MassDEP Statewide Recycling Participation 2015 Research Results





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OBJECTIVES

The primary objectives of this research are to assess:

- The perceptions of Massachusetts residents on the recycling of normal household recyclables, including what motivates and what acts as a barrier to recycling or recycling more.
- How correct (or incorrect) is residents' understanding of the recycling "rules," and the extent to which recycling is perceived to be complicated.
- Residents' knowledge of the issue of contamination of recyclables and which arguments have the most impact on motivating behavior change in this area.
- Compare the current results with similar research conducted in 1996, 2000, and 2005, to understand how perceptions and behaviors have changed.

Secondary objectives include obtaining data on:

- Perceptions of Pay-As-You-Throw (PAYT) programs among residents of towns that use the PAYT model for managing household trash and recycling.
- The vocabulary used to describe current recycling programs.
- Where residents turn for information on recycling.
- A range of specific recycling issues including compact fluorescent lamp disposal, used textile disposal, and home composting.



METHODOLOGY OVERVIEW 1

- 600 telephone surveys with Massachusetts residents in jurisdictions with either curbside or town-managed/town-sponsored drop-off recycling programs.
 - -Towns where residents have to hire a hauler to manage their trash and/or recycling were excluded based on zip codes.
 - -Residents of large apartment buildings or complexes were also excluded.
 - -Residents of smaller apartment or condominium buildings were excluded unless the building offers a recycling program with separate recycling bins in the trash storage area and the number of these residents included was intentionally limited.
- The survey comprised 70 questions.
- Because of the growing incidence of households that rely entirely on cell phones for telephony and the concomitant reduction in households with a landline telephone, the study employed a dual mode data collection effort that included both cell phone and landline representation. The landline sample skewed significantly toward older residents and in order to balance the sample by age bands to more accurately represent the population, the cell phone component was increased during the course of data collection.
- Both landline and cellphone sample were random draws from compiled phone sample with appended data from US Census and commercial databases. Sample was allocated and dialed according to standard industry practice for quantitative telephone data collection.
- Quotas were set for the landline sample based on the population distribution by area code.

METHODOLOGY OVERVIEW 2

- Respondents were screened for involvement in household recycling and access to a curbside or townsponsored drop-off recycling program. Cell phone respondents were verified as legal Massachusetts residents (area codes of cell phones are not geographically based). Respondents under 18 years of age were not included.
- The sponsor of the research was not identified.
- The survey fielded July 13 August 24, 2015.
- The average duration was approximately 18 minutes.
- •This survey in aggregate has a margin of sampling error of +/- 4 percentage points at the midpoint of the 95% confidence interval. Any segment (e.g., area code, single-stream vs. not, property tax-based vs. PAYT) will have higher margins of error.
- Small discrepancies in percentages are due to rounding.

METHODOLOGYSAMPLE SIZE

Base sizes used in this report:

Overall - 600

- Weighted to represent the age profile of the adult population of Massachusetts and geographical distribution of the population.
- The sample frame is meant to represent households with access to town sponsored recycling—curbside and municipal drop-off.
- Potential respondents from larger multi-family and apartment buildings were not included.
- Landline 394; Cellphone 207

Aı	rea	CO	d	es

• 413 – 73

• 508 – 176

• 617 – 112

• 781 – 118

• 978 – 122

Pay-as-you-throw (PAYT)

• PAYT – 135

• Non-PAYT – 465

Single-stream municipalities

• Single-stream – 354

• Non-Single-stream – 246

Curbside recyclers

• Curbside – 491



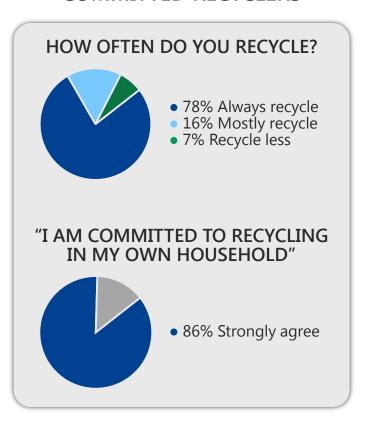
SUMMARY OF KEY FINDINGS



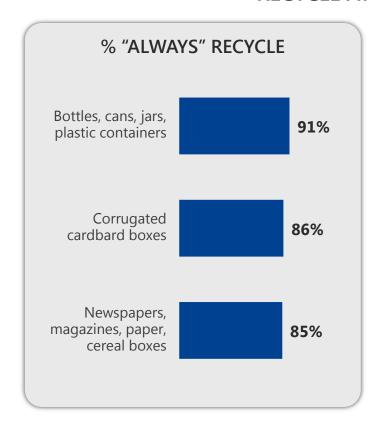
RECYCLING KNOWLEDGE AND COMMITMENT KEY FINDINGS

Massachusetts residents are committed to recycling and they recycle at high levels.

COMMITTED RECYCLERS



RECYCLE AT HIGH LEVELS



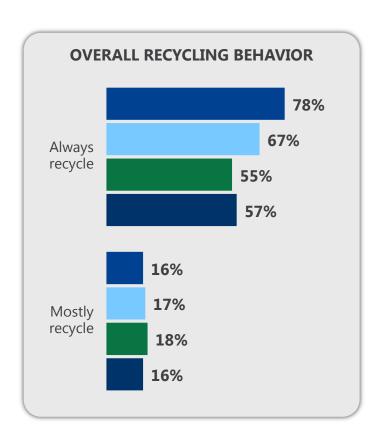


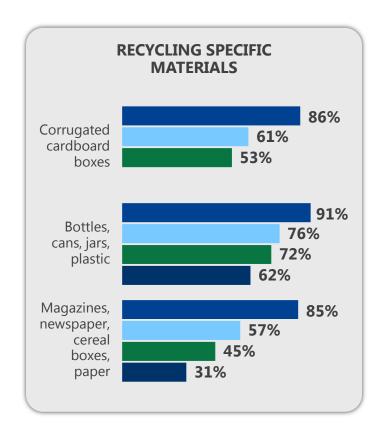
RECYCLING OVER TIMEKEY FINDINGS

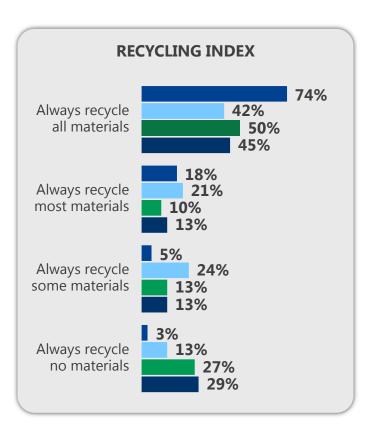
Massachusetts recycling participation has increased over the last two decades.

More recycle at higher levels and "always" recycle most materials. Fewer don't recycle at all.

■ 2015 **■** 2005 **■** 2000 **■** 1996





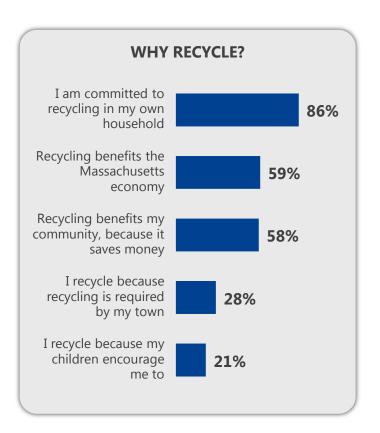


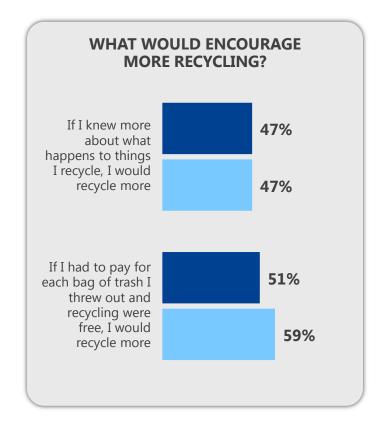


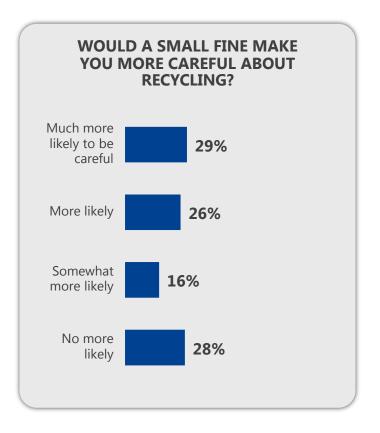
ENCOURAGING MORE RECYCLINGKEY FINDINGS

Massachusetts residents see the benefits of recycling. They would be encouraged to recycle more by knowing more about what happens and by monetary incentives and disincentives. Most residents believe they already recycle everything they can—so encouraging them to do more will be difficult.

2015 2005

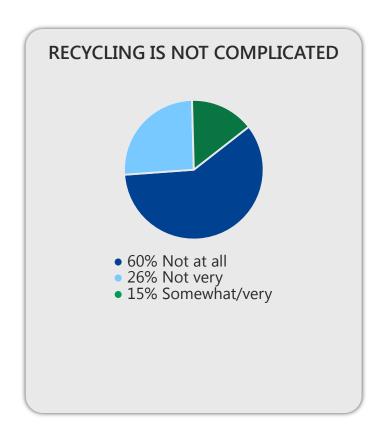


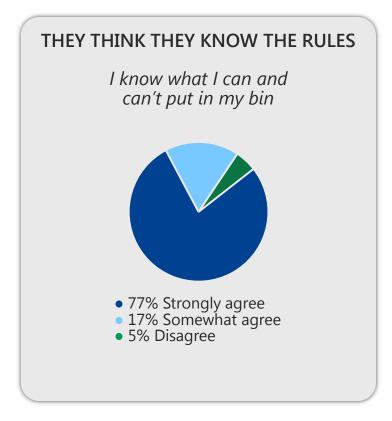




RECYCLING KNOWLEDGE AND COMMITMENT KEY FINDINGS

Massachusetts residents think recycling is not complicated and they believe they know the rules of recycling, but they don't. So, they are likely to try to recycle materials that contaminate recyclables.

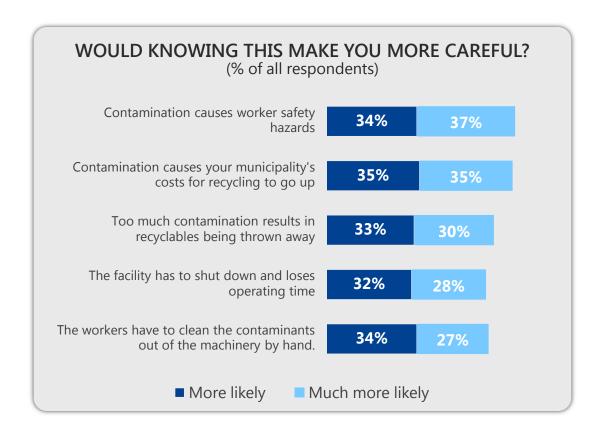


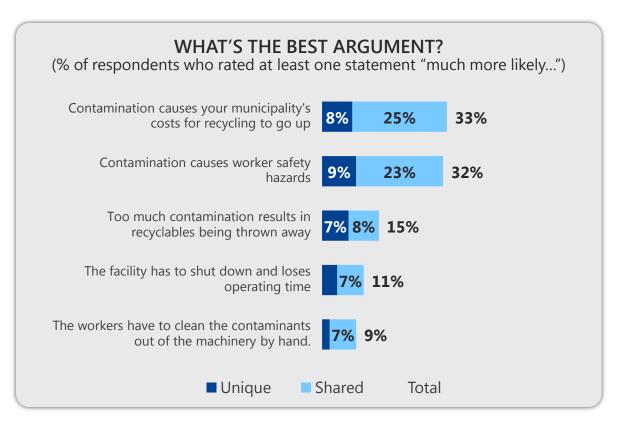




ARGUMENTS AGAINST CONTAMINATIONKEY FINDINGS

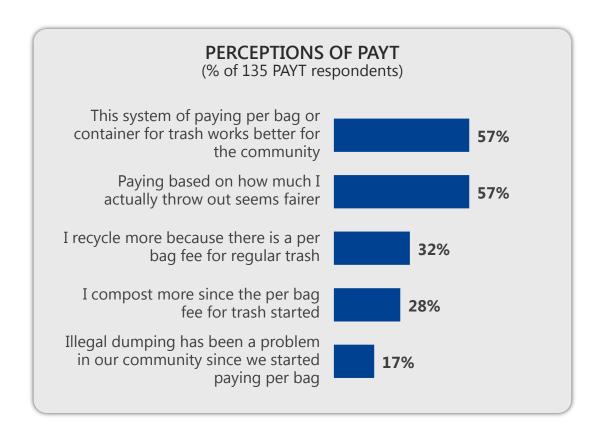
Massachusetts residents would be more careful with their recycling if they had a better sense of the problems contamination causes. Any of the tested arguments would work, and it may be optimal to use a multi-pronged approach. The best arguments are about costs and worker safety.





PAY-AS-YOU-THROW (PAYT) PERCEPTIONS KEY FINDINGS

Massachusetts residents who live in PAYT communities believe it works better for their communities and is fairer. They do not see any increase in illegal dumping resulting from PAYT. The perception that PAYT is better for the community has increased since 2005.

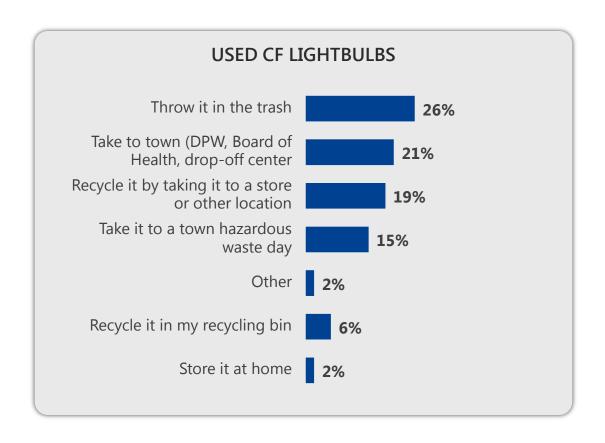


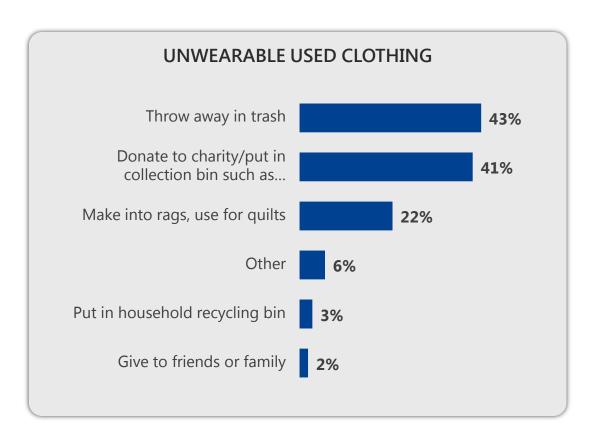




OTHER RECYCLING ISSUESKEY FINDINGS

Massachusetts residents are unlikely to throw a used CF lightbulb or unwearable used clothing in their recycling bins, and they are more likely to throw them in the trash.

