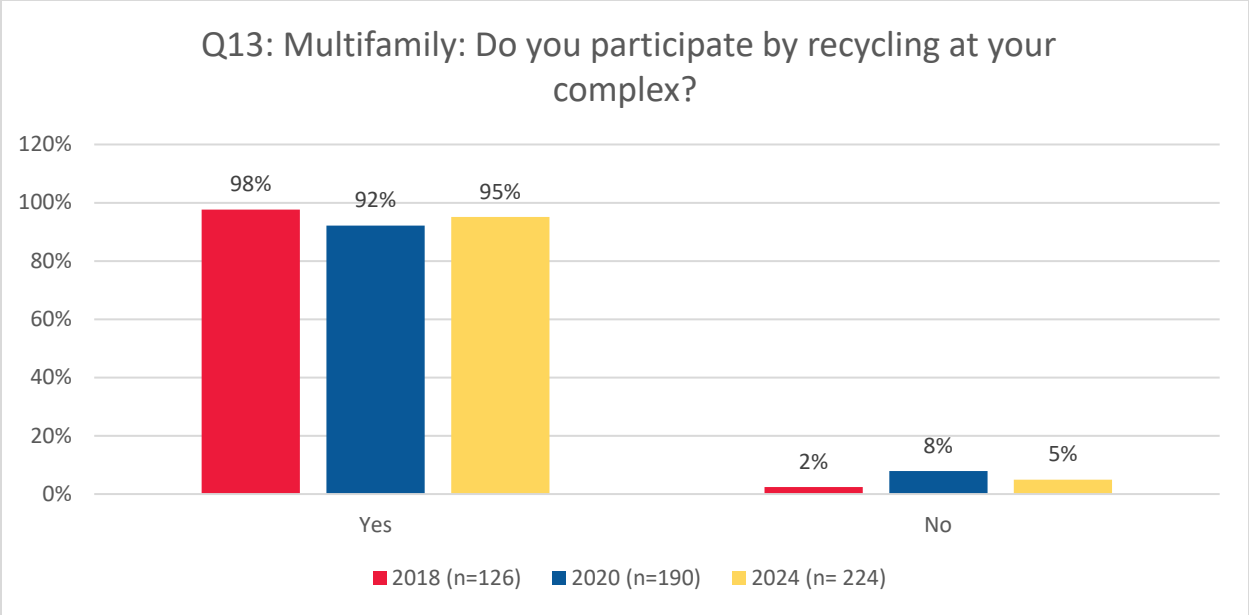
Would recycle if service made available in 2024: 89 percent

Still would not recycle if service made available in 2018: 10 percent

Still would not recycle if service made available in 2020: 12 percent

Still would not recycle if service made available in 2024: 11 percent

The respondents who can recycle in their multifamily residence (69%) were asked whether they participate. More than nine in ten (95%) are recycling at their multifamily residence. There was a small, significant increase from 2020 in the number of residents in multifamily housing recycling. A detailed look at unincorporated respondents is further discussed in the Unincorporated Recycling Participation section.



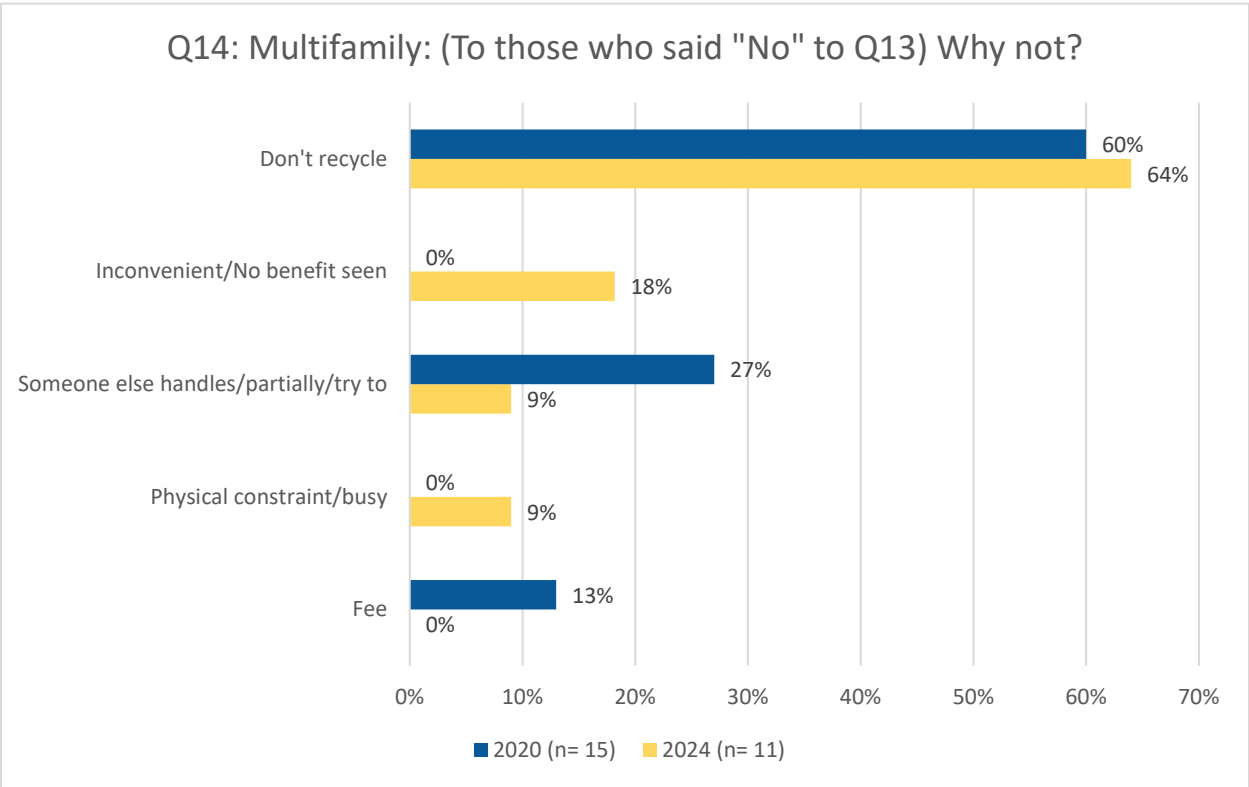
Title: Q13: Multifamily: Do you participate by recycling at your complex?

Description: The triple bar graph above shows the percentage trending of multifamily housing residents that recycle. The percentage value for each category is as follows:

- Recycle at complex in 2018: 98 percent
- Recycle at complex in 2020: 92 percent
- Recycle at complex in 2024: 95 percent
- Do not recycle at complex in 2018: 2 percent
- Do not recycle at complex in 2020: 8 percent
- Do not recycle at complex in 2024: 5 percent

Multifamily housing residents offered recycling but do not participate (5%) answered an open-ended question asking why they did not participate. The majority (64%) do not provide any specific reason for not recycling. A few respondents mentioned they do not see any change from recycling, it is inconvenient, or they are too busy.

A full list of verbatim responses is available in [Appendix D](#).

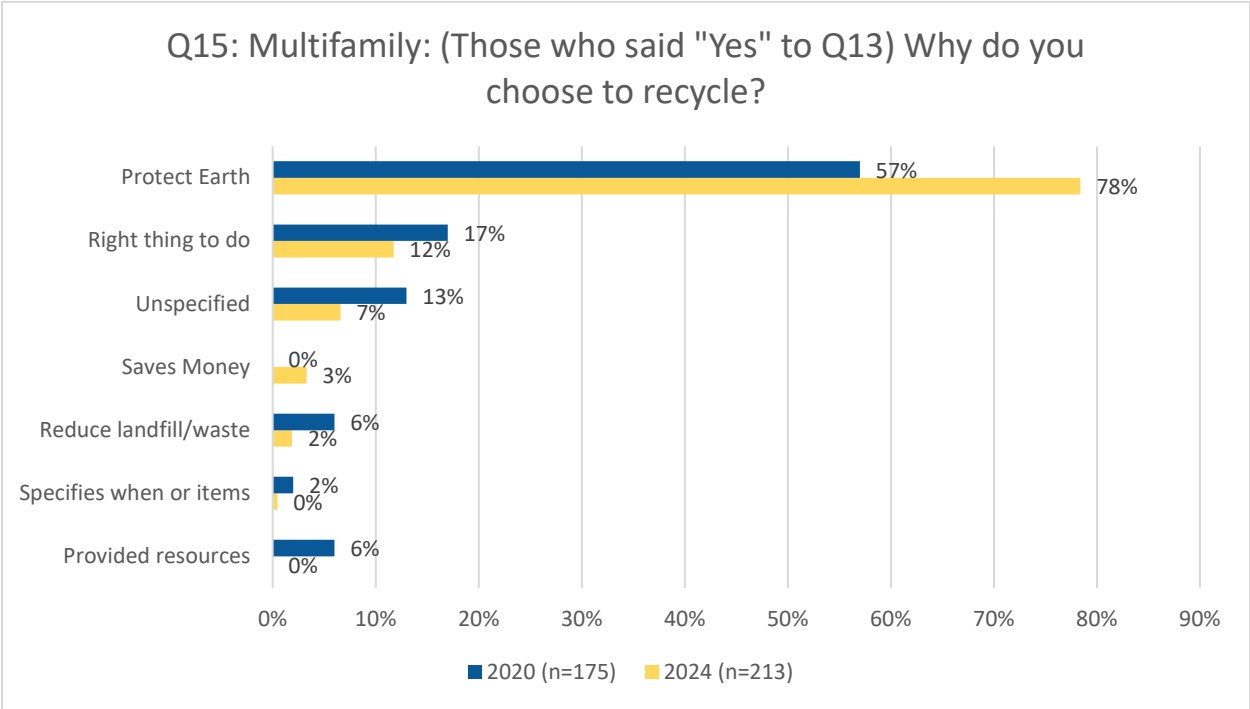


Title: Q14: Multifamily: (To those who said "No" to Q13) Why not?

Description: The double bar graph above shows the percentage trending of multifamily housing residents’ reasons for why they do not recycle. The percentage value for each category is as follows:

- Don't recycle in 2020: 60 percent
- Don't recycle in 2024: 64 percent
- Inconvenient/No benefit seen in 2020: 0 percent
- Inconvenient/No benefit seen in 2024: 18 percent
- Someone else handles/partially/try to in 2020: 27 percent
- Someone else handles/partially/try to in 2024: 9 percent
- Physical constraints/busy in 2020: 0 percent
- Physical constraints/busy in 2024: 9 percent
- Fee in 2020: 13 percent
- Fee in 2024: 0 percent

For multifamily housing residents who have recycling services offered and participate, an open-ended question asking why they choose to recycle was presented to them. Multifamily housing residents cited protecting the Earth (78%) more often than single-family residents. Moreover, protecting the Earth as the reason for recycling was more often cited by multifamily housing residents in 2024 compared to 2020 (57%). Other respondents noted that recycling was the right thing to do (12%), helped save money (3%), and reduced what went to landfills (2%). Less than 1 in 10 (7%) respondents provided an unspecified answer to why they recycled. A full list of verbatim responses is available in [Appendix D](#).



Title: Q15: Multifamily: (Those who said "Yes" to Q13) Why do you choose to recycle?