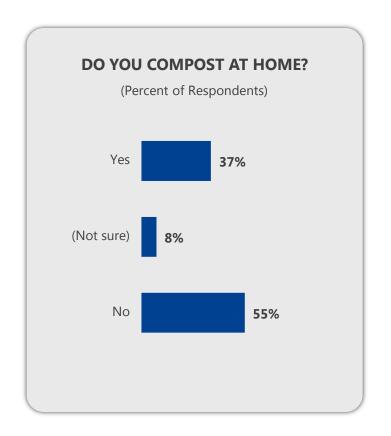


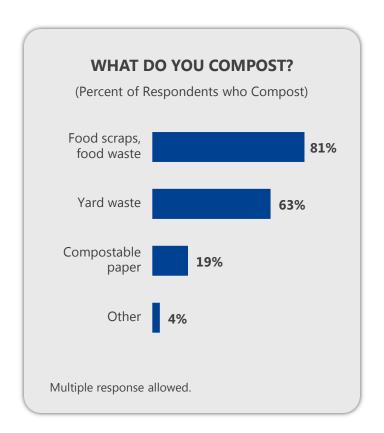


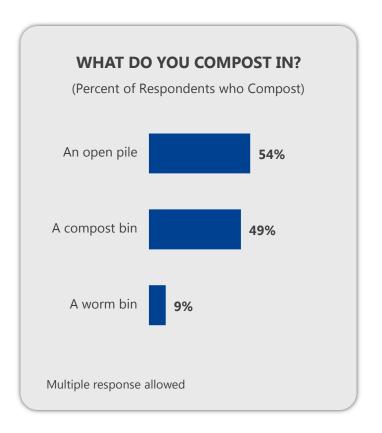




More than a third of Massachusetts households that have easy access to recycling also compost at home—most compost food and yard waste, either in bins or open piles.







RESEARCH-BASED RECOMMENDATIONS RECOMMENDATIONS

These recommendations are based entirely on this research and do not consider cost, political reality, time required, other data about recycling, etc.

RECALIBRATING KNOWLEDGE OF THE RECYCLING RULES RECOMMENDATIONS

Recalibrating knowledge of the recycling rules

Massachusetts residents have bought into the idea of recycling, see the benefits of it, and do it actively and enthusiastically.

They need to modify their recycling behavior to reduce contamination, but without reducing their commitment to and enthusiasm toward recycling generally.

They need to learn that some of the materials they believe are recyclable cannot be put in household recycling. This is a matter of correcting what appears to be a widespread misapprehension.

•It will be important to position this correction in a way that does not diminish residents' sense of doing the right thing and feeling a strong commitment to recycling.

The overall effort needs to shift from encouraging residents to recycle "more" to encouraging them to recycle "right."

TEACHING RESIDENTS ABOUT CONTAMINATION RECOMMENDATIONS

Teaching residents about contamination

Residents also need to have a sense of the effects of contamination—the harm that it causes to the recycling process and the people who work in the handling facilities.

- •It seems likely that most residents do not know what causes contamination and the effects it has. However, it is likely that when they learn about it most will pay more attention to removing contaminants from household recyclables.
- Many residents believe that "the facility will sort it out" and appear to have little idea what this means in practical terms—they believe that they are doing the right thing by erring on the side of inclusion when in doubt.
- •The tested explanations of the effects of contamination all resonate and it is likely that a broad approach that emphasizes both the economic costs and the hazards to the workers would be most effective.

Many will probably divert the contaminants into regular trash because of the extra effort required to recycle them, and getting people to recycle recyclables that cannot be put in household bins will be the next step in the process of maximizing diversion of household recyclables from trash.

INCREASING RECYCLING RECOMMENDATIONS

Increasing recycling

The research suggests several ways to increase recycling over current levels:

- 1. Increase recycling at the margins: Even residents who say they are recycling all they can probably could recycle more. Residents who say they mostly recycle could do more. But, many people have the perception that they are doing all they can, and attacking that perception could be counter-productive.
- 2. **Program improvements**: Residents who have regular single-stream curbside recycling with frequent pickups and large, new bins are most apt to recycle to the fullest extent possible. Moving people into this category will likely increase recycling.
- 3. Implement PAYT: PAYT programs provide an economic incentive to maximizing recycling and people who live in PAYT communities are generally positive about those programs. The research does not address whether or not PAYT is effective in diverting more recyclables from the household waste stream, but it does suggest that it would be an effective way to incent residents, with little downside.
- 4. Increase the range of material types: Many people would recycle other materials in their bins if they could. These are largely materials that are currently regarded as contaminants (especially thin plastic) or non-recyclable in conventional ways (especially Styrofoam), but if programs or facilities can be changed to make these materials acceptable for bins, more people will recycle them. The downside of this idea is that to deal with the current contamination situation, the first step is to convince residents to not put these materials into their bins.
- 5. Increase home composting: There are many residents who do not currently compost anything. Some of these wastes, especially food waste and perhaps compostable paper, end up in trash

COMMUNICATION ABOUT HARD-TO-DISPOSE-OF HOUSEHOLD WASTES RECOMMENDATIONS

Communication about hard-to-dispose-of household wastes

The research suggests an opportunity for communication about used CF lightbulbs and textiles, which may have relevance for other hard-to-dispose of household wastes:

- Many residents do not know what to do with used CF lightbulbs. Most appear to have an sense that these materials should not be thrown out with regular trash (although a fair number still do this). If more residents were made aware of the MassDEP's website app for finding disposal locations for these wastes, there would probably be less confusion about what to do with them.
- Residents dispose of unwearable used clothing (and, presumably, other textile waste) in a variety of ways, but very few put these items in with their recyclables (a plurality throws them in the trash). It seems unlikely that most residents know that textiles can be recycled and how to go about doing that.

DETAILED FINDINGS



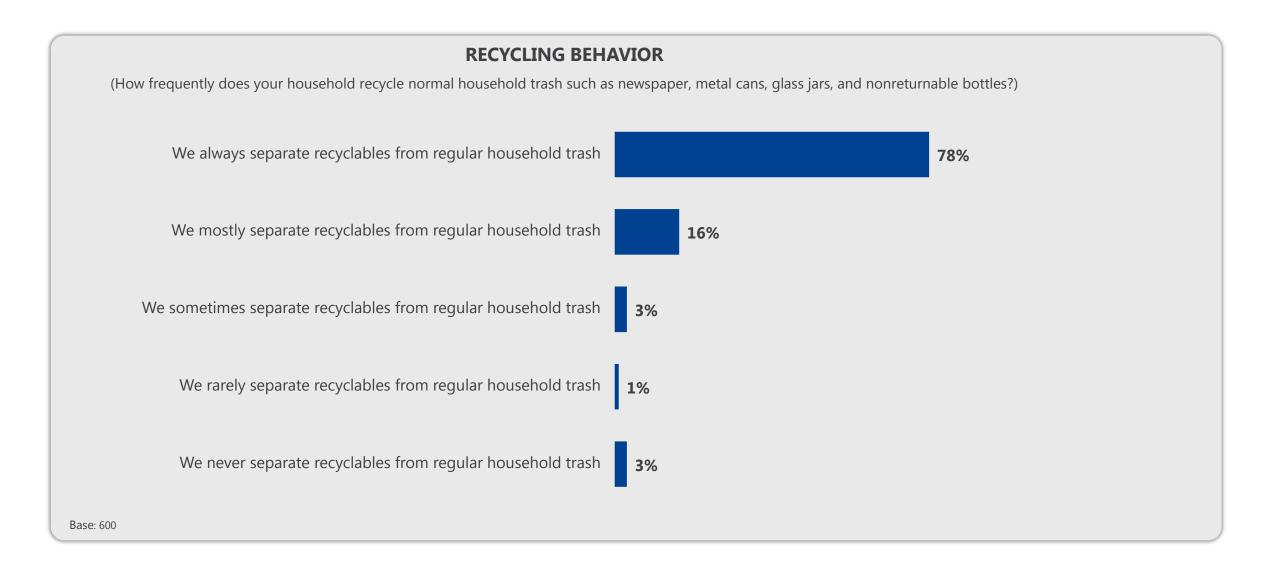
DETAILED FINDINGS



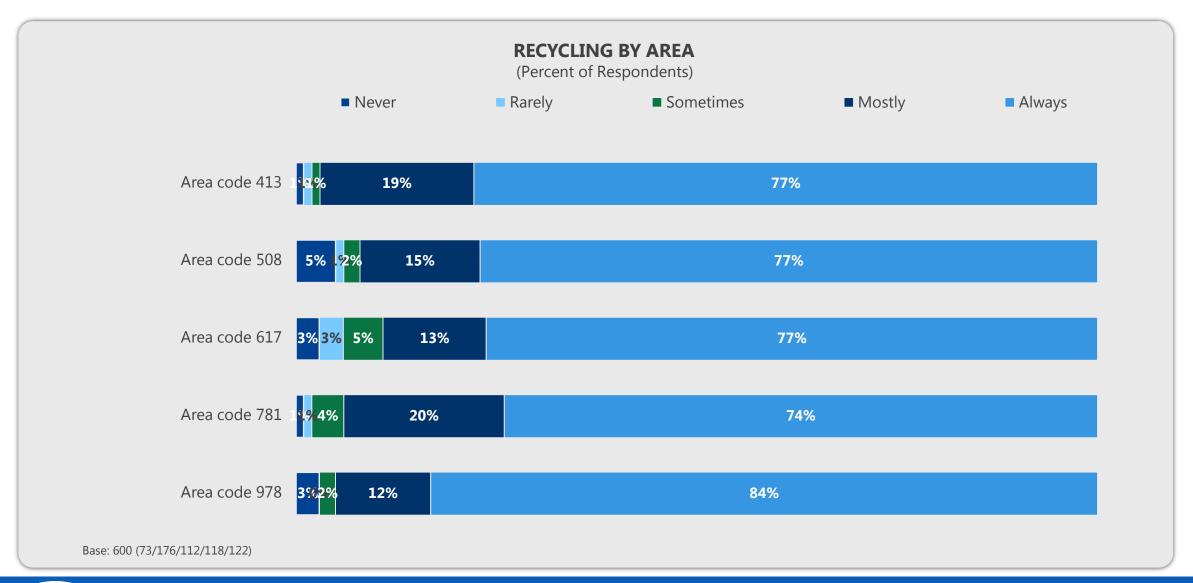
RECYCLING BEHAVIOROVERALL SUMMARY

- Almost all Massachusetts residents who have access to town-provided curbside or drop-off recycling say they mostly or always separate recyclables from regular trash for disposal. More than three-quarters (78%) say they "always" recycle what they can and another 16% say they "mostly" do.
- The percentages of residents who recycle is consistent across the Commonwealth—residents who can recycle do so at about the same rate everywhere.
- Recycling rates overall and for individual types of recyclables have all increased over the 20 year span of measurements and have increased significantly since the last measurement was made in 2005.
- More than half of Massachusetts recyclers can be characterized as "wishful" recyclers—if in doubt, they will tend to throw an item in the recycling bin, assuming it will be sorted out later if it turns out to not actually be recyclable.
- The move to larger bins in many communities may be the reason for the large reduction in people who report putting recyclables in the trash when they run out of room in their bin—this has declined from 18% in 2005 to 10% now.
- Older and more affluent residents are more apt to report recycling at very high rates overall, but the numbers who report recycling individual types of materials are relatively even across demographic categories. Older residents are a little more likely to be "retro" recyclers (follow the recycling rules as they originally learned them) and younger residents are a little more likely to be "wishful" recyclers. Younger and less affluent residents less likely to think they know the rules of recycling and more likely to say they would recycle more if they knew what happens to the materials.
- Level of education does not appear related directly to recycling behavior—including behavior that is incorrect (e.g., the likelihood of putting thin plastic bags in the bin is even across all levels of education). Having children in the house appears not to have any bearing on recycling behavior either.
- There do not appear to be meaningful differences in behavior based on whether people live in single-stream communities or not.

RECYCLING BEHAVIORHOW FREQUENTLY DOES YOUR HOUSEHOLD RECYCLE?



RECYCLING BEHAVIOR BY AREA HOW FREQUENTLY DOES YOUR HOUSEHOLD RECYCLE...?





RECYCLING BEHAVIOR OVER TIME HOW FREQUENTLY DOES YOUR HOUSEHOLD RECYCLE...?

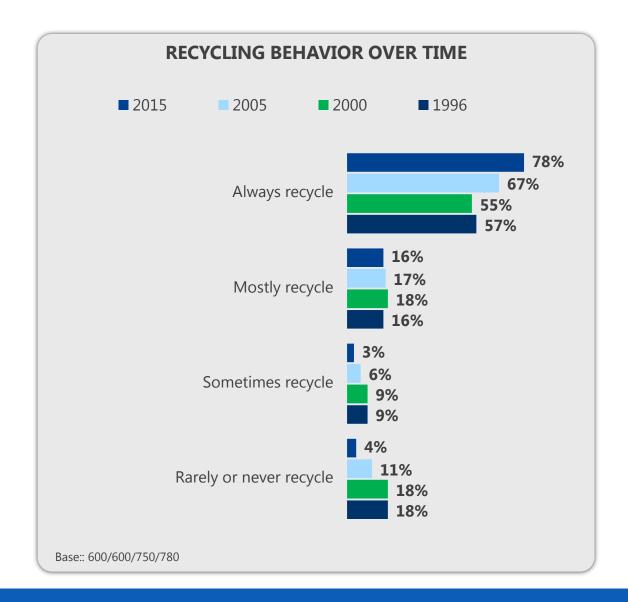
Recycling behavior over time

The percentage of residents that recycles regularly has increased since last measured in 2005, and has also increased over the 20-year span since first measured.

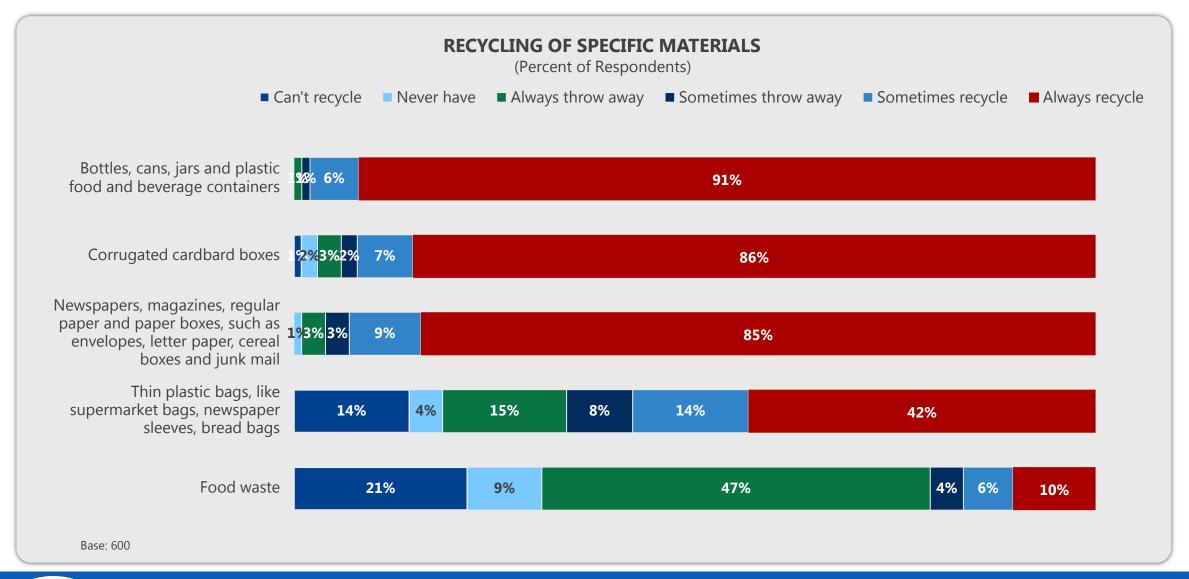
Gradually, the numbers of residents who recycle rarely or infrequently have gone down—in 1996 they represented more than a quarter of the population (27%) and by 2015 have been reduced to about a quarter of that (7%).

Also, the numbers of residents who say they "always" recycle has increased over time, from a little over half (57%) to more than three-quarters (78%).

The sample in 2015 and 2005 included fewer residents who do not have easy access to recycling programs (e.g., people who live in large apartment complexes or who must hire their own trash removal services). If those residents are removed from the earlier measurements, it would add approximately 5-6% to the "always" recycle segments.



RECYCLING OF SPECIFIC MATERIALS HOW FREQUENTLY DOES YOUR HOUSEHOLD RECYCLE...?





RECYCLING SPECIFIC MATERIALS OVER TIME HOW FREQUENTLY DOES YOUR HOUSEHOLD RECYCLE...?

Recycling specific materials over time

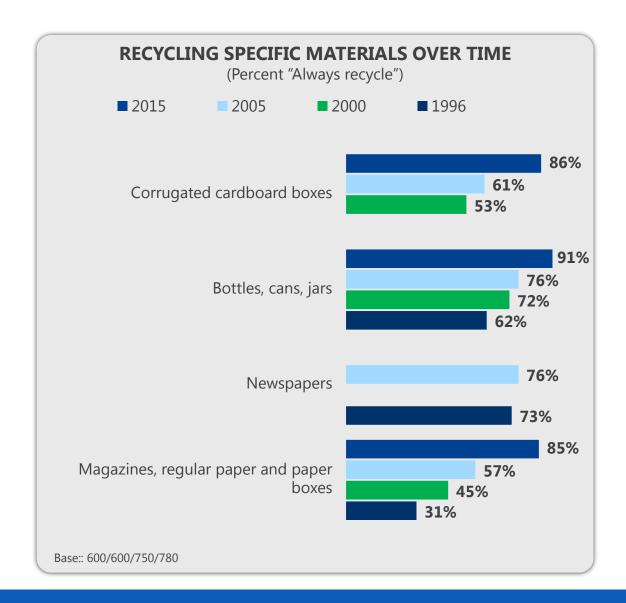
In previous iterations of this research, we tested four materials:

- Newspapers
- Glass, plastic, metal containers
- Magazines, regular paper
- Corrugated cardboard

For 2015, newspapers were combined with magazines and regular paper, which may account for the large jump in recycling in that category. In 2000, newspapers and magazines were combined and the "always" recycle rates was 82%.

These materials are all being recycled by more residents now than in previous years. The numbers have risen gradually and generally linearly for all of these materials.

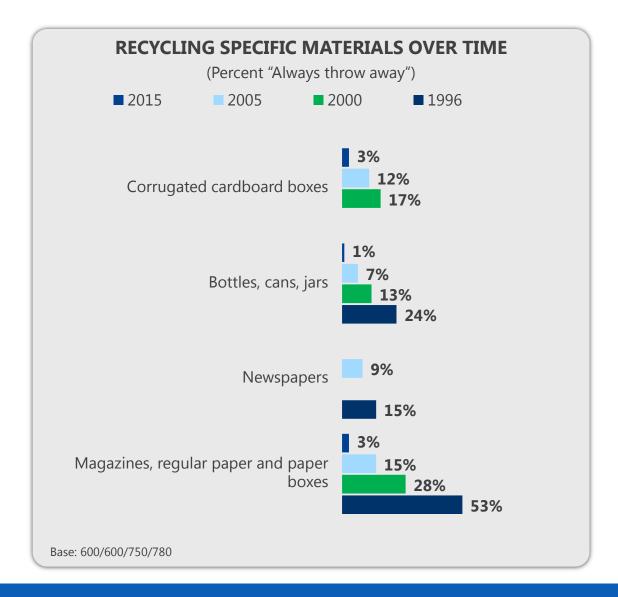
The jump in corrugated cardboard recycling may be related to the overall rise in cardboard being sent to households as shipping containers.



RECYCLING SPECIFIC MATERIALS OVER TIME HOW FREQUENTLY DOES YOUR HOUSEHOLD RECYCLE...?

Recycling specific materials over time

Conversely, the percentage of residents who always throws away each of these common recyclables has declined considerably over time.





RECYCLING INDEX OVER TIME

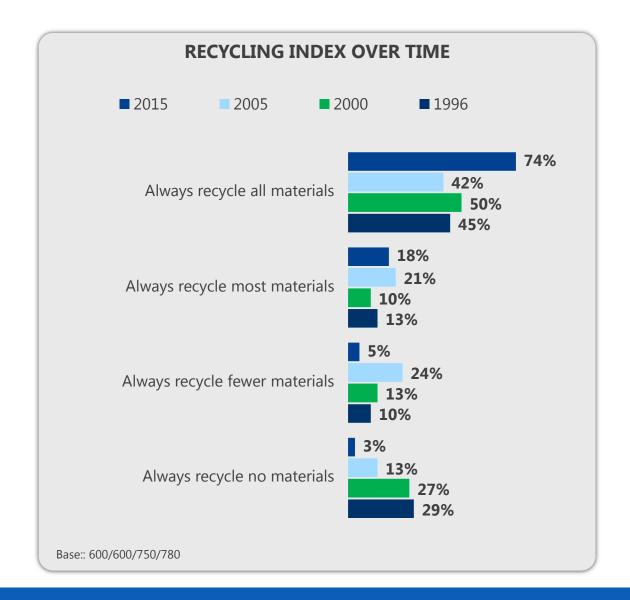
HOW FREQUENTLY DOES YOUR HOUSEHOLD RECYCLE...?

Recycling index over time

Combining all of the material types into an "index" of recycling behavior follows the same general pattern as for the individual materials.

Now, about three-quarters (74%) say they "always" recycle all of the materials and another 18% say they always recycle most types. Thus, 92% say they are recycling at very high rates.

In 2015, the number of material types was consolidated from four to three. In general, the types of materials has not changed. So, a resident who always recycles all three categories in 2015 should be comparable to a resident who always recycles all four categories in 2005. The same is true for residents who recycle nothing—these should be comparable from year to year.



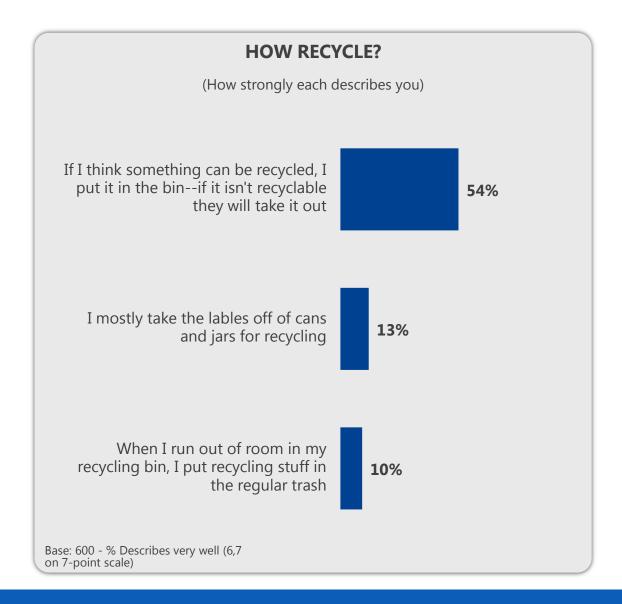
RECYCLING BEHAVIOR HOW DO YOU RECYCLE?

How do residents recycle?

More than half (54%) of Massachusetts residents who have easy access to recycling are "wishful" recyclers—if in doubt, they will put an item in their recycling bin and assume that it will be sorted out later if it is not actually recyclable.

Relatively few residents are "retro" recyclers—slightly more than one in ten (13%) —still take the labels off can and jars for recycling.

Similarly, relatively few residents (10%) put recyclables into the trash if they run out of room in their bins. This is almost half of the 2005 percentage (18%) and may reflect the move to much larger recycling bins in many communities.





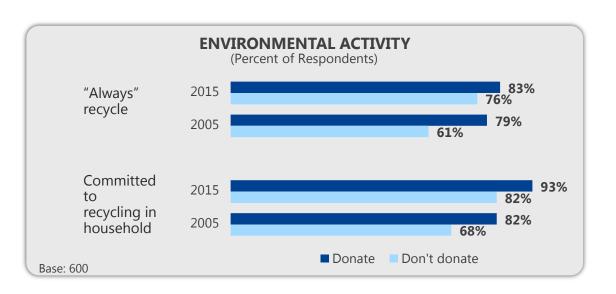
RECYCLING BEHAVIOR WHO RECYCLES?

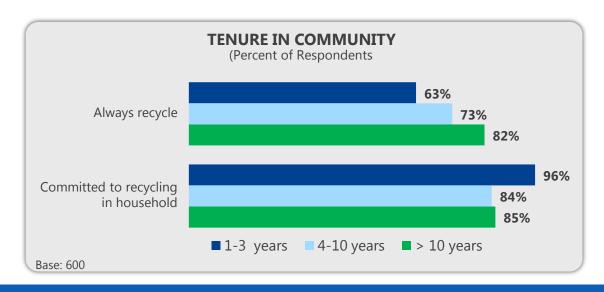
Environmentally active people?

About a quarter of Massachusetts residents say they (or someone in their family) donates time or money to environmental groups or organizations. This percentage has remained relatively stable over time (albeit a bit lower now than in previous surveys). It appears that recycling is now such a regular way of disposing some kinds of household waste that people who do not donate to environmental causes are recycling at nearly the same level as those who do, and that gap has declined over time.

Longer term residents?

Residents who have lived in their communities for longer might be expected to recycle more, as a general expression of connectedness to the community, greater likelihood of having children who grow up in the community, etc. It is also the case that longer term residence in a community is likely to be skewed toward home ownership and away from renters. Longer term residents are more likely to say they recycle more, but are actually slightly less likely to describe themselves strongly as being committed to recycling.







BY DEMOGRAPHIC CHARACTERISTICS: AGE, INCOME

18 - 35	36 - 55	55+	<\$50K	\$50-99K	\$100K+	REFUSED
			.,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	700 00 11	720011	
68%	80%	85%	74%	75%	84%	78%
78	87	88	82	86	86	83
83	88	86	86	84	89	83
91	90	92	88	91	95	86
4	14	12	10	13	9	10
49	38	42	49	40	41	43
161	223	196	119	187	195	99
	78 83 91 4 49	68% 80% 78 87 83 88 91 90 4 14 49 38	68% 80% 85% 78 87 88 83 88 86 91 90 92 4 14 12 49 38 42	68% 80% 85% 74% 78 87 88 82 83 88 86 86 91 90 92 88 4 14 12 10 49 38 42 49	68% 80% 85% 74% 75% 78 87 88 82 86 83 88 86 86 84 91 90 92 88 91 4 14 12 10 13 49 38 42 49 40	68% 80% 85% 74% 75% 84% 78 87 88 82 86 86 83 88 86 86 84 89 91 90 92 88 91 95 4 14 12 10 13 9 49 38 42 49 40 41

BY DEMOGRAPHIC CHARACTERISTICS: EDUCATION, CHILDREN

	HS OR LESS	SOME COLLEGE	COLLEGE	GRAD SCHOOL	CHILDREN	NO CHILDREN
Overall (How frequently does your household recycle? - % Always)	82%	71%	77%	84%	77%	79%
Newspapers, magazines, regular paper and paper boxes, such as envelopes, letter paper, cereal boxes and junk mail	75	88	85	89	86	84
Corrugated cardboard boxes	88	86	86	85	88	84
Bottles, cans, jars, and plastic food and beverage containers	88	90	93	92	93	91
Food waste	9	12	8	14	11	11
Thin plastic bags, like supermarket bags, newspaper sleeves, bread bags	44	46	39	44	44	41
Base	106	112	239	139	259	334
% Always recycle each category						



BY DEMOGRAPHIC CHARACTERISTICS: SINGLE-STREAM VS. NOT

	SINGLE- STREAM	NOT	
Overall (How frequently does your household recycle? - % Always)	78%	79%	
Newspapers, magazines, regular paper and paper boxes, such as envelopes, letter paper, cereal boxes and junk mail	84	85	
Corrugated cardboard boxes	84	89	
Bottles, cans, jars, and plastic food and beverage containers	92	89	
Food waste	7	15	
Thin plastic bags, like supermarket bags, newspaper sleeves, bread bags	42	44	
Base	354	246	
% Always recycle each category			



BY DEMOGRAPHIC CHARACTERISTICS: AGE, INCOME

	18 - 35	36 - 55	55+	<\$50K	\$50-99K	\$100K+	REFUSED
When I run out of room, I put recycling in the trash	11%	9%	11%	11%	10%	9%	12%
If I knew more about what happens to things I recycle, I would recycle more	49	48	44	62	47	40	43
If I had to pay for each bag of trash and recycling were free, I would recycle more	55	55	44	51	52	47	57
If I think something can be recycled, I put it in the bin—if it isn't they will take it out	58	56	50	50	56	58	45
I mostly try to take the labels off cans and jars	9	14	16	17	14	11	11
I know what I can put in my bin and what I can't	68	81	82	76	76	79	80
Base	161	223	196	119	187	195	99
% Describes very well (6,7 on 7-point scale)							

RECYCLING BEHAVIOR 5

BY DEMOGRAPHIC CHARACTERISTICS: EDUCATION, CHILDREN

10% 50 47	10% 45 53	8% 44 48	11% 50 53	9%	
47	53	48	53		
			33	50	
48	55	59	55	54	
14	13	9	14	13	
68	78	79	75	80	
	239	139	259	334	
		112 239			

RECYCLING BEHAVIOR 6

BY DEMOGRAPHIC CHARACTERISTICS: SINGLE-STREAM VS. NOT

	SINGLE- STREAM	NOT
When I run out of room, I put recycling in the trash	12%	8%
If I knew more about what happens to things I recycle, I would recycle more	47	47
If I had to pay for each bag of trash and recycling were free, I would recycle more	49	55
If I think something can be recycled, I put it in the bin—if it isn't they will take it out	54	53
I mostly try to take the labels off cans and jars	12	15
I know what I can put in my bin and what I can't	76	80
Base	354	246
% Describes very well (6,7 on 7-point scale)		

MOTIVATORS AND BARRIERS TO RECYCLING

DETAILED FINDINGS



MOTIVATORS AND BARRIERS OVERALL SUMMARY

- Almost all Massachusetts residents who have access to recycling say they are committed to recycling in their own households (84% strongly agree with this description of them). More than half of residents believe strongly that recycling benefits the Massachusetts economy and that recycling benefits their own communities because it saves money (59% and 58%, respectively). Relatively few residents say they recycle because their town requires them to (28%). Likewise, relatively few say they recycle because their children encourage them to (21%).
- The percentages of residents who are committed to recycling, see these overall benefits to recycling, and are motivated either by regulation or the encouragement of their children are generally similar across the Commonwealth.
- The percentage of residents who say they are committed to recycling in their households has risen steadily over the last 20 years—it was first measured at 60% in 1996 (approximately 65% when people without easy access are taken out), 72% in 2005, and 86% now.
- The percentage of people who believe that recycling benefits the state economy is slightly lower (63% in 2005 vs. 59% now).
- The percentage of people who say that recycling benefits their communities because it saves money is 58%. In 2005, this question did not include the qualifier about the benefit being saving money and 84% strongly agreed with it then. It may be that some residents see the primary benefit as something other than local economics. It could also be the case that people are less apt to see a local benefit now.
- The numbers of residents who say they would recycle more if they knew more about what happens to the materials has been steady over time (47% in 2005, 47% in 2015). The number who say they would recycle more if they had to pay per bag for trash has declined (59% in 2005 vs. 51% today) and that may reflect the overall higher numbers who are already paying per bag for trash (and who believe they are already doing all they can).