Description: The double bar graph above shows the percentage trending of residents that live in multifamily housing’s reasons for why they recycle. The percentage value for each category is as follows:

- Protect Earth in 2020: 57 percent
- Protect Earth in 2024: 78 percent
- Right thing to do in 2020: 17 percent
- Right thing to do in 2024: 12 percent
- Unspecified in 2020: 13 percent
- Unspecified in 2024: 7 percent
- Saves money in 2020: 0 percent
- Saves money in 2024: 3 percent
- Reduce landfill or waste in 2020: 6 percent
- Reduce landfill or waste in 2024: 2 percent
- Specifies when or items in 2020: 2 percent
- Specifies when or items in 2024: 0 percent
- Provided resources in 2020: 2 percent
- Provided resources in 2024: 0 percent

Multifamily residents were also asked which materials they recycle. Multifamily residents who have recycling offered nearly universally recycle all of the materials mentioned in the table below. A few respondents (1%) note they do not recycle metal cans, cartons, glass bottles and jars, and paper.

Q16: Do you recycle the following items at your complex? “Yes”

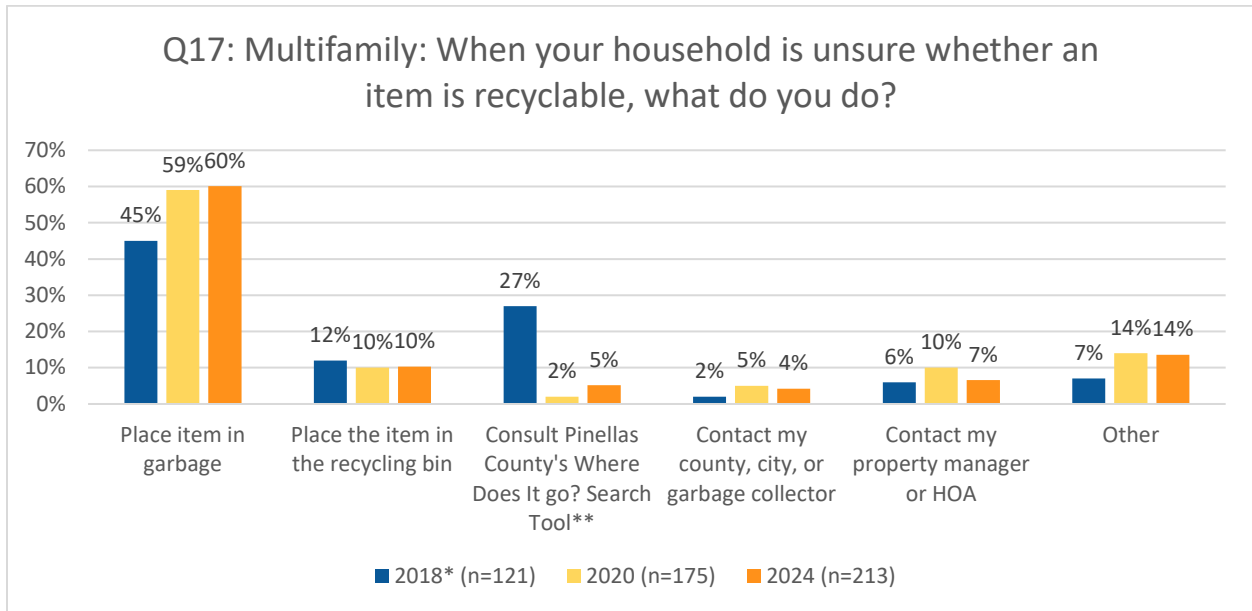
Material type	2018 (n=123)	2020 (n=175)	2024 (n=123)
Metal cans (Aluminum, tin, & steel cans in 2018)	84%	93%	99%
Cardboard	89%	95%	100%
Cartons	73%	91%	99%
Glass bottles and jars	82%	89%	99%
Paper	85%	95%	99%
Plastic bottles and jugs	84%	97%	100%

In 2024, respondents who indicated they did not recycle glass bottles and jars were asked a follow-up question as to why they do not. This represented only a very small proportion of the sample (1.4% of multifamily residents), so no chart is provided. However, like single-family residents, most reused them for other purposes. The only other reason provided for not recycling glass bottles and jars was not having a spot for them.

A full list of verbatim responses is available in [Appendix D](#).

Most multifamily households are placing items they are unsure about in the trash (60%) rather than recycling them. One in ten (10%) mention that they recycle the item. This figure is very similar to single-family residents, suggesting that the residency type does not affect that decision. Multifamily housing residents are slightly more likely to contact their property manager or HOA (7%) than contact the county or city they live in if they are unsure if an item can be recycled. The remaining 14% listed “other,” and the open-ended responses were coded in a graph on the next page. Like the trend in single-family, multifamily respondents were more likely to use the Where Does It Go? Search Tool in 2024 (5%) than in 2020 (2%).

The remaining 14% listed “other,” which is further detailed on the next page.



Title: Q17: Multifamily: When your household is unsure whether an item is recyclable, what do you do?

Description: The double bar graph above shows the percentage trending of what multifamily residents who recycle do if they are unsure about whether an item can be recycled or not. The percentage value for each category is as follows:

Place item in the trash in 2018: 45 percent

Place item in the trash in 2020: 59 percent

Place item in the trash in 2024: 60 percent

Place item in the recycling bin in 2018: 12 percent

Place item in the recycling bin in 2020: 10 percent

Place item in the recycling bin in 2024: 10 percent

Consult Pinellas County's A to Z guide for recycling and disposal in 2018: 27 percent

Consult Pinellas County's A to Z guide for recycling and disposal in 2020: 2 percent

Consult Pinellas County's Where Does It Go? Search Tool in 2024: 5 percent

Contact my county, city, or garbage collector in 2018: 2 percent

Contact my county, city, or garbage collector in 2020: 5 percent

Contact my county, city, or garbage collector in 2024: 4 percent

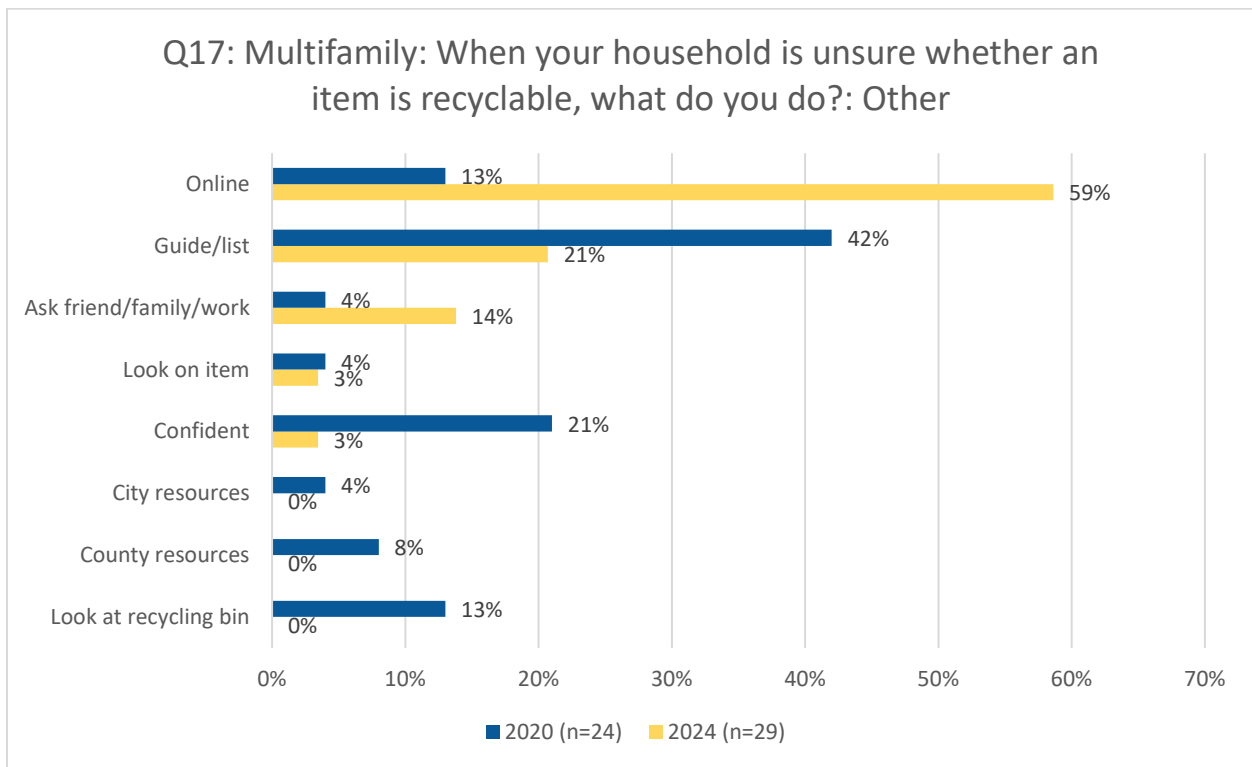
Contact my property manager or HOA in 2018: 6 percent

Contact my property manager or HOA in 2020: 10 percent

Contact my property manager or HOA in 2024: 7 percent
 Other in 2018: 7 percent
 Other in 2020: 14 percent
 Other in 2024: 14 percent

For the 14% of those who responded with “other” regarding what they do if they are unsure if an item is recyclable or not, the most common response, like single-family respondents, is that they reference online sources (59%). One in five multi-family residents (21%) look at a recycling guide/list, and 14% ask a friend, family member, or colleague. Only 3% of respondents either look at the item or are confident that they know it is or is not recyclable.

A full list of verbatim responses is available in [Appendix D](#).



Title: Q17: Multifamily: When your household is unsure whether an item is recyclable, what do you do?: Other

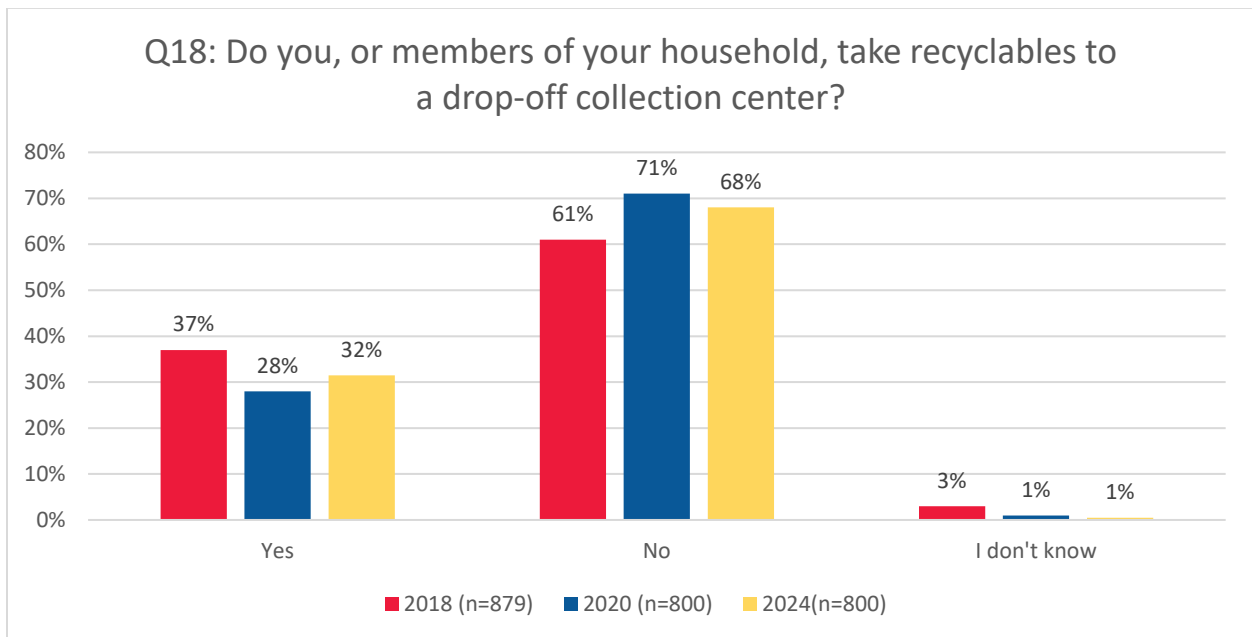
Description: The double bar graph above shows the percentage trending of what multifamily residents who recycle do if they are unsure about whether an item can be recycled or not, who selected “other”. The percentage value for each category is as follows:

Online in 2020: 13 percent
 Online in 2024: 58 percent
 Guide/List in 2020: 42 percent
 Guide/List in 2024: 21 percent
 Ask friend/family/work in 2020: 4 percent
 Ask friend/family/work in 2024: 14 percent

Look on item in 2020: 4 percent
 Look on item in 2024: 3 percent
 Confident in 2020: 21 percent
 Confident in 2024: 3 percent
 City Resource in 2020: 3 percent
 City Resource in 2024: 0 percent
 County Resource in 2020: 8 percent
 County Resource in 2024: 0 percent
 Look at recycling bin in 2020: 13 percent
 Look at recycling bin in 2024: 0 percent

Recycling Practices

All respondents – single- and multi-family residents – are asked questions about their specific recycling practices. The county provides free recycling drop-off collection centers located throughout the county, including unincorporated areas as well as within municipalities, where residents may go to recycle items typically accepted at a multifamily dwelling or a curbside program. Respondents were asked if they or if some members of their household utilize these drop-off centers. About one in three (33%) go to collection sites, while just under seven in ten (68%) do not, and the remaining 1% are unsure. A detailed look at unincorporated respondents is further discussed in the Unincorporated Recycling Participation section.



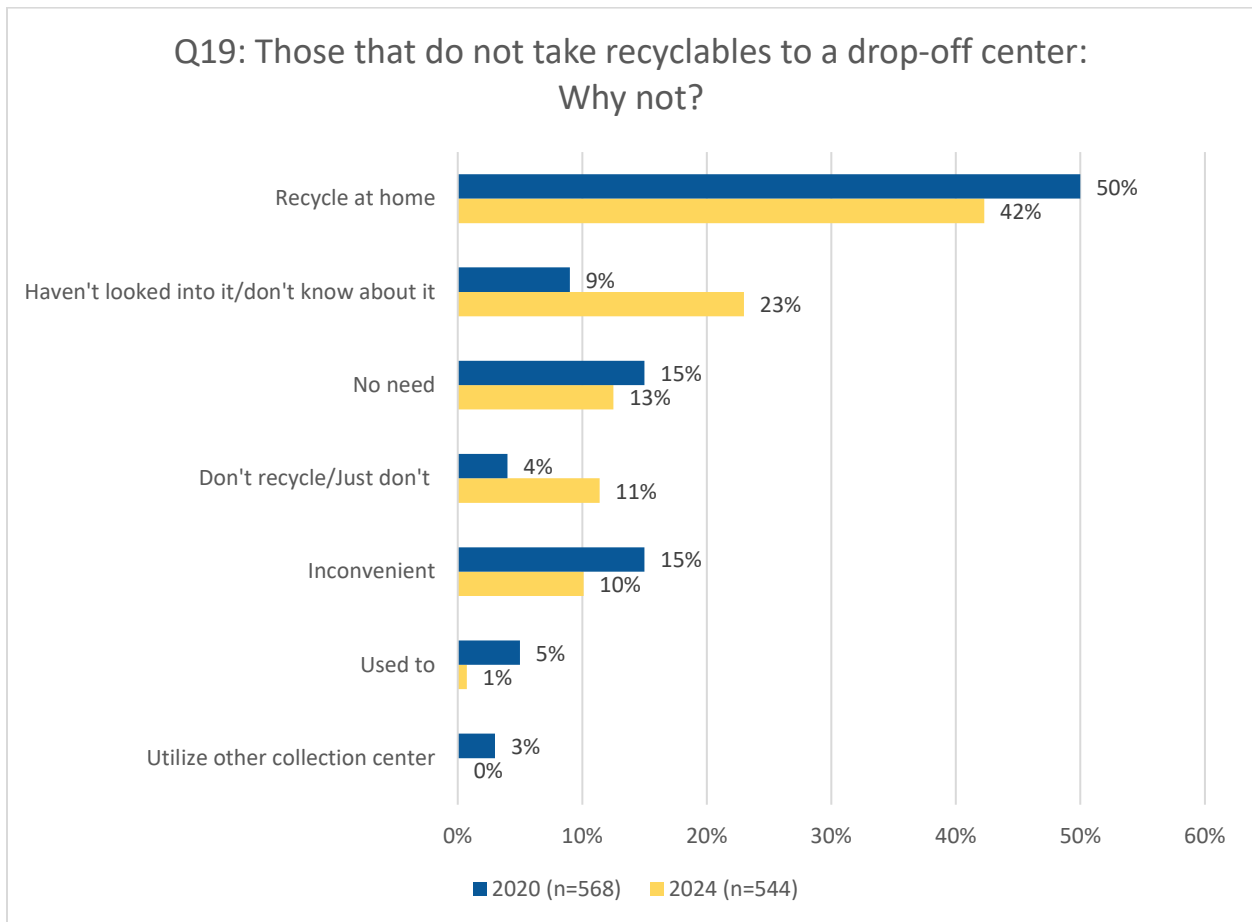
Title: Q18: Do you, or members of your household, take recyclables to a drop-off collection center?

Description: The triple bar graph above shows the percentage trending of the residents that utilize a drop-off collection center. The percentage value for each category is as follows:

Yes in 2018: 37 percent
 Yes in 2020: 28 percent

Yes in 2024: 32 percent
 No in 2018: 61 percent
 No in 2020: 71 percent
 No in 2024: 68 percent
 I don't know in 2018: 3 percent
 I don't know in 2020: 1 percent
 I don't know in 2024: 1 percent

Those that do not utilize the drop-off centers were asked why they do not. The most common reason for not using the drop-off centers is because they already recycle at home (42%). This was also the most cited reason in 2020 (50%), but there is a significant decrease in the number of respondents between the two studies. Nearly a quarter (23%) indicated that they did not know about the drop-off centers. About one in seven residents (15%) stated they have no need to go to the drop-off center while one in ten (10%) perceive it to be inconvenient. About a tenth (11%) of the sample do not recycle while only 1% used to take recyclables to a drop-off center. A full list of verbatim responses is available in [Appendix D](#). A detailed look at unincorporated respondents is further discussed in the Unincorporated Recycling Participation section.



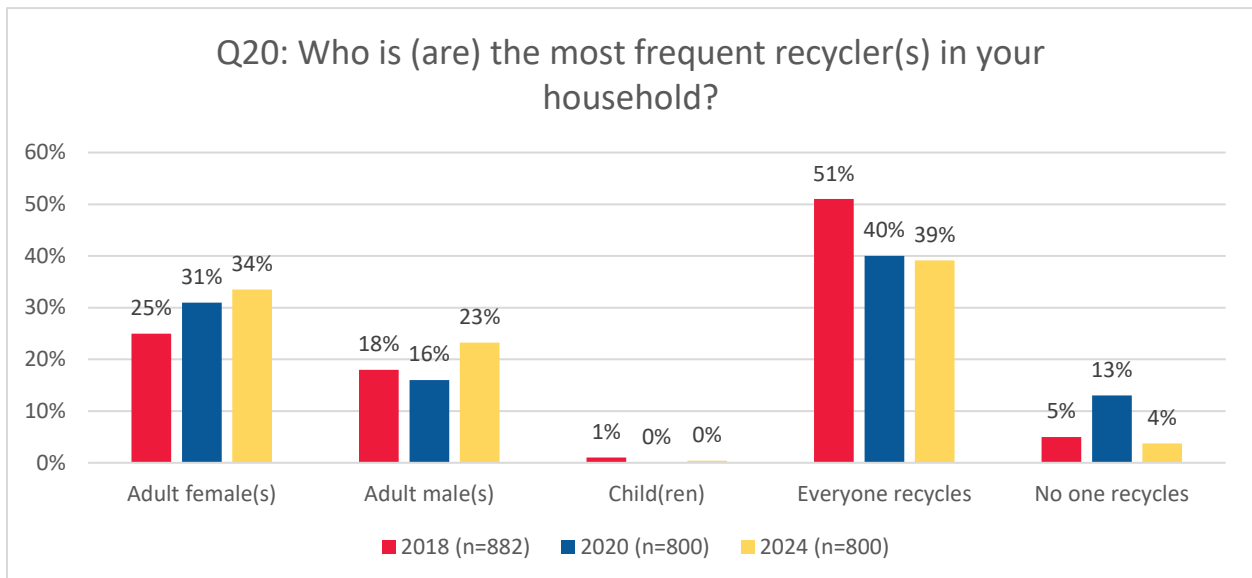
Title: Q19: Those that do not take recyclables to a drop-off center: Why not?

Description: The bar graph above shows the percentage trending of the residents’ reasoning on why they do not utilize drop-off collection centers. The percentage value for each category is as follows:

- Recycle at home in 2020: 50 percent
- Recycle at home in 2024: 42 percent
- Haven’t looked into it or don’t know about it in 2020: 9 percent
- Haven’t looked into it or don’t know about it in 2024: 23 percent
- No need in 2020: 15 percent
- No need in 2024: 15 percent
- Don’t recycle or just don’t use in 2020: 4 percent
- Don’t recycle or just don’t use in 2024: 11 percent
- Inconvenient in 2020: 15 percent
- Inconvenient in 2024: 10 percent
- Used to in 2020: 5 percent
- Used to in 2024: 1 percent
- Utilize other collection centers in 2020: 3 percent
- Utilize other collection centers in 2024: 0 percent

Respondents were asked about the member(s) of their household who engage(s) with recycling the most. About two in five (39%) say everyone in their household participates, while 34% state the most frequent recyclers are adult female(s). Under one in four (23%) state the most frequent recyclers in their household are men. Only 4% say no one recycles, which is a significant decrease from 2020 (13% in 2020).

There was no significant change in households stating everyone recycles, and a significant increase in the percentage of adult males being the most recyclers.