MOTIVATORS AND BARRIERS OVERALL SUMMARY 2

- The number of residents who believe recycling is complicated remains very low—around 2% say it is "very complicated," which has been stable since 1996. The number who say it is "somewhat complicated" has declined linearly over that time, from 23% to 13% now. Six in ten residents (60%) say recycling is "not at all complicated."
- Responding to an open-end question asking for the one thing that could help them recycle more, approximately one in five residents (21%) say they already recycle as much as they can. This is essentially the same as in 2005 (24%). In 2005, almost a quarter of residents (23%) said they would recycle more if their programs were made more convenient in some way (e.g., more frequent pick-ups, moving to single-stream). That percentage has dropped in 2015 to about 5%. A little less than one in ten (8%) say the one improvement would be their program accepting other types of waste, especially thin plastic bags and Styrofoam. This is meaningful in that a large number of residents believe these materials (particularly thin plastic bags) are already acceptable.
- More than half of residents say that a small fine would motivate them to be at least more likely to be careful about their recycling (29% say it would make them "much more likely" and 26% say "more likely"). Younger residents are much more likely to respond positively to this idea than are older residents: 42% of the 18 35 cohort say "much more likely" vs. 30% of 36 55 and 17% of 55+ groups. Note that residents who believe they are already being as careful as they can be do not see this as making them more careful.
- Residents in single-stream communities are a little more likely to believe that recycling benefits their communities by saving money (61% vs. 55%), but otherwise the pattern is similar across the different types of communities.

MOTIVATORS AND BARRIERS WHY DO YOU RECYCLE?

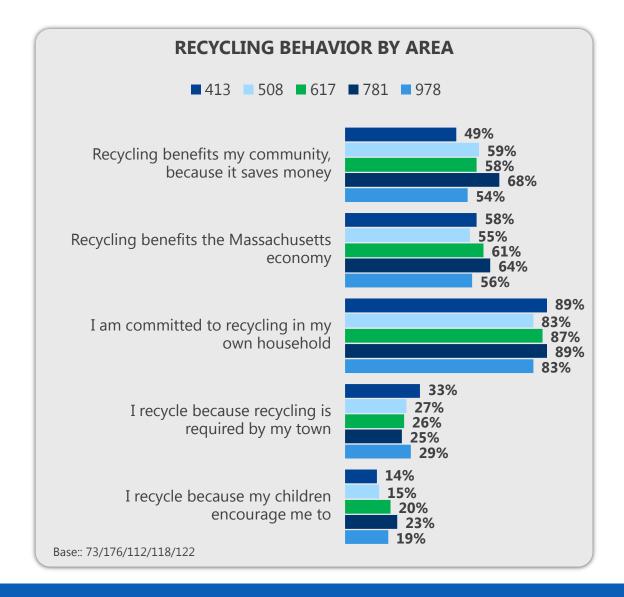




MOTIVATORS AND BARRIERS WHY DO YOU RECYCLE? BY AREA

Why recycle by area

The general pattern of perceived benefits and motivators of recycling behavior is consistent across the Commonwealth.





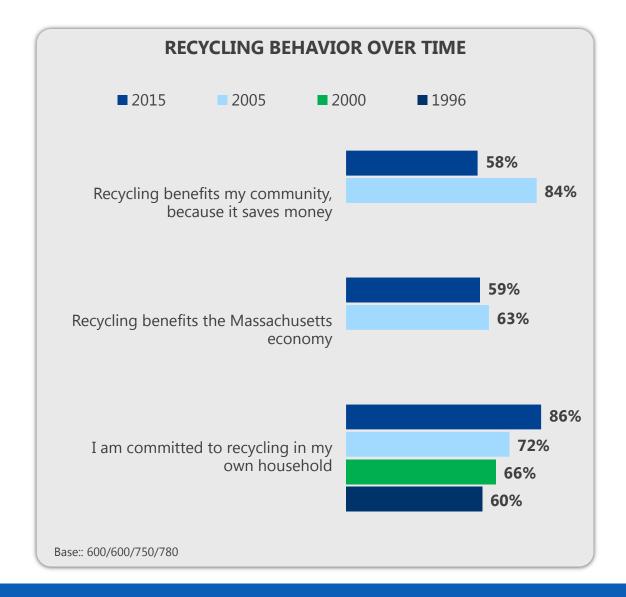
MOTIVATORS AND BARRIERS WHY DO YOU RECYCLE? OVER TIME

Recycling behavior over time

The number of people who say the are committed to recycling in their household has steadily increased since 1996 and now includes nearly all residents.

The idea that recycling benefits the state economy is essentially stable since last measured in 2005.

The idea that recycling benefits the local community by saving money is subscribed to by 58% of residents. In 2005, this question did not include the qualifier "because it saves money" and 84% agreed strongly with it. It could be that some residents see a primary benefit other than saving money; it could also be that the number who believe there is a local benefit has gone down.

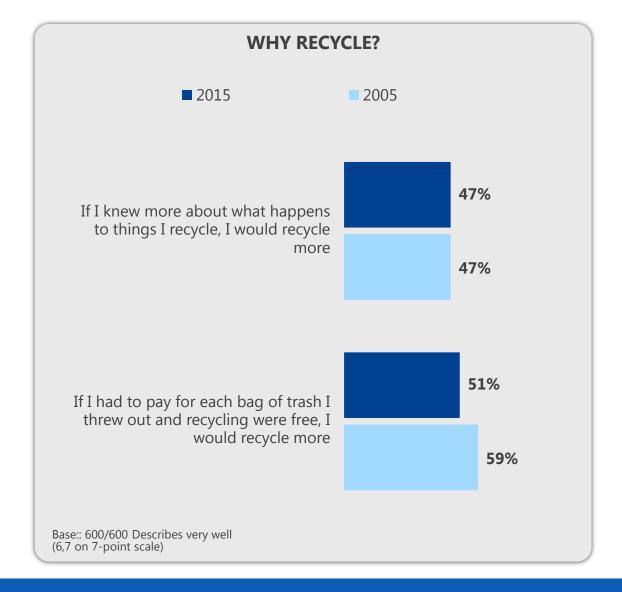


MOTIVATORS AND BARRIERS WHY DO YOU RECYCLE? OVER TIME

Recycling behavior over time

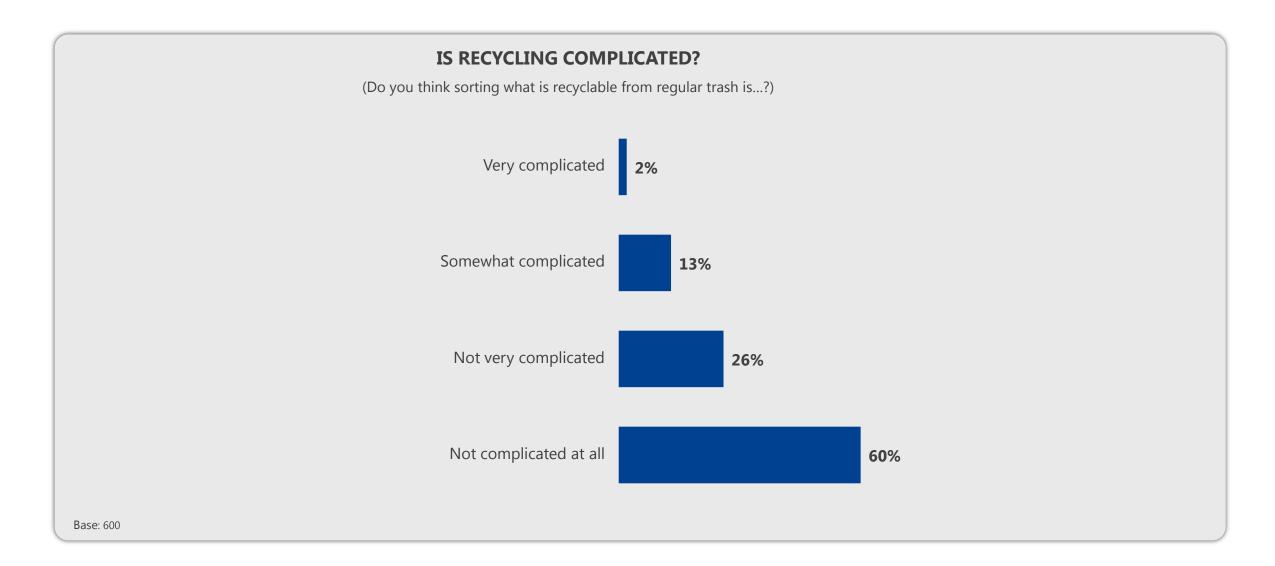
The number of residents who say they would recycle more if they knew more about what happens to the materials they throw in their bins has been stable since 2005.

The number who would be motivated to recycle more if they had to pay per bag for trash has gone down since 2005 from 59% to 51%, which may reflect the larger number who now do pay per bag (and who say they already are doing everything they can).





MOTIVATORS AND BARRIERS IS RECYCLING COMPLICATED?





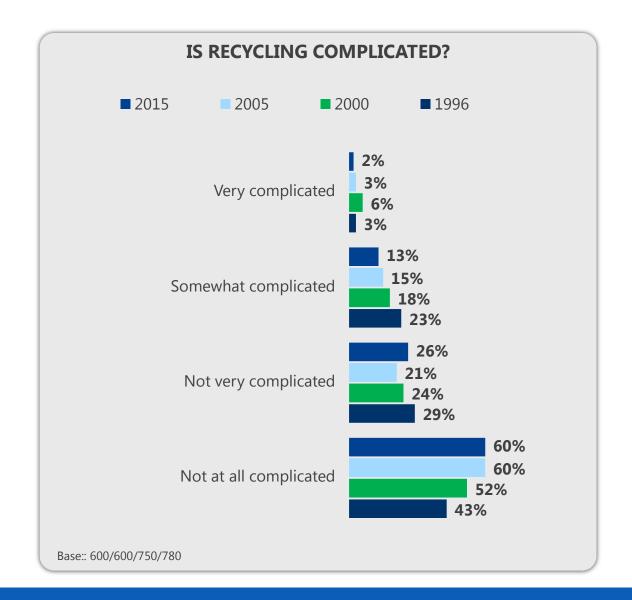
MOTIVATORS AND BARRIERS

IS RECYCLING COMPLICATED? PERCEPTIONS OVER TIME

Perception over time

The number of people who think recycling is very complicated is unchanged and has been stable since 1996. However, the number who characterize recycling as "somewhat complicated" has gone down steadily, from 23% in 1996 to 13% in 2015.

The number who believe recycling is not all complicated is unchanged at 60%.



MOTIVATORS AND BARRIERS WHAT WOULD ENCOURAGE MORE RECYCLING?

What one thing would encourage more?

The number who say they are already doing all they can is essentially stable since 2005.

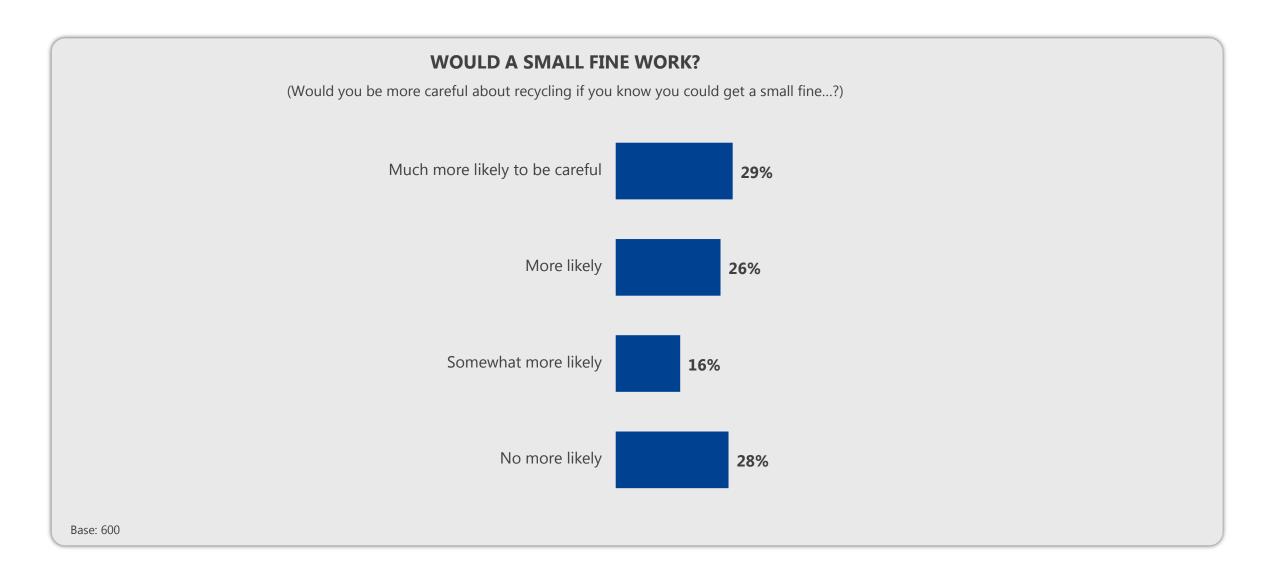
In 2005, almost a quarter of residents (23%) wanted their programs to be more convenient—more frequent pickups, single-stream, etc. That number has declined to about 5% now.