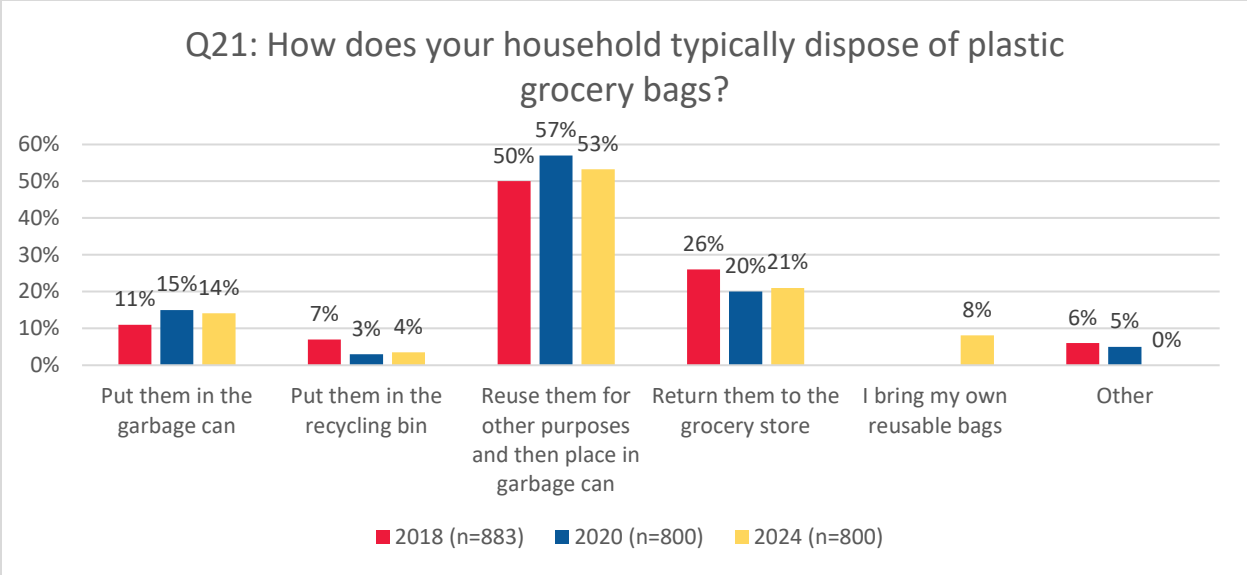
Title: Q20: Who is (are) the most frequent recycler(s) in your household?

Description: The double bar graph above shows the percentage trending of the most frequent recyclers per household. The percentage value for each category is as follows:

Adult female(s) in 2018: 25 percent
Adult female(s) in 2020: 31 percent
Adult female(s) in 2024: 34 percent
Adult male(s) in 2018: 18 percent
Adult male(s) in 2020: 16 percent
Adult male(s) in 2024: 23 percent
Children in 2018: 1 percent
Children in 2020: 0 percent
Children in 2024: 0 percent
Everyone recycles in 2018: 51 percent
Everyone recycles in 2020: 40 percent
Everyone recycles in 2024: 39 percent
No one recycles in 2018: 5 percent
No one recycles in 2020: 13 percent
No one recycles in 2024: 4 percent

Plastic grocery bags are ubiquitous in the United States, as the country uses around 10 billion of them each year (Earth911, 2023). Beyond the environmental impact, they can also pose an issue for solid waste departments when not disposed of properly. Plastic grocery bags easily get tangled in recycling equipment, causing them to slow down or stop a facility's recycling operations. Positively, the vast majority (96%) of respondents state that they are not placing them in the recycling bin. This means that there are still 4% of households that are placing plastic bags into the recycling bin. Most residents (53%) repurpose them and then throw the bags away. One in five (21%) take bags to the grocery store to be recycled, and 14% throw them away after their first use.

In 2024, an additional option was added to see what percentage of County residents bring their reusable grocery bags with them when shopping. Just under one in ten (8%) report using reusable grocery bags when they shop. When comparing the percentage who reported bringing their own reusable grocery bags as an "other" disposal method in 2020 to those who answered in 2024, we do see a small, but statistically significant increase in those utilizing reusable bags. This presents an opportunity to continue to message the importance of using reusable bags to reduce the number of plastic grocery bags used and the number that end up in garbage bins.



Title: Q21: How does your household typically dispose of plastic grocery bags?

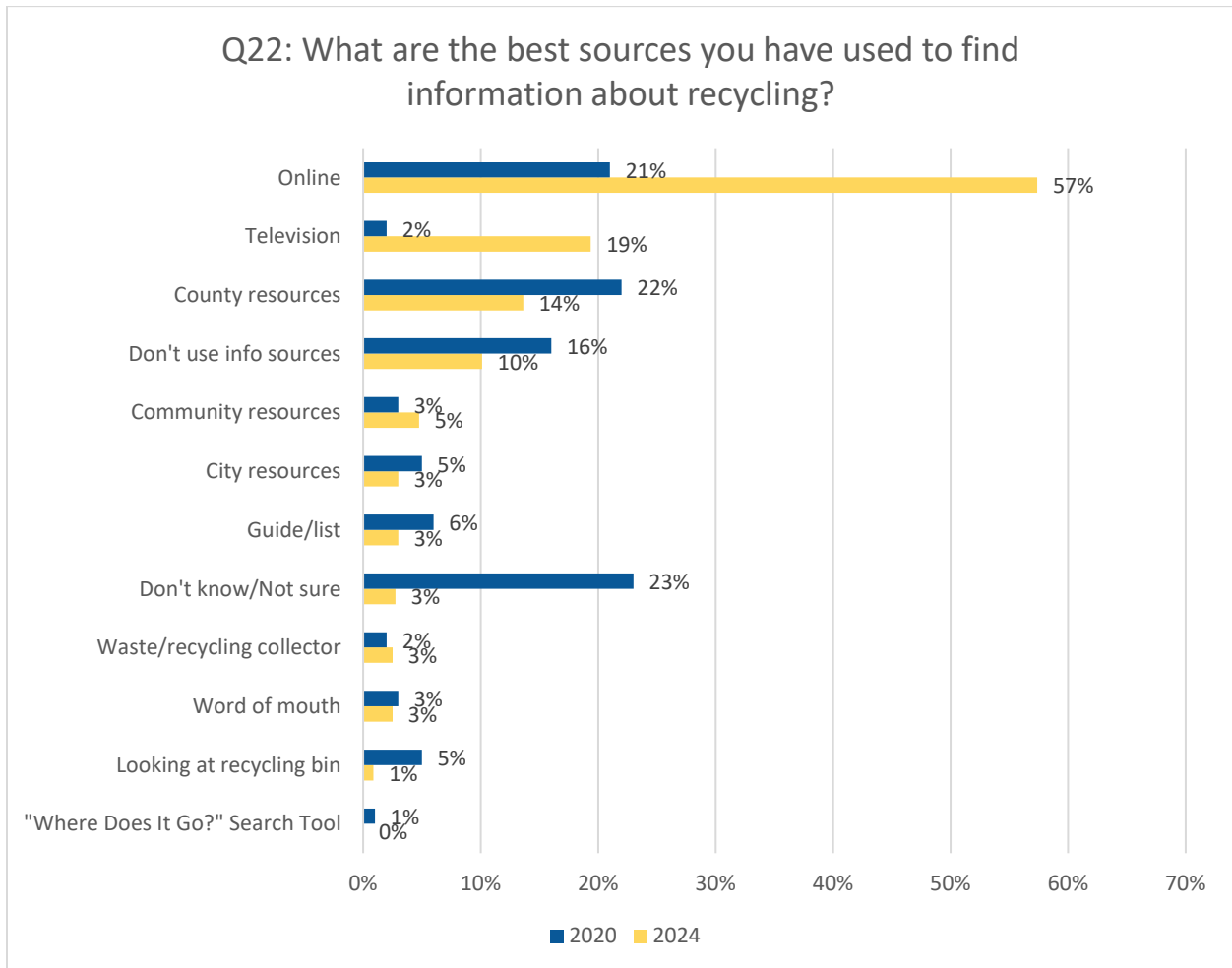
Description: The triple bar graph above shows the percentage trending of how residents dispose of plastic grocery bags. The percentage value for each category is as follows:

- Put them in the trash can in 2018: 11 percent
- Put them in the trash can in 2020: 15 percent
- Put them in the trash can in 2024: 14 percent
- Put them in the recycling bin in 2018: 7 percent
- Put them in the recycling bin in 2020: 3 percent
- Put them in the recycling bin in 2024: 4 percent
- Reuse them for other purposes and then place in trash can in 2018: 50 percent
- Reuse them for other purposes and then place in trash can in 2020: 57 percent
- Reuse them for other purposes and then place in trash can in 2024: 53 percent
- Return them to the grocery store in 2018: 26 percent
- Return them to the grocery store in 2020: 20 percent
- Return them to the grocery store in 2024: 21 percent
- I bring my own reusable bags in 2018: Not asked
- I bring my own reusable bags in 2020: Not asked
- I bring my own reusable bags in 2024: 8 percent
- Other in 2018: 6 percent
- Other in 2020: 5 percent
- Other in 2024: 0 percent

All respondents were asked about their preferred sources to find information about recycling. The majority of respondents prefer online sources (57%) to find information about recycling. These were general mentions of the Internet, Google, and online. It is clear from the data that residents have turned heavily to online resources for information about recycling and disposal practices. Pinellas County Solid Waste already provides several online resources for residents to understand recycling and disposal in the County, but they were not explicitly mentioned by respondents. This may suggest that the searchability

of these resources could be improved so residents can receive proper information about recycling for their community. Another fifth (19%) of respondents find that television is a good source of information about recycling while one in seven residents find County resources to be the best source of information. One in ten do not seek out information about recycling and 3% were unsure. This is a noticeable improvement from 2020, when 16% did not seek information on recycling and 23% were not sure of the best sources. However, the use of County resources and guides or lists significantly fell.

A list of verbatim responses is available in [Appendix D](#).



Title: Q22: What are the best sources you have used to find information about recycling?

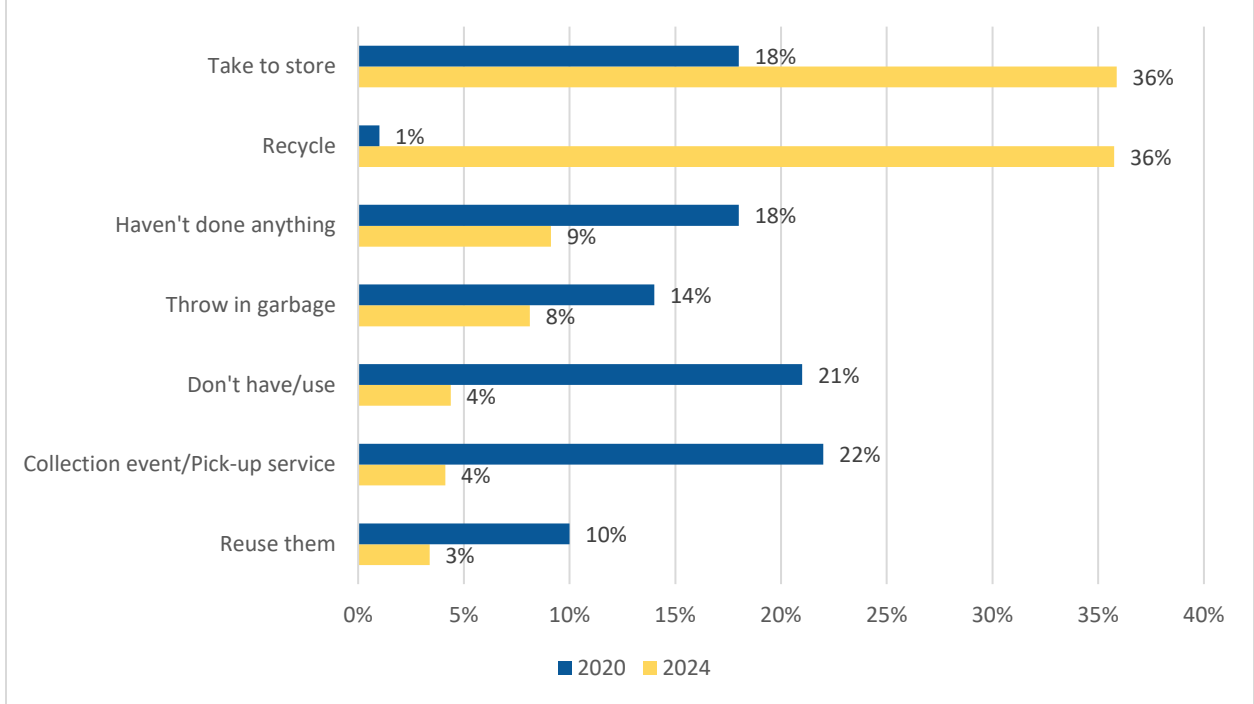
Description: The double bar graph above shows the percentage trending of where residents find the best sources of information about recycling. The percentage value for each category is as follows:

- Online in 2020: 21 percent
- Online in 2024: 57 percent
- Television in 2020: 2 percent
- Television in 2024: 19 percent
- County resources in 2020: 22 percent
- County resources in 2024: 14 percent

Don't use info sources in 2020: 16 percent
Don't use info sources in 2024: 10 percent
Community resources in 2020: 3 percent
Community resources in 2024: 5 percent
City resources in 2020: 5 percent
City resources in 2024: 3 percent
Guide/list in 2020: 6 percent
Guide/list in 2024: 3 percent
Don't know or not sure in 2020: 23 percent
Don't know or not sure in 2024: 3 percent
Waste/recycling collector in 2020: 2 percent
Waste/recycling collector in 2024: 3 percent
Word of mouth in 2020: 3 percent
Word of mouth in 2024: 3 percent
Look at recycling bin in 2020: 5 percent
Look at recycling bin in 2024: 1 percent
"Where Does It Go?" Search Tool in 2020: 0.1 percent
'Where Does It Go?' Search Tool in 2024: 0 percent

Next, respondents were asked what they do with old rechargeable batteries. The question was presented in an open-ended format to capture a variety of behaviors. The most prevalent response was to take them to a store, which doubled in total responses from 2020 (18% in 2020). The next more prevalent response was to recycle them (36%), which was a drastic increase from 2020 (1% said recycle). However, it should be noted that a majority of those responses were generic which does not indicate how they recycled them. On the other hand, fewer respondents in this study stated they threw rechargeable batteries away in the garbage. This speaks to a better understanding amongst residents since 2020 that rechargeable batteries should not be placed in the garbage but there still may be some confusion on if they are recyclable. Under 10% (9%) do nothing with them, do not use them (4%), reuse them (3%), or take them to a collection event or use a pick-up service (3%). A list of verbatim responses is available in [Appendix D](#).

Q24: What do you currently do with your rechargeable batteries? These include any items in which the batteries must be recharged and can be found in items such as laptops, cell phones, wireless headphones, tools, etc.



Title: Q24: What do you currently do with your rechargeable batteries? These include any items in which the batteries must be recharged and can be found in items such as laptops, cell phones, wireless headphones, tools, etc.

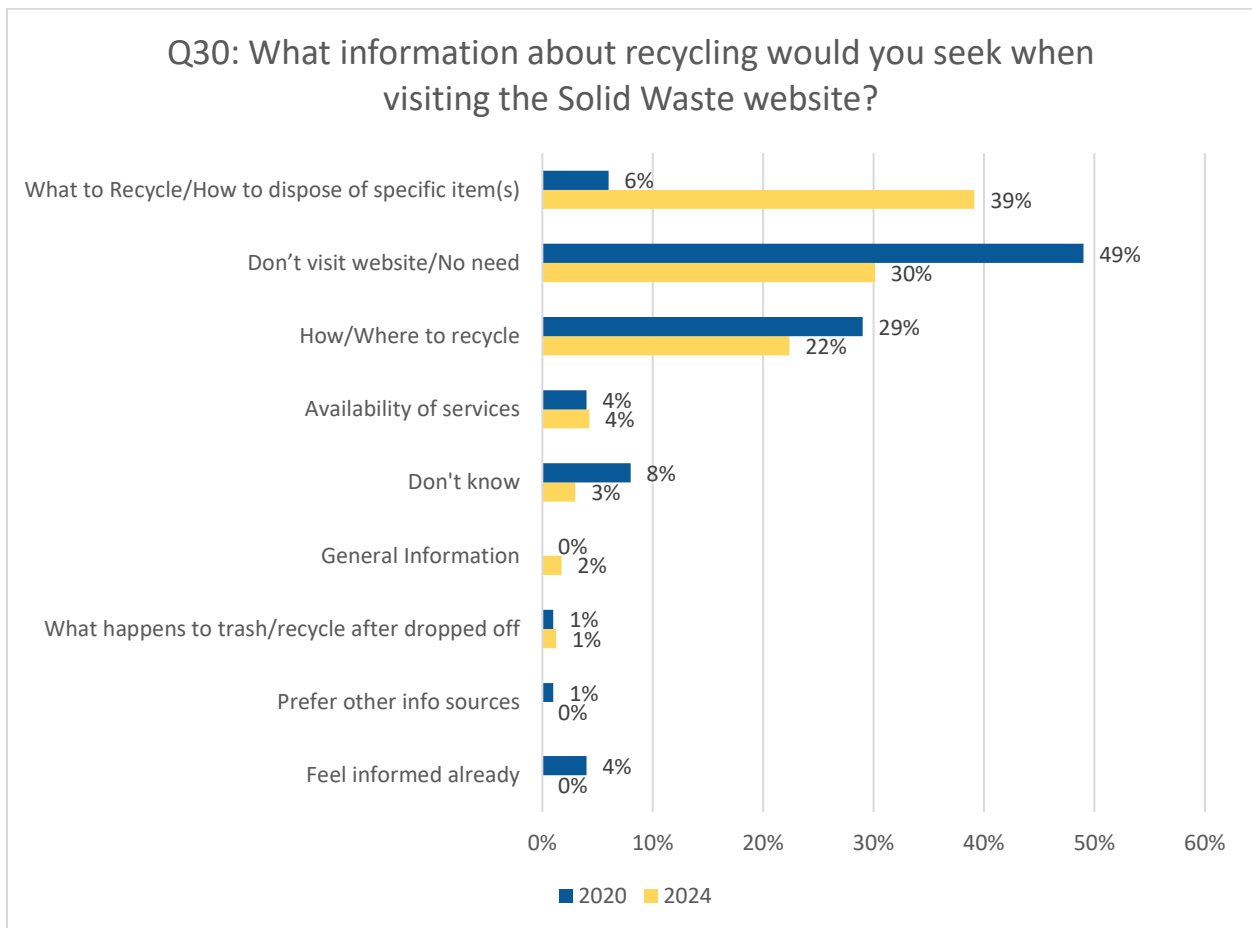
Description: The bar graph above shows the percentage of how residents dispose of rechargeable batteries. The percentage value for each category is as follows:

- Take to store in 2020: 18 percent
- Take to store in 2024: 36 percent
- Recycle in 2020: 1 percent
- Recycle in 2024: 36 percent
- Haven't done anything in 2020: 18 percent
- Haven't done anything in 2024: 9 percent
- Throw in garbage in 2020: 14 percent
- Throw in garbage in 2024: 8 percent
- Don't have or use in 2020: 21 percent
- Don't have or use in 2024: 4 percent
- Collection event or pick-up service in 2020: 22 percent
- Collection event or pick-up service in 2024: 4 percent
- Reuse them in 2020: 10 percent

Reuse them in 2024: 3 percent

All respondents were then asked the information they would seek out when visiting PCSW’s website, with the responses coded in the graph below. A full list of verbatim responses is available in [Appendix D](#).

Almost four in ten (39%) said that they look for what to recycle or information about recycling/disposal of specific materials and items like batteries, motor oil, and bulk items. About a third (30%) stated they do not or need to visit the website. This, however, represents a significant decrease in respondents reporting they have no need to use the website (49% in 2020). A little over a fifth of respondents look for how/where to recycle, which is also a significant decrease from 2020 (29% in 2020). Other cited reasons for visiting PCSW’s website included the availability of services (4%), general facts about recycling (2%), and what happens to recyclables after they are dropped off (1%).



Title: Q30: What information about recycling would you seek when visiting the Solid Waste website?

Description: The double bar graph above shows the percentage trending of what information residents are looking for on PCSW’s website. The percentage value for each category is as follows:

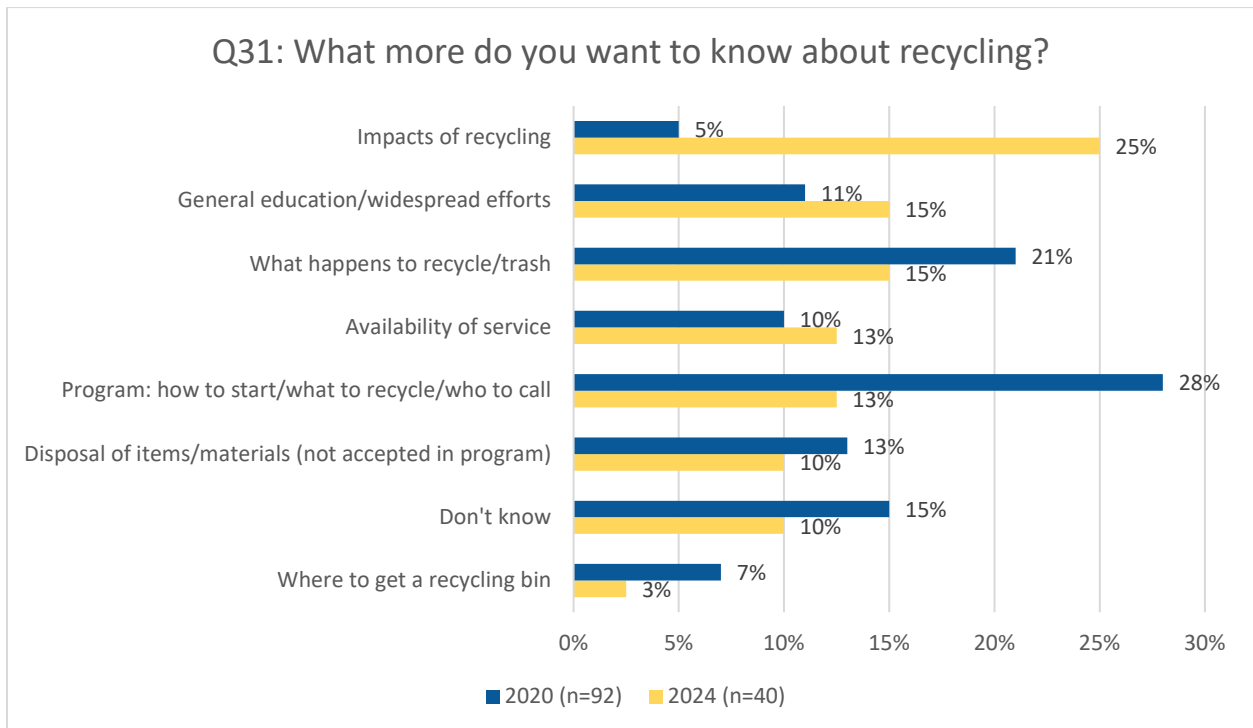
What to recycle/How to dispose of specific item(s) in 2020: 6 percent

What to recycle/How to dispose of specific item(s) in 2024: 39 percent

Don't visit website or no need in 2020: 49 percent

Don't visit website or no need in 2024: 30 percent
 How/Where to recycle in 2020: 29 percent
 How/Where to recycle in 2024: 22 percent
 Availability of services in 2020: 4 percent
 Availability of services in 2024: 4 percent
 Don't know in 2020: 8 percent
 Don't know in 2024: 3 percent
 General information in 2020: 0 percent
 General information in 2024: 2 percent
 What happens to trash or recycling after dropped off in 2020: 1 percent
 What happens to trash or recycling after dropped off in 2024: 1 percent
 Prefer other information sources: 1 percent
 Prefer other information sources: 0 percent
 Feel informed already in 2020: 4 percent
 Feel informed already in 2024: 0 percent

In an open-ended response question, respondents were asked what more they wanted to know about recycling. A vast majority (95%) answered "nothing." The graph below depicts the remaining responses that named something specific respondents would like to know. It is compared to responses from 2020, but given the same sample, it should not be inferred that there are any differences between the two studies for this question. In general, residents were interested in the impacts of recycling, what happens to recycling and trash, and general information. A full list of verbatim responses is available in [Appendix D](#).