Almost one in ten residents say they want their programs to handle more materials, especially thin plastic bags and Styrofoam. This is noteworthy because large numbers of residents already believe these materials can be put in their recycling bins.

What single thing would encourage you to recycle more?	2015	2005
Already do as much as possible	21%	24%
Education/information , especially about what can be recycled and the outcomes/benefits of recycling	19%	15%
Incentives/disincentives , including fines, enforcement, tax breaks, paying for trash, getting a credit	15%	18%
Helps the environment , residents' belief that they are doing the right thing	10%	n/a
Bins —town supplied, bigger, better, stronger, more, wheeled, covered	8%	In 2005, 23% wanted
Take other material , especially plastic bags and Styrofoam	8%	more convenience and 9% wanted other
ther program improvements, pick o curbside, pick up more frequently, 5% ngle stream, less sorting		program improvements.
Base:	600	600



MOTIVATORS AND BARRIERS WHAT WOULD ENCOURAGE YOU TO RECYCLE MORE CAREFULLY?



MOTIVATORS AND BARRIERS TO RECYCLING 1 BY DEMOGRAPHIC CHARACTERISTICS: AGE, INCOME

	18 – 35	36 - 55	55+	<\$50K	\$50-99K	\$100K+	REFUSED
Recycling benefits my community, because it saves money.	57%	58%	61%	65%	59%	57%	53%
Recycling benefits the Massachusetts economy.	59	56	62	66	62	55	51
I am committed to recycling in my own household.	85	87	84	86	85	89	79
I recycle because recycling is required by my town.	22	22	37	39	30	14	37
I recycle because my children encourage me to.	13	20	20	24	15	17	18
Would you be more careful if you could get a small fine for putting recyclables in trash or vice versa? (% "Much more likely")	42	30	17	25	34	31	15
Base	161	223	196	119	187	195	99

MOTIVATORS AND BARRIERS TO RECYCLING 2 BY DEMOGRAPHIC CHARACTERISTICS: EDUCATION, CHILDREN

	HS OR LESS	SOME COLLEGE	COLLEGE	GRAD SCHOOL	CHILDREN	NO CHILDREN
Recycling benefits my community, because it saves money.	57%	56%	61%	58%	54%	62%
Recycling benefits the Massachusetts economy.	59	55	60	58	54	62
am committed to recycling in my own nousehold.	80	83	87	88	85	87
recycle because recycling is required by my town.	31	37	28	17	24	31
recycle because my children encourage me to.	22	16	18	16	20	17
Would you be more careful if you could get a small fine for putting recyclables in trash or vice versa? (% "Much more likely")	26	31	28	30	37	22
Base	106	112	239	139	259	334

MOTIVATORS AND BARRIERS TO RECYCLING 2

BY DEMOGRAPHIC CHARACTERISTICS: SINGLE-STREAM VS. NOT

	SINGLE- STREAM	NOT
Recycling benefits my community, because it saves money.	61%	55%
Recycling benefits the Massachusetts economy.	60	57
I am committed to recycling in my own household.	87	84
I recycle because recycling is required by my town.	29	26
I recycle because my children encourage me to.	17	20
Would you be more careful if you could get a small fine for putting recyclables in trash or vice versa? (% "Much more likely")	31	26
Base	354	246
% Strongly agree (6,7 on 7-point scale) except when	e indicated	



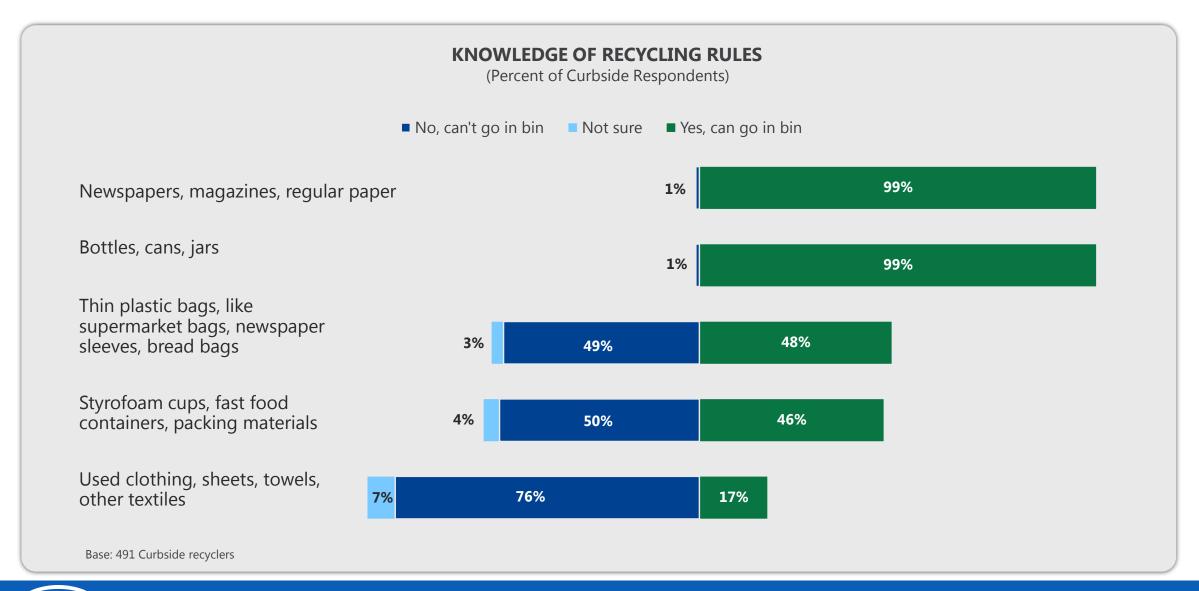
DETAILED FINDINGS



KNOWLEDGE OF RECYCLING RULES OVERALL SUMMARY

- Essentially all Massachusetts residents who have access to recycling know that they can recycle newspaper, magazines, regular paper, cardboard, bottles, cans, jars, etc.
- However, nearly half of residents with curbside recycling (48%) think they can throw thin plastic bags into their recycling bins and nearly as many (46%) think they can recycle Styrofoam in their bins. Nearly eight in ten residents (79%) believe that any plastic that has a number in the recycling triangle symbol can be recycled in their bins—only 18% know this is not the case. Younger residents are more likely to believe thin plastics and all plastics with a number can go into their bins.
- Relatively few curbside residents (17%) think they can put unwearable used clothing into their recycling bin.
- Nearly half of curbside residents (44%) believe that rinsing containers is a requirement.
- When the various questions about what materials are acceptable for recycling in the household bin are combined into an index of "recycling knowledge" only one in ten residents (10%) can be characterized as all or mostly correct. A third of residents are largely correct (33%). As noted above, the main misapprehensions are around what kind of plastics are acceptable. About a third of residents (33%) can be characterized as mostly or all incorrect.
- Despite the foregoing, most residents (77%) agree strongly with the statement "I know what I can put in my bin and what I can't."
- And, residents who score lower on the knowledgeability index have the same views on the (non-) complexity of recycling as residents who actually do know the rules.
- Residents who score lower on the knowledgeability index are also a little more likely to be wishful recyclers.
- Residents in single-stream communities are more likely to think Styrofoam can go into their bins (50% vs. 40%), but also more likely to say thin plastic bags are not acceptable (44% vs. 58%).

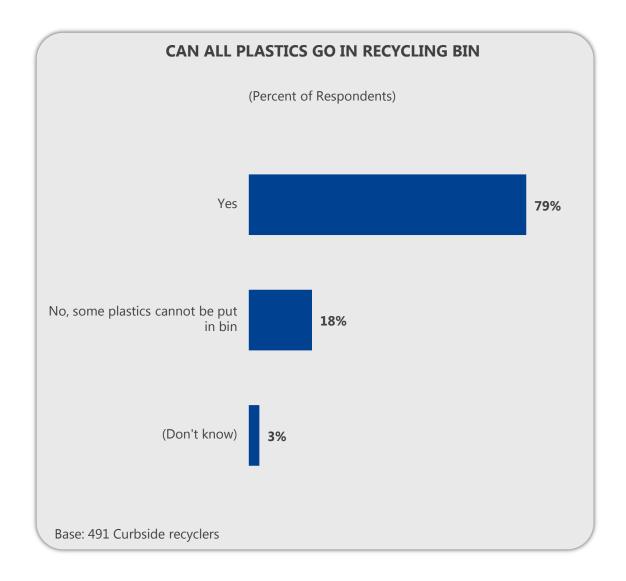
KNOWLEDGE OF RECYCLING RULES CAN YOU RECYCLE...IN YOUR HOUSEHOLD RECYCLING BIN?



KNOWLEDGE OF RECYCLING RULES CAN ALL PLASTICS GO IN RECYCLING BIN?

Plastics

Almost eight in ten Massachusetts curbside recyclers believe that if a plastic has a number in the triangle recycling symbol it can be thrown in their household recycling bin. Fewer than one in five know that this is not the case.

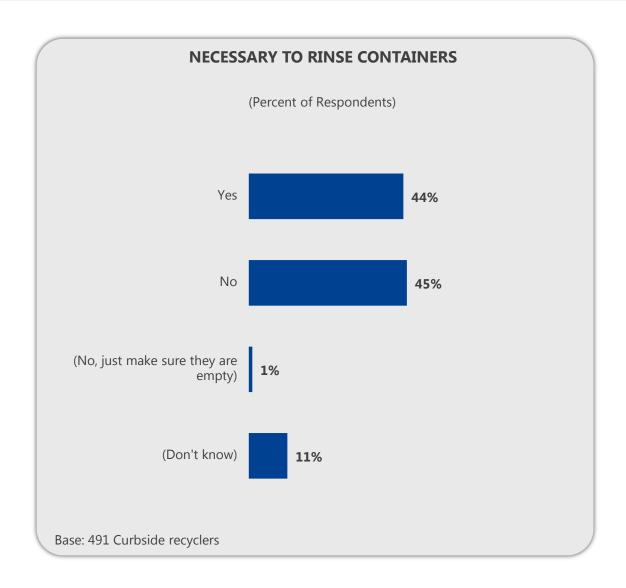




IS IT NECESSARY TO RINSE OUT CONTAINERS FOR RECYCLING?

Rinse containers

Nearly half of curbside recyclers say it is necessary to rinse out containers before recycling them and about the same number say it is not.

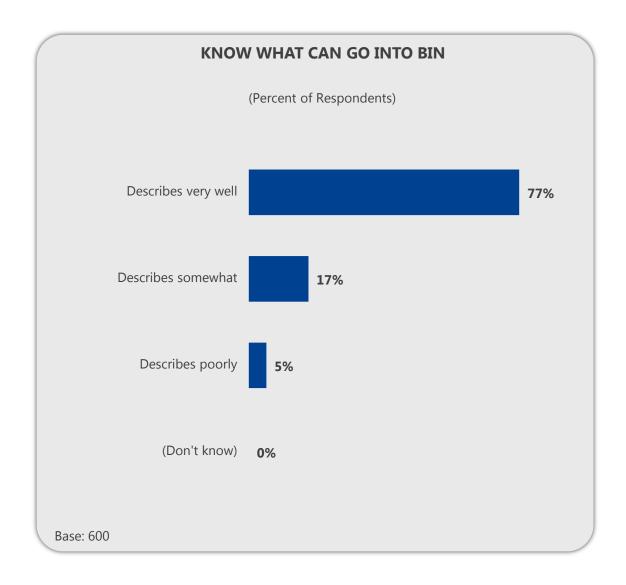




KNOWLEDGE OF RECYCLING RULES KNOW WHAT CAN GO INTO BIN

I know what I can put in my bin and what I can't

Almost all residents believe they know what they can put in their recycling bins and what they cannot.





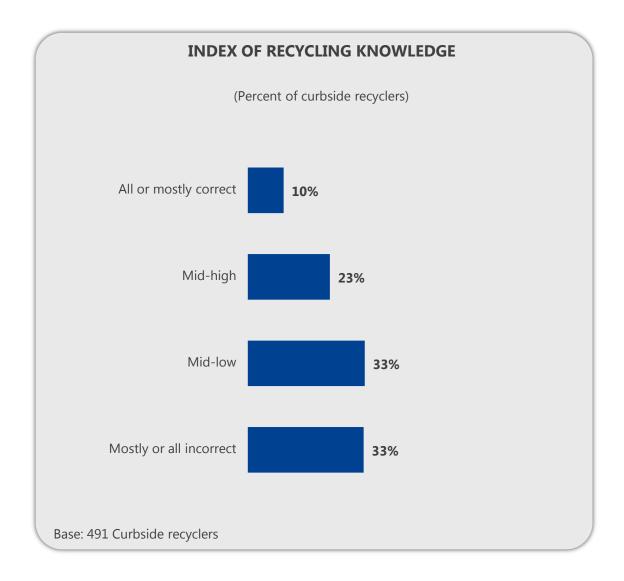
KNOWLEDGE OF RECYCLING RULES INDEX OF RECYCLING KNOWLEDGE

Index of recycling knowledge

The questions used to assess residents' knowledge of curbside recycling of specific materials (e.g., thin film plastics, Styrofoam) are combined to create an index of recycling knowledge.

Of the 10% who are "all or mostly correct," only 8.4% of residents are familiar enough with recycling "rules" to correctly assess the recyclability of *all* of the materials tested. About a third of residents, on the other hand, are mostly incorrect in what they "know" about recycling.

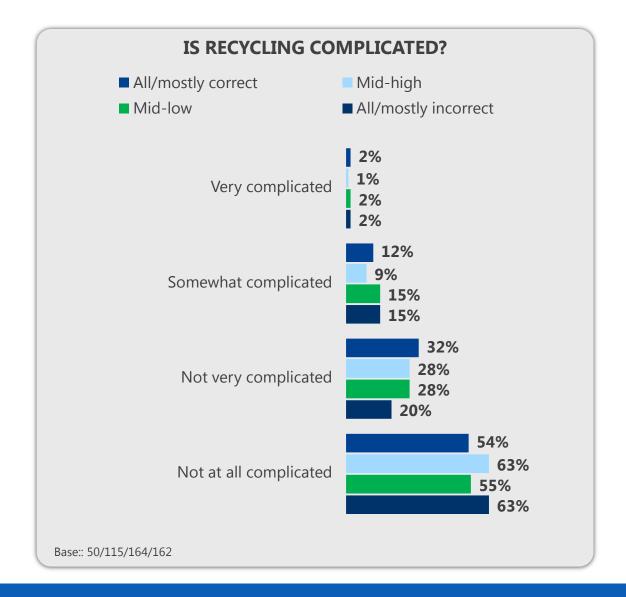
Most curbside recyclers (79%) believe that any plastic with a number on it can go into the recycling bin and about half believe thin film plastics and Styrofoam can be recycled in their bins (48% and 46% respectively).



IS RECYCLING COMPLICATED? PERCEPTIONS VS. ACTUAL KNOWLEDGE

Perception vs. actual knowledge

The perception of how complicated recycling is does not vary much on the basis of how much residents correctly know about it. Put another way, residents believe they know what can be recycled, regardless of how correct or incorrect their knowledge is.



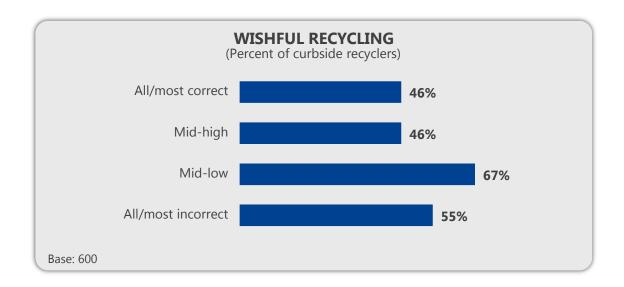


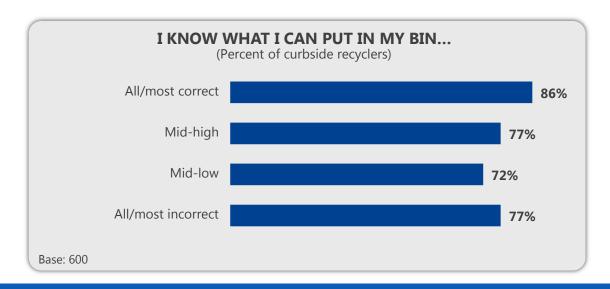
KNOWLEDGE OF RECYCLING RULES HOW CONFIDENT ARE RECYCLERS IN THEIR KNOWLEDGE?

How confident are recyclers in their knowledge?

Recyclers who are on the lower end of the recycling knowledgeability index are a little more likely to be wishful recyclers.

Recyclers who are at the very high end of the index are most likely to agree that they know what can put into their bin, but those further down on the index also tend to believe that in large numbers.







BY DEMOGRAPHIC CHARACTERISTICS: AGE, INCOME

	18 – 35	36 - 55	55+	<\$50K	\$50-99K	\$100K+	REFUSED
Styrofoam cups, fast food containers, and packing materials	56%	41%	46%	51%	53%	38%	45%
Thin plastic bags, like supermarket bags, newspaper sleeves, bread bags	55	43	50	50	47	45	55
Used clothing, sheets, towels, and other textiles	22	14	17	26	21	11	12
Newspapers, magazines, and regular paper	99	98	99	99	97	99	100
Bottles, cans, and jars	99	99	98	99	98	98	100
All plastics with a number in the triangle recycling symbol	87	78	74	82	82	77	73
Necessary to rinse containers? (% "yes")	42	45	45	43	46	44	41
is recycling complicated? (% "Not complicated at all")	57	58	62	59	54	65	62
Base	161	223	196	119	187	195	99

^{% &}quot;Yes, can be recycled in bin" among curbside recyclers

BY DEMOGRAPHIC CHARACTERISTICS: EDUCATION, CHILDREN

	HS OR LESS	SOME COLLEGE	COLLEGE	GRAD SCHOOL	CHILDREN	NO CHILDREN
Styrofoam cups, fast food containers, and packing materials	55%	42%	48%	41%	50%	45%
Thin plastic bags, like supermarket bags, newspaper sleeves, bread bags	55	50	43	51	50	47
Used clothing, sheets, towels, and other textiles	22	15	16	18	18	17
Newspapers, magazines, and regular paper	98	97	100	98	98	99
Bottles, cans, and jars	99	97	99	99	99	99
All plastics with a number in the triangle recycling symbol	86	78	75	80	78	79
Necessary to rinse containers?	42	41	45	47	40	47
Is recycling complicated? (% "Not complicated at all")	68	54	56	63	59	60
Base	106	112	239	139	259	334
% "Yes, can be recycled in bin" among curbside recy	yclers					

BY DEMOGRAPHIC CHARACTERISTICS: SINGLE-STREAM VS. NOT

	SINGLE- STREAM	NOT
Styrofoam cups, fast food containers, and packing materials	50%	40%
Thin plastic bags, like supermarket bags, newspaper sleeves, bread bags	44	58
Used clothing, sheets, towels, and other textiles	18	17
Newspapers, magazines, and regular paper	99	98
Bottles, cans, and jars	99	98
All plastics with a number in the triangle recycling symbol	79	79
Necessary to rinse containers?	42	47
Is recycling complicated? (% "Not complicated at all")	61	59
Base % "Yes, can be recycled in bin" among curbside recyclers	354	246



CONTAMINATION OF RECYCLABLES

DETAILED FINDINGS

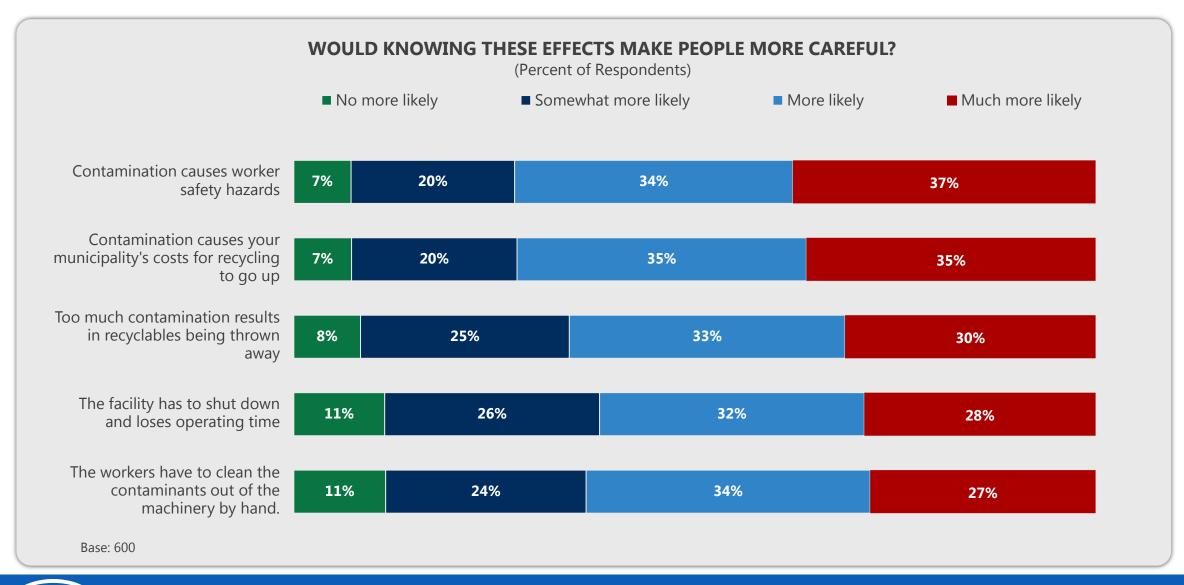


CONTAMINATION OF RECYCLABLES OVERALL SUMMARY

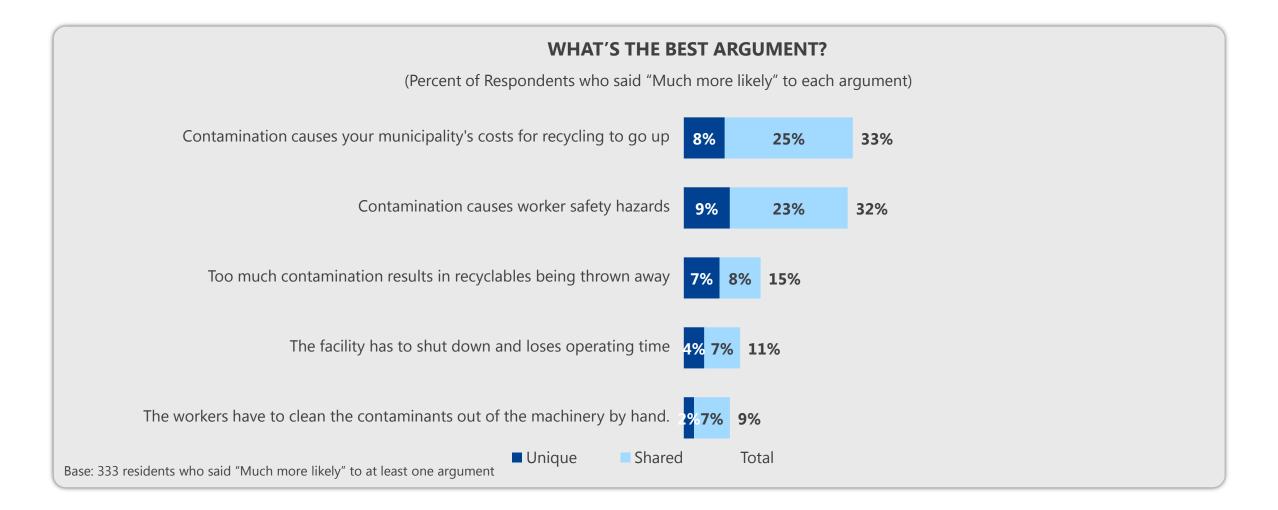
- We introduced residents to the idea of contamination of recyclables:
 - -"Now, I would like to ask a few questions about contamination of the recycling process. Contamination can occur when materials that should not be put into household recycling end up there. Contaminants can include regular trash, food waste, and things like thin plastic bags and ropes and cords that can tangle around the sorting machines. "
- We then presented residents with five statements and asked them whether each statement would make people more likely to be careful about that they put in their recycling.
- The five statements have roughly the same order-of-magnitude effect. None of them stand out for being either much more or much less effective than any of the others. Any of the statements could be effective as part of communications program designed to reduce contamination.
- 330 residents rated at least one statement as "much more likely" to get people to be more careful. The number of "much more likely" ratings among this group is one way to rank the statements.
 - -Based on this ranking, the statements about contamination causing costs to rise and creating worker safety hazards are much more effective than the others.
 - -The cost argument resonates most strongly with younger residents and least likely with older (43% of 18 35; 33% of 36 55; 26% of 55+).
 - -The worker safety argument resonates most strongly with older residents (27%/29%/42%).
- As noted in the section on Motivators and Barriers, more than half of residents say that small fines would make them more likely to be careful about what they put in their bins. How knowledgeable residents actually are about the rules of recycling makes relatively little difference in how they view the idea of fines, except that people on the high end of the knowledge continuum are more likely to say fines would not have an effect on them.



CONTAMINATION OF RECYCLABLES WOULD PEOPLE BE MORE CAREFUL IF THEY KNEW THAT...?



CONTAMINATION OF RECYCLABLES WHAT'S THE BEST ARGUMENT TO GET PEOPLE TO BE MORE CAREFUL?



CONTAMINATION OF RECYCLABLESWHAT ARGUMENTS WORK BEST?

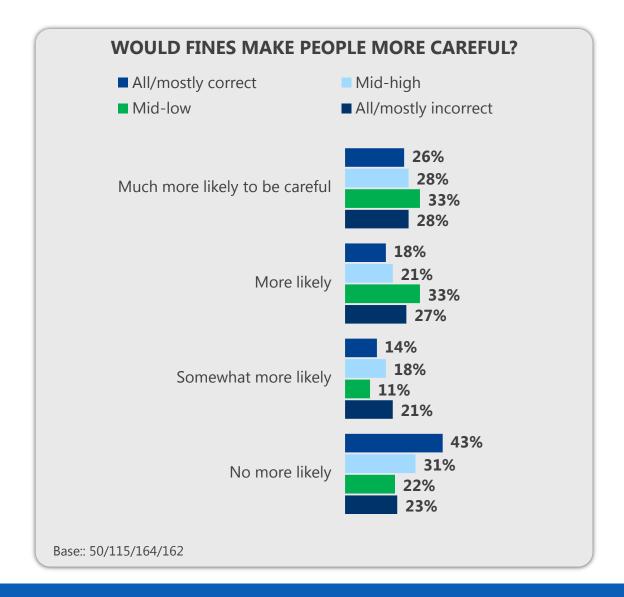
Correct knowledge of recycling

How correct residents are in their understanding of recycling and recyclability has no bearing on which arguments they find persuasive for mitigating contamination.

Fines?

The accuracy of residents' knowledge of recycling is not related in any significant way to whether or not they would be more careful recyclers if small fines were imposed for contamination.

Recyclers whose knowledge is accurate are more likely to say a fine would have no influence on them—they may be stronger in their belief that they are already doing the right thing.



BEST ARGUMENT VS. CONTAMINATION OF RECYCLABLES 1

BY DEMOGRAPHIC CHARACTERISTICS: AGE, INCOME

	18 - 35	36 - 55	55+	<\$50K	\$50-99K	\$100K+	REFUSED
The workers have to clean the contaminants out of the machinery by hand.	2%	14%	7%	11%	13%	3%	13%
The facility has to shut down and loses operating time.	13	9	11	19	4	14	9
Contamination causes your municipality's costs for recycling to go up.	43	33	26	36	31	39	17
Too much contamination results in recyclables being thrown away.	15	15	14	13	15	17	15
Contamination causes worker safety hazards.	27	29	42	21	38	26	47
Base	86	132	106	62	103	125	47

Base: 600, % Unique ratings of "Much more likely to be careful..." for each argument

BEST ARGUMENT VS. CONTAMINATION OF RECYCLABLES 2 BY DEMOGRAPHIC CHARACTERISTICS: EDUCATION, CHILDREN

	HS OR LESS	SOME COLLEGE	COLLEGE	GRAD SCHOOL	CHILDREN	NO CHILDREN
The workers have to clean the contaminants out of the machinery by hand.	9%	7%	8%	12%	9%	9%
The facility has to shut down and loses operating time.	13	8	14	8	16	8
Contamination causes your municipality's costs for recycling to go up.	34	30	35	31	32	34
Too much contamination results in recyclables being thrown away.	11	13	14	21	13	17
Contamination causes worker safety hazards.	32	42	29	28	30	34
Base	53	60	144	75	148	182

Base: 600, % Unique ratings of "Much more likely to be careful..." for each argument

BEST ARGUMENT VS. CONTAMINATION OF RECYCLABLES 3 BY DEMOGRAPHIC CHARACTERISTICS: SINGLE STREAM VS. NOT

	SINGLE- STREAM	NOT
The workers have to clean the contaminants out of the machinery by hand.	10%	8%
The facility has to shut down and loses operating time.	10	14
Contamination causes your municipality's costs for recycling to go up.	34	31
Too much contamination results in recyclables being thrown away.	16	14
Contamination causes worker safety hazards.	30	34
Base	354	246
Base: 600, % Unique ratings of "Much more likely to	be careful" for eac	h argument

PAY-AS-YOU-THROW (PAYT) PERCEPTIONS

DETAILED FINDINGS



PAYT PERCEPTIONSOVERALL SUMMARY

135 respondents self-identified as being in PAYT communities.