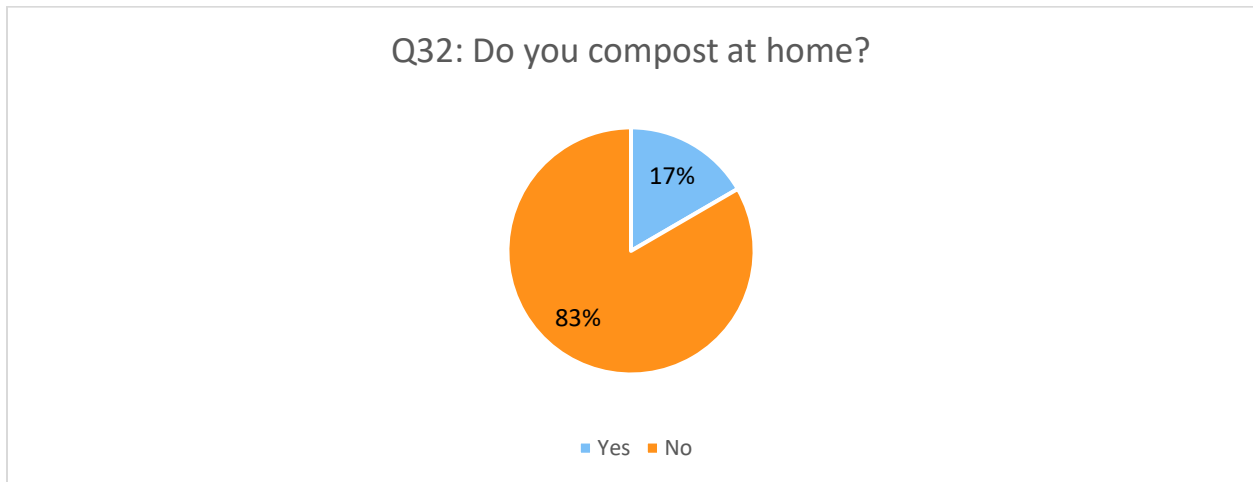
Title: Q31: What more do you want to know about recycling?

Description: The double bar graph above shows the percentage trending of what residents want to know about recycling. The percentage value for each category is as follows:

- Impacts of recycling in 2020: 5 percent
- Impacts of recycling in 2024: 25 percent
- General education and widespread efforts in 2020: 11 percent
- General education and widespread efforts in 2024: 15 percent
- What happens to recycling or trash in 2020: 21 percent
- What happens to recycling or trash in 2024: 15 percent
- Availability of services in 2020: 10 percent
- Availability of services in 2024: 13 percent
- Regarding recycling programs in 2020: 28 percent
- Regarding recycling programs in 2024: 13 percent
- Disposal of items or material in 2020: 13 percent
- Disposal of items or material in 2024: 10 percent
- Don't know in 2020: 15 percent
- Don't know in 2024: 15 percent
- Where to get a recycling bin: 7 percent
- Where to get a recycling bin: 3 percent

Composting

A new question was added to the 2024 survey to get a general understanding of how many residents compost at home. In total, about one in six (17%) residents stated they compost at home.



Title: Q32: Do you compost at home?

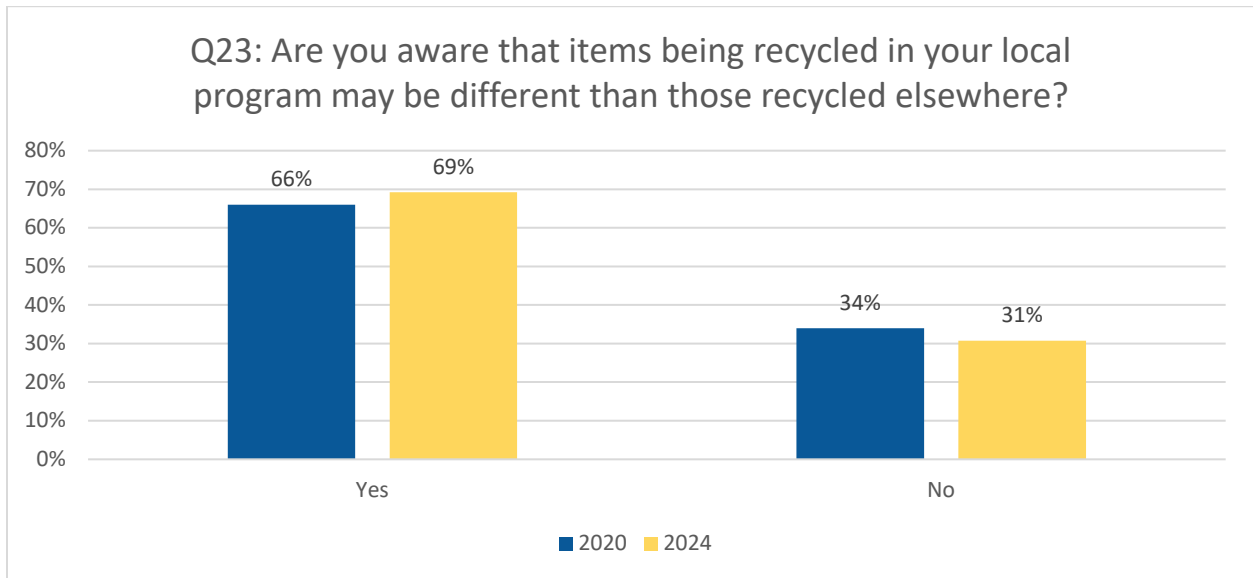
Description: The pie chart above shows the percentage of residents who compost at home. The percentage value for each category is as follows:

- Yes: 17 percent
- No: 83 percent

Recycling Awareness

The previous sections provide insight into residents' recycling and disposal habits. This section of questions gauged their knowledge and information about recycling and disposal habits.

The first question asked if residents knew that recyclables vary across different recycling programs. More than two-thirds (69%) of respondents reported that they knew that recyclables change depending on the area. This is statistically similar to awareness levels in 2020 when 66% of respondents stated they knew that recycling programs differ by location.



Title: Q23: Are you aware that items being recycled in your local program may be different than those recycled elsewhere?

Description: The double bar chart above shows the percentage trending of residents aware that items that can be recycled in local programs may differ from those recycled elsewhere. The percentage value for each category is as follows:

Yes in 2020: 66 percent

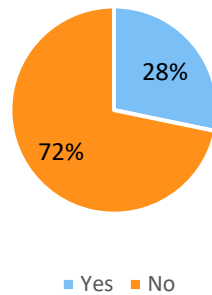
Yes in 2024: 69 percent

No in 2020: 34 percent

No in 2024: 31 percent

There was interest in understanding how residents look for information about recycling and disposal practices and what media is best to reach them about recycling and disposal information. To understand these topics, two new questions were introduced in 2024. The first question asked if respondents searched online for how to recycle and dispose of items properly in the last year. About one in four (28%) noted they searched online for this information. This finding further shows that residents are relying heavily on online sources to find needed information about recycling and disposal practices.

Q33: Have you searched online for how to recycle and dispose of items properly in the last year?



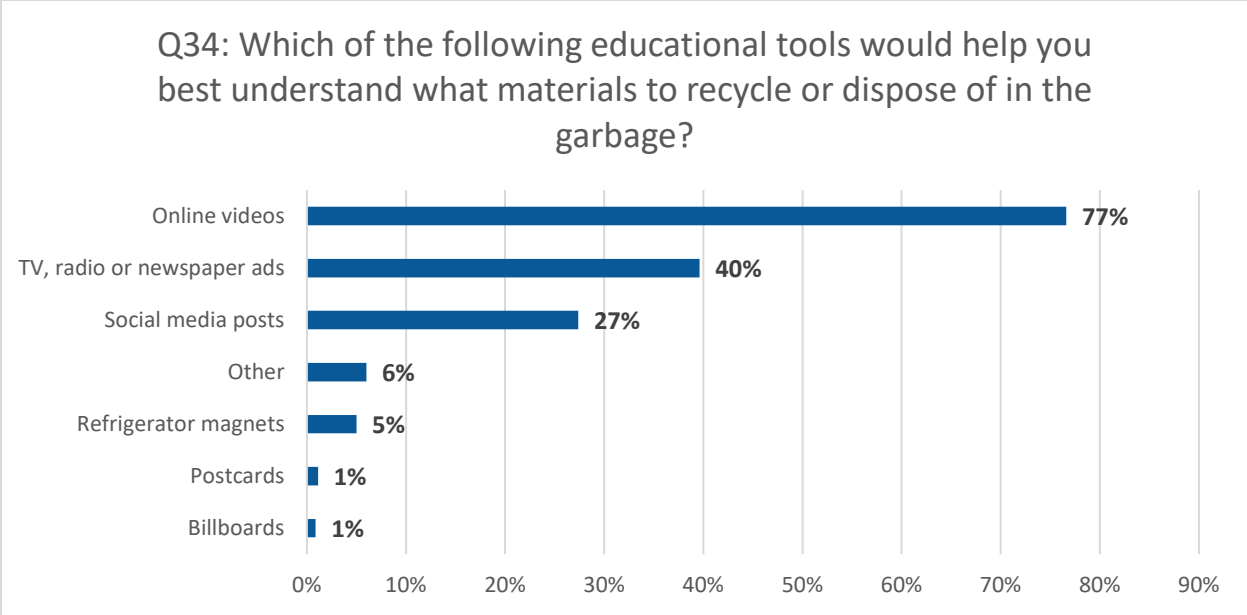
Title: Q33: Have you searched online for how to recycle and dispose of items properly in the last year?

Description: The pie chart above shows the percentage of residents who have searched online for how to recycle and dispose of items properly in the last year. The percentage value for each category is as follows:

Yes: 28 percent

No: 72 percent

The next question asked residents which educational tools would best help them understand what materials are recyclable or should be disposed of in the garbage. Respondents could select more than one tool, so the percentage adds up to more than 100 percent. More than three in four respondents (77%) state online videos are the best tool to learn this information followed by television, radio, or newspaper ads (40%). About one in four (27%) reported that social media posts are helpful. Residents labeled refrigerator magnets (5%), postcards (1%), and billboards (1%) as the least effective tools. For the 6% who identified an “other” media, most mentioned the website (63%) or they did not know (35%). The only other tool mentioned in “other” was a flyer (2%). A list of verbatim responses is available in [Appendix D](#).



Title: Q34: Which of the following educational tools would help you best understand what materials to recycle or dispose of in the garbage?