A majority of PAYT residents say that PAYT works better for the community (57%) and that it seems like a fairer system (57%).

About a third (32%) say they recycle more because there is a per bag fee for regular trash. Almost as many (28%) say they compost more since PAYT was implemented.

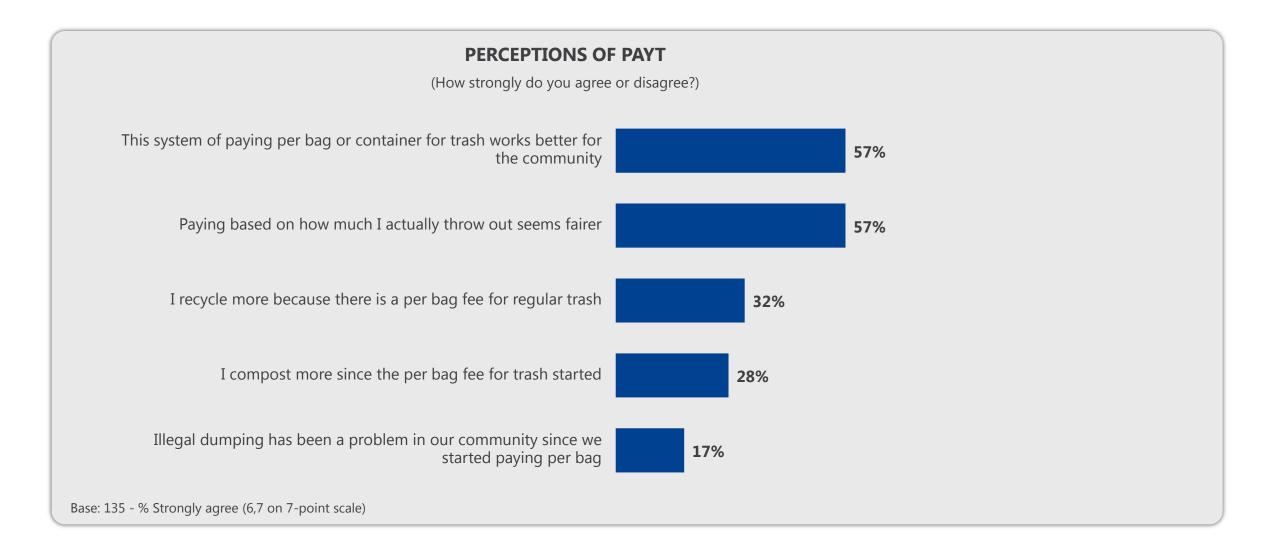
Very few PAYT residents say illegal dumping is a problem in their communities since PAYT started (17%).

PAYT residents are different from non-PAYT residents in several respects that may have to do with the economic and regulatory incentives involved in the PAYT model. PAYT residents are:

- more likely to say they recycle because the town requires them to (35% vs. 25%)
- less likely to believe they can put any numbered plastic into recycling (70% vs. 81%)
- more likely to say they would recycle more if they had to pay per bag for trash (62% vs. 48%)
- much likely to say they would be careful with their recycling if fines were involved for contamination (35% vs. 27%)
- more likely to compost at home (50% vs. 34%)

PAYT residents are not more likely to recycle more, overall and specific materials. Although they are less apt to say that any numbered plastic can go into a household bin, they are generally not any more well informed about the rules of recycling. They have the same likelihood of being a wishful recycler as non-PAYT residents and they are equally likely to think recycling is not very complicated. Their reactions to the statements about contamination are the same as others'.

PAYT PERCEPTIONS TO WHAT EXTENT DO YOU AGREE THAT...?





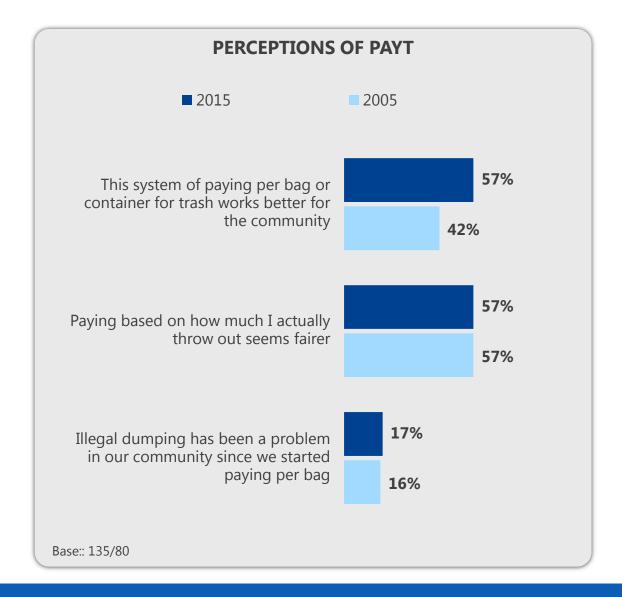
PAYT PERCEPTIONS

TO WHAT EXTENT DO YOU AGREE THAT ...? PERCEPTIONS OVER TIME

Perception over time

Since last measured in 2005, the perception that PAYT works better for the community has increased significantly, from 42% to 57%. This may be because in many communities PAYT has been in place for some time and the initial upheaval caused by the changeover is far in the past.

The perceptions that PAYT is fairer and that illegal dumping is not a problem are both unchanged from 2005.





PAYT VS. OTHER RESIDENTSSIMILARITIES AND DIFFERENCES

PAYT vs. Other residents

No differences in:

- Recycling behavior, overall and for specific materials
- Perceived benefits of recycling
- Awareness of what can be recycled (although slightly less likely to believe any plastic can go into bin)
- Likelihood of being a Wishful Recycler
- Views of how complicated recycling is
- Reactions to arguments to mitigate contamination
- Donations made to environmental groups

	PAYT	NON-PAYT
I recycle because recycling is required by my town	35%	25%
Put any plastic with a number in the bin	70%	81%
Recycle more if had to pay per bag for trash and recycling free	62%	48%
Much more likely to be careful if there are fines	35%	27%
Compost at home	50%	34%

RECYCLING VOCABULARY

DETAILED FINDINGS



RECYCLING VOCABULARY OVERALL SUMMARY

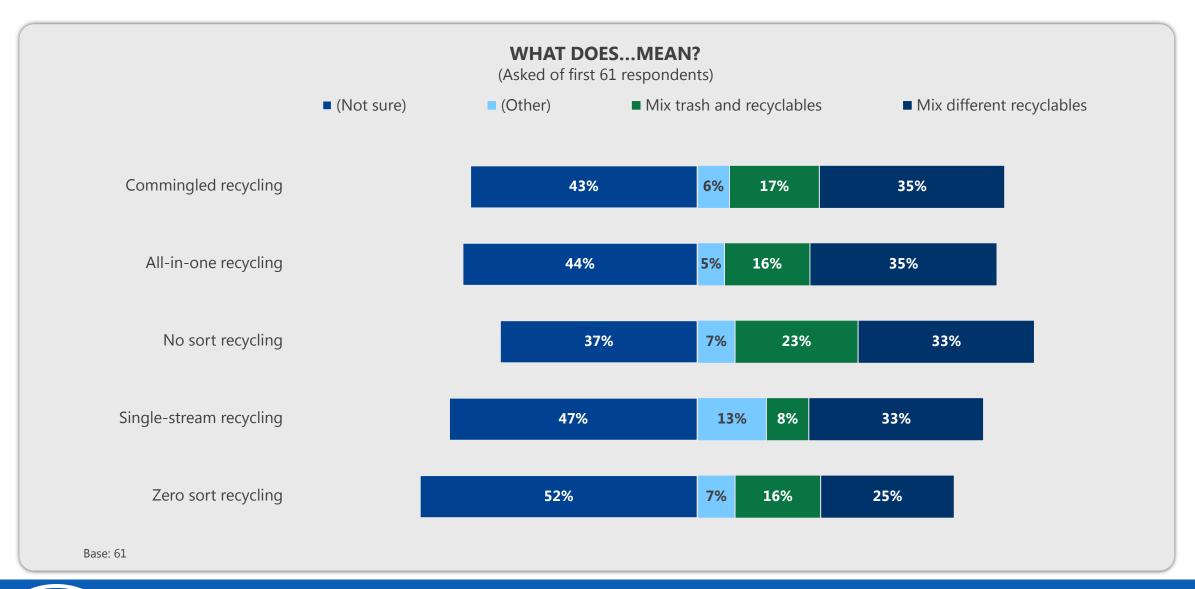
This series of questions was asked only of the first 61 respondents.

The five tested terms are basically equivalent. Residents either know or intuit their correct meaning at roughly the same levels. The numbers of residents who say they are "not sure" what these phrases mean are roughly equal too. Thus it appears that any of these terms could be used and defined however is desired. Note that there may be other reasons to favor one or another of them and it could also be that there are reasons other than meaning to favor one or another.

Single-stream is the term that the lowest number of residents believe means trash and recyclables can be mixed.

When residents are asked later what would encourage them to recycle more, those who talk about a program improvement that includes less sorting, or being able to put everything in one bin, the term they tend to use is single-stream.

RECYCLING VOCABULARYAS FAR AS YOU KNOW, WHAT DOES...MEAN?



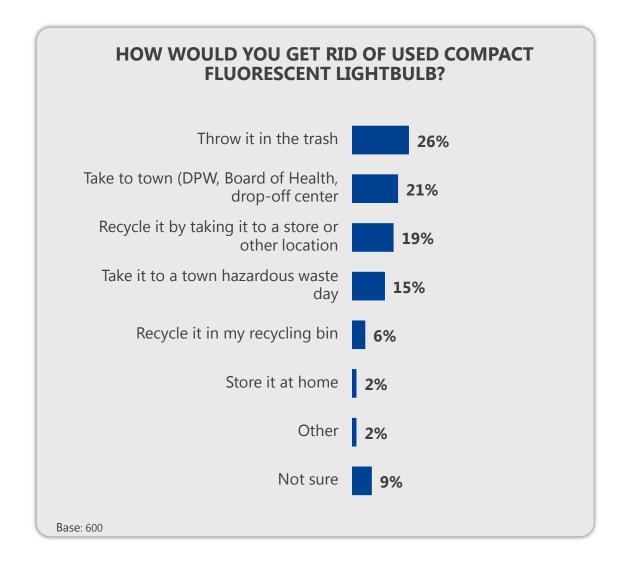
DETAILED FINDINGS



USED COMPACT FLUORESCENT LIGHTBULB HOW WOULD YOU GET RID OF...?

How would you get rid of a used CF lightbulb?

Most residents do not really know what to do with a used compact fluorescent lightbulb, but very few of them say they would put it in their recycling bin (6%). Unfortunately, about a quarter (26%) say they would throw it in the regular trash.



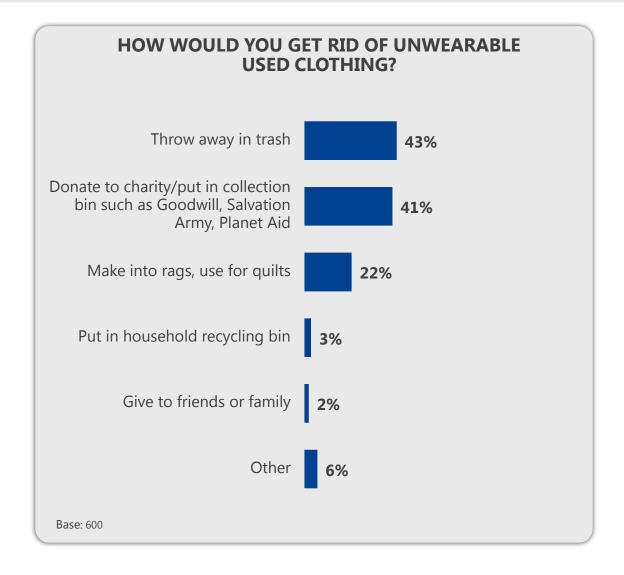


UNWEARABLE USED CLOTHINGHOW WOULD YOU GET RID OF...?

How would you get rid of unwearable used clothing?

Residents do a variety of things with unwearable used clothing. A plurality (43%) simply throw them away. Only 3% say they put them in the household recycling bin.

This appears to be more of an issue of diverting these from the waste stream rather than an issue of contaminating recyclables.





BY DEMOGRAPHIC CHARACTERISTICS: AGE, INCOME

18 – 35	36 - 55	55+	<\$50K	\$50-99K	\$100K+	REFUSED
7%	3%	7%	13%	4%	3%	4%
33	25	21	28	30	24	18
3	3	3	4	3	4	1
46	43	42	49	44	40	46
161	223	196	119	187	195	99
	7% 33 3	7% 3% 33 25 3 3 46 43	7% 3% 7% 33 25 21 3 3 3 46 43 42	7% 3% 7% 13% 33 25 21 28 3 3 4 46 43 42 49	7% 3% 7% 13% 4% 33 25 21 28 30 3 3 4 3 46 43 42 49 44	7% 3% 7% 13% 4% 3% 33 25 21 28 30 24 3 3 4 3 4 46 43 42 49 44 40



BY DEMOGRAPHIC CHARACTERISTICS: EDUCATION, CHILDREN

	HS OR LESS	SOME COLLEGE	COLLEGE	GRAD SCHOOL	CHILDREN	NO CHILDREN	
How would you get rid of CF lamp? (% throw in recycling bin)	5%	11%	4%	4%	5%	6%	
How would you get rid of CF lamp? (% throw in trash)	30	26	29	17	26	25	
What do you generally do with unwearable used clothing? (% put in recycling bin)	3	3	4	2	4	3	
What do you generally do with unwearable used clothing? (% put in trash)	43	47	44	40	41	45	
Base	106	112	239	139	259	334	



BY DEMOGRAPHIC CHARACTERISTICS: SINGLE STREAM VS. NOT

	SINGLE- STREAM	NOT
How would you get rid of CF lamp? (% throw in recycling bin)	7%	4%
How would you get rid of CF lamp? (% throw in trash)	28	22
What do you generally do with unwearable used clothing? (% put in recycling bin)	5	1
What do you generally do with unwearable used clothing? (% put in trash)	48	38
Base	354	246



INFORMATION SOURCES

WHERE WOULD YOU TURN FOR INFORMATION ON RECYCLING?

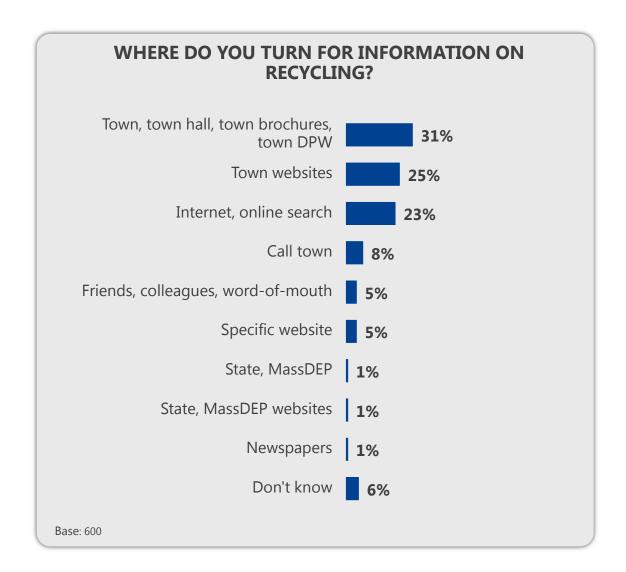
Information sources

Internet is the go-to resource, whether search or to a town website (48% + 6% who use MA state or other sites).

But, significant numbers go directly to town resources or look to town supplied information. (31% + 8% who would call their town).

Very few look to mainstream media for information on recycling.

In general, younger residents are more apt to use the internet and older residents are more likely to use an inperson approach.



INFORMATION GATHERING 1

BY DEMOGRAPHIC CHARACTERISTICS: AGE, INCOME

	18 – 35	36 - 55	55+	<\$50K	\$50-99K	\$100K+	REFUSED
Internet, online search	42%	25%	8%	27%	23%	22%	19%
Town websites	29	30	15	15	27	32	17
Town, town hall, town brochures, town DPW	17	26	46	24	35	26	40
Call town	2	5	17	14	8	5	10
State, MassDEP, state, MassDEP websites	4	1	1	1	2	2	2
Newspapers	0	2	1	2	0	2	0
Word-of-mouth	0	8	5	5	5	4	5
Other specific website	6	3	6	9	3	4	4
Not sure	4	6	7	9	2	7	7
Base	161	223	196	119	187	195	99

INFORMATION GATHERING 2

BY DEMOGRAPHIC CHARACTERISTICS: EDUCATION, CHILDREN

	HS OR LESS	SOME COLLEGE	COLLEGE	GRAD SCHOOL	CHILDREN	NO CHILDREN
Internet, online search	24%	30%	24%	17%	28%	20%
Town websites	11	22	30	29	30	20
Town, town hall, town brochures, town DPW	32	30	25	39	25	35
Call town	12	8	8	5	4	11
State, MassDEP, state, MassDEP websites	1	2	2	2	1	3
Newspapers	1	2	1	1	0	2
Word-of-mouth	6	8	4	4	4	5
Other specific website	8	4	4	3	6	4
Not sure	9	5	5	4	6	5
Base	106	112	239	139	259	334
Base: 600, Pre-coded open-end, multiple response allowed						

INFORMATION GATHERING 3

BY DEMOGRAPHIC CHARACTERISTICS: SINGLE STREAM VS. NOT

	SINGLE- STREAM	NOT
e search	23%	23%
	25	23
ll, town brochures, town	30	32
	8	9
P, state, MassDEP websites	2	2
	1	1
h	6	3
website	5	3
	6	5
	354	246
oded open-end, multiple respo		1



COMPOSTINGDO YOU COMPOST? HOW? WHAT?

Compost

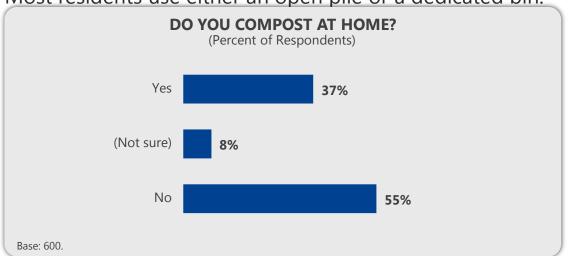
More than a third of households with easy access to recycling also compost at home. Composters are a little more likely to be younger.

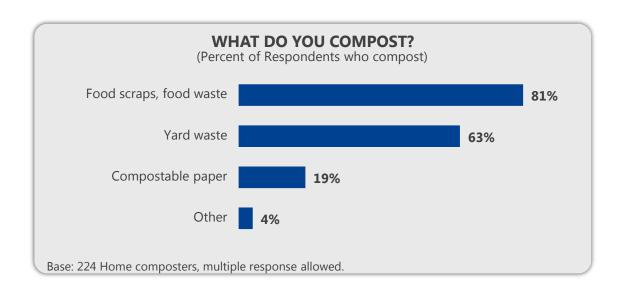
What?

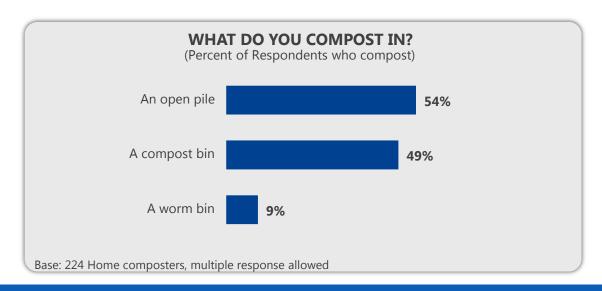
Most of those who compost compost food. Fewer compost yard waste and relatively few compost paper.

How?

Most residents use either an open pile or a dedicated bin.









HOME COMPOSTING 1

BY DEMOGRAPHIC CHARACTERISTICS: AGE, INCOME

18 - 35	36 - 55	55+	<\$50K	\$50-99K	\$100K+	REFUSED
42%	37%	35%	40%	42%	33%	35%
59	70	63	62	65	66	62
82	86	78	81	85	80	81
19	21	17	18	20	15	27
47	60	56	52	57	47	64
57	42	48	39	53	55	41
7	10	8	11	7	8	12
161	223	196	119	187	195	99
	42% 59 82 19 47 57	42% 37% 59 70 82 86 19 21 47 60 57 42 7 10	42% 37% 35% 59 70 63 82 86 78 19 21 17 47 60 56 57 42 48 7 10 8	42% 37% 35% 40% 59 70 63 62 82 86 78 81 19 21 17 18 47 60 56 52 57 42 48 39 7 10 8 11	42% 37% 35% 40% 42% 59 70 63 62 65 82 86 78 81 85 19 21 17 18 20 47 60 56 52 57 57 42 48 39 53 7 10 8 11 7	42% 37% 35% 40% 42% 33% 59 70 63 62 65 66 82 86 78 81 85 80 19 21 17 18 20 15 47 60 56 52 57 47 57 42 48 39 53 55 7 10 8 11 7 8

Base: 600, follow-up questions asked of 224 home composters

HOME COMPOSTING 2

BY DEMOGRAPHIC CHARACTERISTICS: EDUCATION, CHILDREN

	HS OR LESS	SOME COLLEGE	COLLEGE	GRAD SCHOOL	CHILDREN	NO CHILDREN	
Do you compost at home?	39%	40%	33%	42%	38%	37%	
What: Yard waste?	66	74	62	59	72	59	
What: Food scraps, food waste?	77	84	81	86	82	83	
What: Compostable paper?	19	25	17	18	21	18	
How: Open pile?	60	58	53	48	54	54	
How: Compost bin?	30	44	47	68	49	48	
How: Worm bin?	12	12	6	9	5	12	
Base	106	112	239	139	259	334	

Base: 600, follow-up questions asked of 224 home composters

HOME COMPOSTING 3

BY DEMOGRAPHIC CHARACTERISTICS: SINGLE STREAM VS. NOT

SINGLE- STREAM	NOT
34%	43%
68	60
76	89
19	20
51	57
49	48
9	9
119	105
composters	
	\$TREAM 34% 68 76 19 51 49 9 119

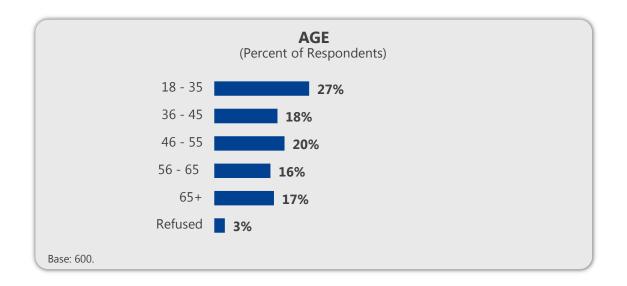


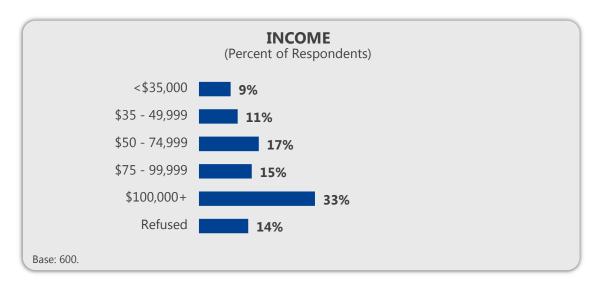
DEMOGRAPHICS

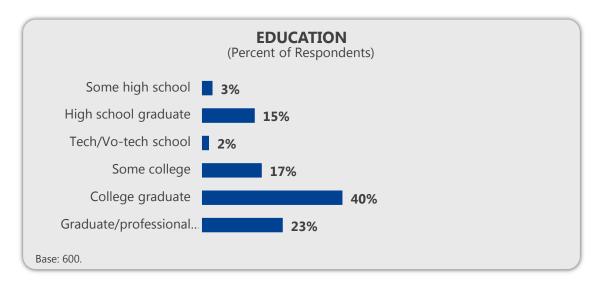
DETAILED FINDINGS



PROFILEDEMOGRAPHICS

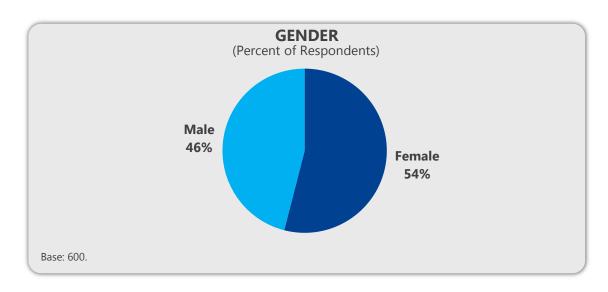


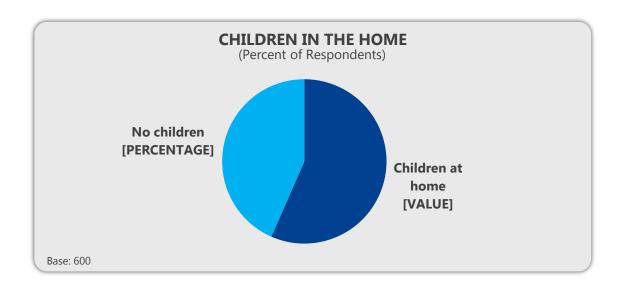


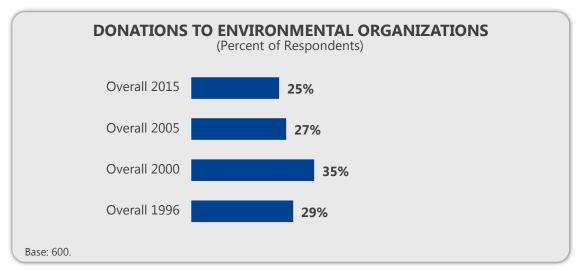




PROFILE DEMOGRAPHICS

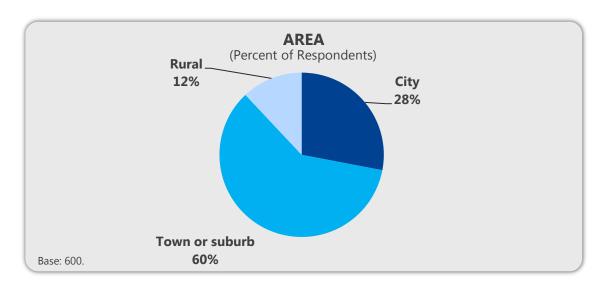


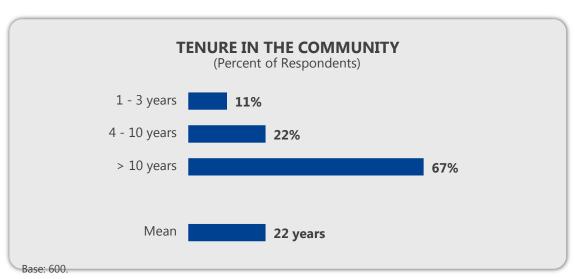


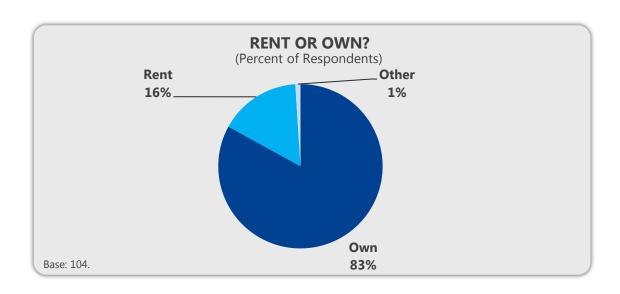




PROFILE DEMOGRAPHICS









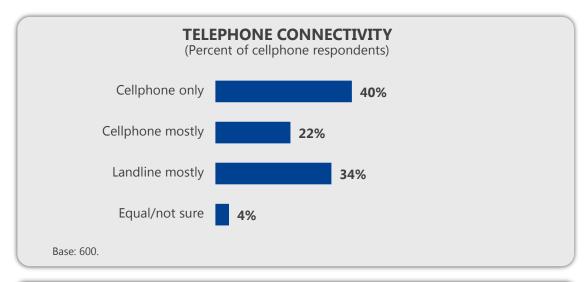
PROFILETELEPHONE CONNECTIVITY

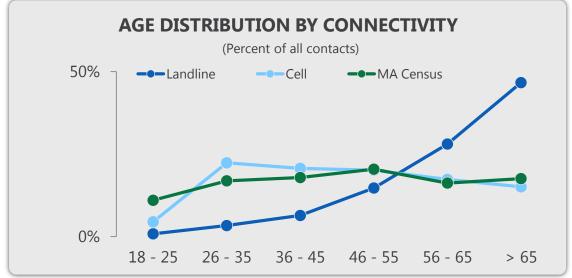
Cellphone only/mostly

This survey was conducted using both cellphones and landlines. The initial qualification was for an adult 18+years old, which disproportionately disqualified cell phone users.

Based on the cellphone sample, if 100% penetration is assumed, approximately 40% of households in Massachusetts are cellphone – only (this accords with other estimates). The remaining landline households are about one third cellphone mostly (meaning the cellphone is considered their primary telephone) and two thirds are landline mostly (overall these are 22% and 34% respectively).

The landline sample was very skewed toward the older segments of the population. The cellphone sample followed the actual population much more closely.





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