Description: The bar chart above shows the percentage of residents who state the following media are the best educational tools that would help people best understand what materials to recycle or dispose of in the garbage. The percentage value for each category is as follows:

- Online videos: 66 percent
- TV, radio, or newspaper ads: 69 percent
- Social media posts: 34 percent
- Other: 31 percent
- Refrigerator magnets: 5 percent
- Postcards: 1 percent
- Billboards: 1 percent

The final series of questions on the 2024 Residential Recycling Awareness Survey ascertained residents’ knowledge about specific recycling information. In this year’s survey, a series of true or false questions were posed. The order the questions were asked changed by respondents. The questions are ordered by the percentage of respondents who answered true. The correct response is highlighted in the table on the following page.

Nine in ten respondents correctly identified that rechargeable batteries should never be placed in the garbage (97%), that Pinellas County offers free drop-off centers where residents can dispose of their recycling (92%), and that the county provides an annual guide for universal disposal guidelines (91%).

There were three clear knowledge gaps amongst residents regarding recycling and disposal knowledge. First, about seven in ten (72%) residents correctly noted that plastic bags should never be put into the recycling bin. This was a similar, though noticeably smaller percentage of residents in 2020 who knew this fact (78% in 2020). Second, over a third of residents believe that rechargeable batteries can be placed in

their recycling bins. This is similar to the percentage of residents who stated they “recycle” their rechargeable batteries in question 24 (36%), which directly asked about how they dispose of their rechargeable batteries. This suggests that there could be a sizeable portion of Pinellas County improperly disposing of rechargeable batteries and contaminating other recyclable products. Lastly, only one in four (24%) knew that burning waste to generate electricity is not considered a form of recycling, but rather a form of green energy conversion. This is a clear change from 2020 when 50% stated they knew this fact.

Overall, there are some clear knowledge gaps about recycling and proper disposal across Pinellas County’s residents that offer PCSW an opportunity to target future educational and information campaigns to new and longtime residents of the county.

Q35: Please state whether the following responses are either true for false.

Statement	True	False
Rechargeable batteries should never be placed in the garbage.	97%	3%
Residents can dispose of their recycling at drop-off centers in the county for free.	92%	8%
You can reference the county’s annual guide for universal disposal guidelines.	91%	9%
Burning waste to generate electricity is a form of recycling.	76%	24%
Plastic bags should never be put into the recycling bin.	72%	28%
Rechargeable batteries should never be placed in the recycling bin.	62%	39%

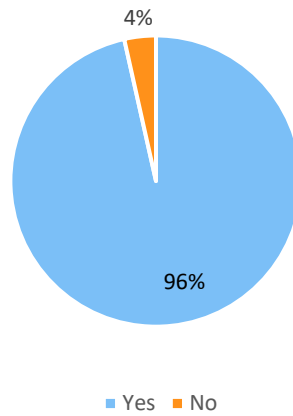
Unincorporated Recycling Participation

In 2024, there was further interest from PCSW about the recycling participation of residents who lived in unincorporated Pinellas County. In the 2024 survey, 11% of the sample stated they lived in an unincorporated area of Pinellas County. However, it should be noted that some residents may be confused about whether they live within a municipality or in an unincorporated area. One reason often cited for this confusion is mailing addresses, since they do not always align with municipal boundaries. Due to the sample size and potential confusion amongst unincorporated residents, the margin of error is much larger for this section than the County-wide figure of +/- 3.46%. Furthermore, this section only examines these numbers for 2024. To better understand the recycling habits of unincorporated County residents, future studies either should focus solely on this population or this population should be oversampled.

The following section looks at unincorporated County single-family residents who recycle curbside, unincorporated County multifamily housing residents who recycle at their complex, and unincorporated County residents who utilize drop-off centers.

Looking at single-family residents who live in unincorporated Pinellas County, nearly all (96%) participate in curbside recycling.

Q6: Single-Family: Do you participate by recycling items curbside?: Unincorporated Residents (n= 57)



Title: Q6: Single-Family: Do you participate by recycling items curbside?: Unincorporated Residents (n= 57)

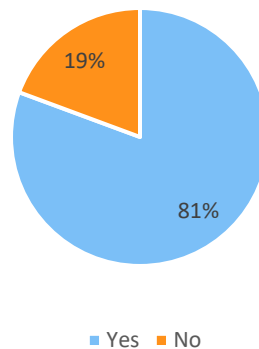
Description: The pie chart above shows the percentage of single-family housing residents who live in unincorporated Pinellas County that recycle items curbside. The percentage value for each category is as follows:

Yes: 96 percent

No: 4 percent

For multifamily housing residents who are offered recycling services at their complex, a majority (81%) utilize the service in 2024.

Q11: Multifamily: Does your complex offer recycling?: Unincorporated Residents (n= 31)

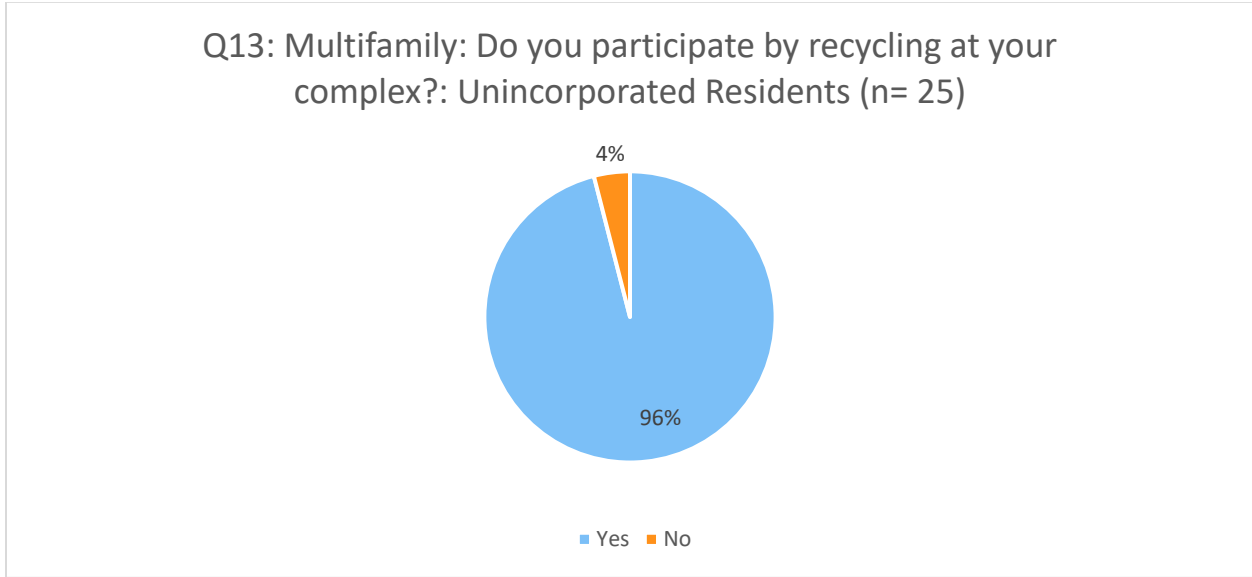


Title: Q11: Multifamily: Does your complex offer recycling?: Unincorporated Residents (n= 31)

Description: The pie chart above shows the percentage of multifamily housing residents who live in unincorporated Pinellas County and are offered recycling services at their complex. The percentage value for each category is as follows:

Yes: 81 percent
No: 19 percent

Of multifamily housing residents (n= 25) who have recycling services offered at their complex, 96% said they do recycle.



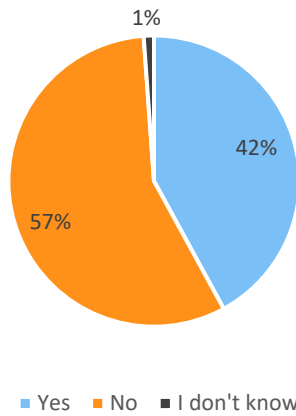
Title: Q13: Multifamily: Do you participate by recycling at your complex?: Unincorporated Residents (n= 25)

Description: The pie chart above shows the percentage of multifamily housing residents who live in unincorporated Pinellas County that recycle items at their complex. The percentage value for each category is as follows:

Yes: 96 percent
No: 4 percent

When asked about utilizing drop-off centers for recycling, a majority (57%) of unincorporated residents report not using these centers.

Q18: Do you, or members of your household, take recyclables to a drop-off collection center?: Unincorporated Residents (n= 88)



Title: Q18: Do you, or members of your household, take recyclables to a drop-off collection center?: Unincorporated Residents (n= 88)

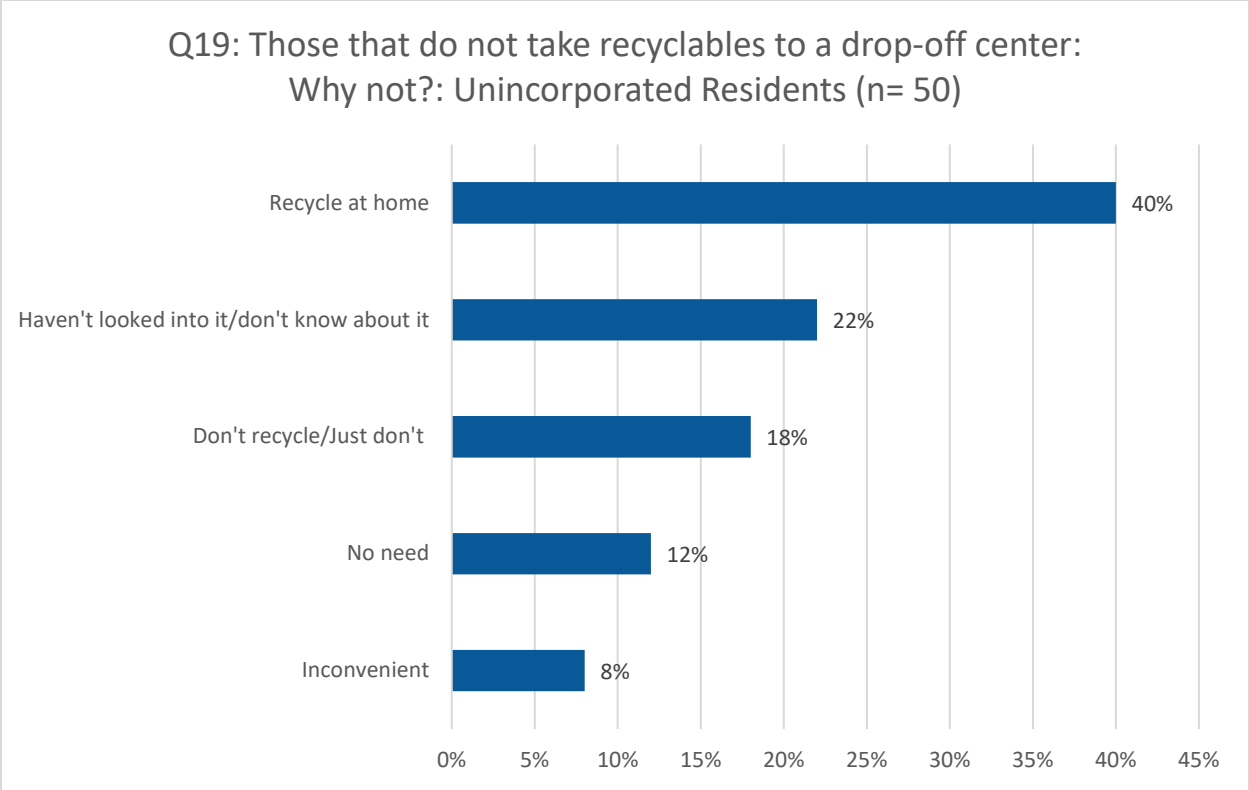
Description: The pie chart above shows the percentage of unincorporated Pinellas County residents who take recyclables to a drop-off center. The percentage value for each category is as follows:

Yes: 42 percent

No: 57 percent

I don't know: 1 percent

Lastly, a plurality of unincorporated residents (40%) say they do not utilize County drop-off centers because they recycle at home. A fifth either have not looked into it/do not know about it (22%) or just do not recycle (18%) for some reason.



Title: Q19: Those that do not take recyclables to a drop-off center: Why not?: Unincorporated Residents (n= 50)

Description: The bar graph above shows the percentage of unincorporated residents’ reasoning on why they do not utilize drop-off collection centers. The percentage value for each category is as follows:

- Recycle at home: 40 percent
- Haven’t looked into it or don’t know about it in 2024: 22 percent
- Don’t recycle or just don’t use it: 18 percent
- No need: 12 percent
- Inconvenient: 8 percent

Conclusion

Recycling is a key component for Pinellas County to achieve zero waste to landfill by 2050. The findings from this survey show county residents moving in the right direction to achieve this goal. Recycling participation amongst both single-family and multifamily households increased from 2020 and 2024. Moreover, more multifamily housing residents report that their complex offers recycling services, a positive development as the county’s population grows over the next several years. Residents are also reporting recycling a variety of materials more often than in previous years, another positive sign that residents understand the importance of recycling as much as possible.

Despite the clear desire amongst county residents to participate in recycling programs, there are some indications that there is a knowledge gap about proper recycling and disposal practices. First, more residents in 2024 noted they did a general online search for information about recycling. While these residents are trying to inform themselves, if they do not consult materials provided by the county, they

may be placing recyclable items in the garbage or could be placing items that should be placed in the garbage with their recyclables. In turn, this could lead to either more recyclable materials heading to the Solid Waste Disposal Complex or batches of recyclables being contaminated (Carlton, 2023). It is important that educational tools provided by the Department are easy to find and rank well in search engines to ensure that residents consume the right information about recycling in their community.

Second, residents' knowledge about what to do with rechargeable batteries offers an opportunity to educate. On rechargeable battery disposal, 97 percent of residents correctly identified that batteries should never be placed in the garbage, but this number drops to 62 percent when asked if they should never be placed in the recycling bin. This finding is further reinforced by residents' open-ended responses about what they do with rechargeable batteries. When asked how they dispose of them, 36% report they recycle them.

Lastly, there may be some confusion about what constitutes recycling. Looking back at the previous questions about rechargeable batteries, residents may believe that by returning them to stores or taking them to collection events, these batteries can be recycled. Yet, rechargeable batteries go through a different process to reclaim materials. More than a quarter (28%) noted that plastic garbage bags can be placed in the recycling bin. However, only 4 percent of the total sample report placing them in their recycling bins. In addition, only a quarter (24%) of respondents knew that burning waste to generate electricity is not a form of recycling. This illustrates some confusion amongst residents about what recycling means. This provides an opportunity for the Department to creatively share information that is already available on the website, so residents gain a better understanding of various recycling and disposal techniques, so they are better equipped to properly get rid of materials in the future.

Overall, the 2024 Residential Recycling Survey results on recycling participation suggest an increase in citizen engagement throughout Pinellas County. PCSW should be heartened by the fact that residents across the county are more than willing to participate and generally understand important information about recycling. Residents view recycling as a public good and a worthwhile goal for their community. However, there are some knowledge gaps among residents regarding Waste-to-Energy and the disposal of rechargeable batteries that may create challenges in the future. Coupled with low levels of awareness regarding PCSW material, there is a case for increased community engagement by the department. Expanding these efforts provides the best chance at increasing recycling engagement throughout Pinellas County.

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Appendix A: Survey Instrument

2024 Residential Recycling Awareness Survey

Hello, I am calling on behalf of the Pinellas County Solid Waste department. We are conducting a survey about recycling and garbage disposal. This information will allow Pinellas County to better understand where improvements can be made in recycling efforts. The survey will not take longer than 10 minutes and all responses are confidential.

Introduction

1. Are you a full-time or seasonal resident of Pinellas County?
 - a. Full-time
 - b. Seasonal
 - c. I don't live there **[terminate]**

2. How long have you lived in Pinellas County?
 - a. Less than 1 year
 - b. 1 – 2 years
 - c. 3 – 5 years
 - d. 6 – 10 years
 - e. 11 – 20 years
 - f. 21 years or longer

3. Do you live within a city's boundaries or in unincorporated Pinellas County?
 - a. City
 - b. Unincorporated
 - c. I don't know

4. What kind of dwelling do you live in?
 - a. Single-family home **[go to "Single Family Home/Duplex/Triplex/Quadplex Residents" section]**
 - b. Duplex/Triplex/Quadplex **[go to "Single Family Home/Duplex/Triplex/Quadplex Residents" section]**
 - c. Apartment (rental) **[skip to "Multifamily Residents" section]**
 - d. Manufactured/Mobile home **[skip to "Multifamily Residents" section]**
 - e. Condominium/Villa/Townhouse **[skip to "Multifamily Residents" section]**
 - f. Other **(DO NOT READ: record what respondent says for "other") [skip to "Multifamily Residents" section]**

Single Family Home/Duplex/Triplex/Quadplex Residents

5. Did you know that your garbage collector offers curbside recycling services?
 - a. Yes
 - b. No

6. Do you participate by recycling items curbside?
- a. Yes **[skip to Q8]**
 - b. No **[go to Q7]**

7. Why don't you participate? **[skip to "Recycling Practices" section once answered]**

8. Why do you choose to recycle?

9. Do you recycle the following items curbside?

Item	Example	Yes or No?
9a. Metal cans	Aluminum soda can or soup/food can	
9b. Cardboard	Flattened box	
9c. Cartons	Milk carton or drink box	
9d. Glass bottles and jars	Beverage or food jar	
9e. Paper	Mail, office paper, newspaper, empty cereal box	
9f. Plastic bottle and jugs	From the kitchen, laundry room or bathrooms	
9g. Other items routinely recycled (DO NOT READ: record what respondent says for "other")		

9A. **[If respondent answers "No" to recycling Glass bottles and jars]** Why do you not recycle glass bottles and jars?

10. When your household is unsure whether an item is recyclable, what do you do?
- a. Place item in the garbage
 - b. Place the item in the recycling bin
 - c. Consult Pinellas County's Where Does It Go? Search Tool
 - d. Contact my county, city, or garbage collector
 - e. Other **(DO NOT READ: record what respondent says for "other")**

****Once completed with Q10 skip to "Recycling Practices" section****

Multifamily Residents

11. Does your complex offer recycling?
- a. Yes **[skip to Q13]**
 - b. No **[go to Q12]**

12. Would you recycle if the service was made available by your residence?
- a. Yes [skip to “Recycling Practices” section]
 - b. No [skip to “Recycling Practices” section]

13. Do you participate by recycling at your complex?
- a. Yes [skip to Q15]
 - b. No [go to Q14]

14. Why not? [skip to “Recycling Practices” section once answered]

15. Why do you choose to recycle?

16. Do you recycle the following items at your complex?

Item	Example	Yes or No?
16a. Metal cans	Aluminum soda can or soup/food can	
16b. Cardboard	Flattened box	
16c. Cartons	Milk carton or drink box	
16d. Glass bottles and jars	Beverage or food jars	
16e. Paper	Mail, office paper, newspaper, empty cereal box	
16f. Plastic bottle and jugs	From the kitchen, laundry room or bathrooms	
16g. Other items routinely recycled (DO NOT READ: record what respondent says for “other”)		

16A. [If respondent answers “No” to recycling Glass bottles and jars] Why do you not recycle glass bottles and jars?

17. When your household is unsure whether an item is recyclable, what do you do?
- a. Place item in the garbage
 - b. Place the item in the recycling bin
 - c. Consult Pinellas County’s Where Does It Go? Search Tool
 - d. Contact my county, city, or recycling collector
 - e. Contact my property manager or HOA
 - f. Other (**DO NOT READ: record what respondent says for “other”**)

Recycling Practices

18. Do you, or members of the household, take recyclables to a drop-off collection center?
- a. Yes **[skip to Q20]**
 - b. No **[go to question 19]**
 - c. I don't know/NA **[skip to Q20]**

19. Why not?

20. Who is (are) the most frequent recycler(s) in your household?
- a. Adult female(s)
 - b. Adult male(s)
 - c. Child(ren)
 - d. Everyone recycles
 - e. No one recycles

21. How does your household typically dispose of plastic grocery bags?
- a. Put them in the garbage can
 - b. Put them in the recycling bin
 - c. Reuse them for other purposes and then place in garbage can
 - d. Return them to the grocery store
 - e. I bring my own reusable bags
 - f. Other (**DO NOT READ: record what respondent says for "other"**)

22. What are the best sources you have used to find information about recycling?

23. Are you aware that items being recycled in your local program may be different than those recycled elsewhere?
- a. Yes
 - b. No

24. What do you currently do with your rechargeable batteries? These include any items in which the batteries must be recharged and can be found in items such as laptops, cell phones, wireless headphones, tools, etc.

Demographics

25. What is the highest level of schooling you have completed?
- a. Some high school or less
 - b. High school graduate or equivalent
 - c. Technical/vocational training

- d. Some college
- e. College degree
- f. Post-graduate studies or higher

26. What is your household income?

- a. Under \$25,000
- b. \$25,000 - \$49,999
- c. \$50,000 - \$74,999
- d. \$75,000 - \$99,999
- e. \$100,000+

27. What is your current employment status?

- a. Full-time
- b. Part-time
- c. Retired
- d. Unemployed
- e. Voluntarily out of the workforce
- f. Other (**DO NOT READ: record what respondent says for "other"**)

28. What is the primary language spoken among members of your household?

- a. English
- b. Spanish
- c. Other (**Record**) _____

29. Are there children age 18 and under in your home?

- a. Yes
- b. No

Final Thoughts on Recycling

30. What information about recycling would you seek when visiting the Solid Waste website?

31. What more do you want to know about recycling?

32. Do you compost at home?

- a. Yes
- b. No

33. Have you searched online for how to recycle and dispose of items properly in the last year?

- a. Yes
- b. No

34. Which of the following educational tools would help you best understand what materials to recycle or dispose of in the garbage?
- a. TV, radio or newspaper ads
 - b. Online videos
 - c. Social media posts
 - d. Billboards
 - e. Refrigerator magnets
 - f. Postcards
 - g. Other

35. Please state whether the following responses are either true or false. **[ROTATE Q35A – Q35F]**

The final section will be true/false knowledge questions.

Statement	True	False
35A. Plastic bags should never be put into the recycling bin.		
35B. Rechargeable batteries should never be placed in the garbage.		
35C. Rechargeable batteries should never be placed in the recycling bin.		
35D. Burning waste to generate electricity is a form of recycling.		
35E. Residents can dispose of their recycling at drop-off centers in the county for free.		
35F. You can reference the county's annual recycling guide for universal disposal guidelines.		

Closing Statement: Thank you for helping Pinellas County reach our vision of zero waste to landfill by 2050 as outlined by the Solid Waste Master Plan by completing this survey. You can learn more about recycling in Pinellas County by accessing the Recycle Guide or using the Where Does It Go? Search Tool to find out how to get rid of hundreds of items by visiting Pinellas.gov/Recycle.