



# MEMORANDUM

May 30, 2003

To: Robin Plutchok, Alameda Waste Management Authority  
From: Alex Evans, Evans/McDonough Company, Inc.

**Re: Multi-Family Recycling Survey Results and Target Analysis**

## METHODOLOGY

The following memorandum highlights the results of a subsection of the November 2002 public opinion survey conducted by the Evans/McDonough Company for the Alameda County Waste Management Authority regarding recycling behaviors and attitudes of multi-family unit dwellers.

A telephone survey of 804 Alameda County residents was conducted by trained professional interviewers November 6 – 14, 2002. Respondents were selected using Random Digit Dialing (RDD) methodology. The margin of error for the survey is plus or minus 3.5 percentage points at the 95% confidence interval.

Only the respondents that live in multi-family housing were asked the battery of behavioral and attitudinal questions on recycling that will be used in this analysis. Of the 804 survey respondents, 297 (37%) live in multi-family housing. The margin of error for multi-family residents is plus or minus 5.7 percentage points at the 95% confidence interval.

## SUMMARY

Residents of multi-unit buildings should not necessarily be lumped all together when discussing recycling attitudes and behaviors. Residents of smaller multi-unit buildings with two to four units tend to look much more like residents of single-family buildings than like residents of buildings with five or more units. Additionally, individuals who live in larger buildings of five or more units tend to respond alike, regardless of whether they are in a 10 unit building or a 100 unit building. For this reason, most of this discussion will center around the differences between “smaller” multi-unit buildings (those with two to four units) and “larger” multi-unit buildings (those with five units or more).

Residents of buildings with two to four units should be treated as part of the single-family population when constructing waste reduction campaigns. These residents of smaller

buildings are much closer to single-family residents with respect to recycling behaviors than they are to residents of building with five or more units. Smaller building residents are already recycling at a fairly high level and should be encouraged to continue to do so.

Residents of buildings with five or more units are lagging far behind their single-family and small multi-family building counterparts with respect to recycling frequency. These larger buildings have a young minority population that has not lived in their residence for very long. Their transience makes it hard for them to establish good recycling habits.

While larger building residents' attitudes on recycling, source reduction, and reuse are not dramatically different from their smaller building counterparts, there are a few structural obstacles that stand out. Residents of larger buildings are less satisfied with the condition of their building's recycling area, are more likely to be concerned with the mess associated with recycling, and would prefer being able to consolidate their recycling into one bin. These structural obstacles are not insurmountable, but require the cooperation of the building manager or landlord to address.

Most residents of larger buildings have their recycling service paid for by their building, and they get much of their information on recycling from their residence or building manager. Additionally, a building manager or landlord can choose whether they will be active promoters of recycling in their buildings, or will just stop at putting out some recycling bins and hoping people use them. Building managers play a major part in the level at which the residents of their buildings are recycling, and instigating change can only happen with active participation from both landlords and tenants.

These large multi-unit buildings with short-term residents would benefit greatly from the development of simple, standardized model recycling system that could be implemented in larger multi-family residences throughout the County. The model should be developed with input from both tenants and building managers/landlords, and should contain three main components:

1. Structural guidelines on how to physically set up a building recycling system that is easy to learn;
2. A system on how to convince residents to make recycling a habit, and;
3. Behavior reinforcement tools, which would promote the ongoing continuation of recycling habits by residents.

If the recycling system in their building is easy to use, habituated, and reinforced, it is likely that residents will transfer their recycling habits to new residences. A standardized system across many buildings means that these transient residents will be more likely to already be familiar with the recycling system when they move in, shortening the time it takes them to start recycling.

The most effective approach from which to approach standardization, habituation, and reinforcement of recycling behaviors is to start by working with the managers of the largest buildings (those with 100 or more units) and work down to the smaller buildings.

While larger buildings don't necessarily have any specific proclivity to recycle more, the "bang for the buck" would be much greater working with a building of 100 units than working with a building with 20 units.

## **HIGHLIGHTS**

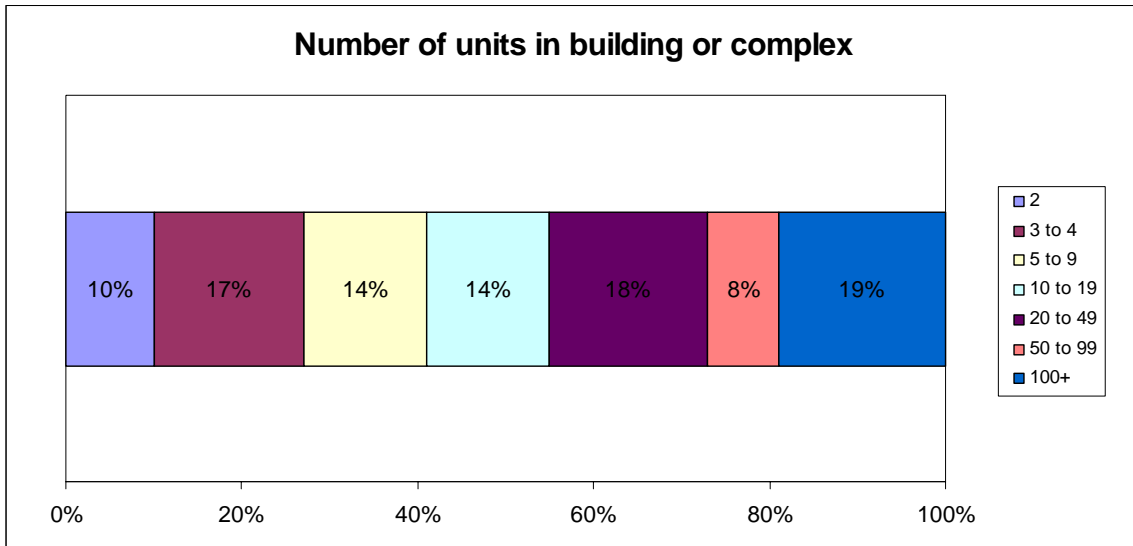
- Residents of buildings with two to four units differ significantly from residents of buildings with five or more units with respect to behavior and attitudes about recycling.
- The County's multi-family population recycles with less frequency than the County as a whole, and residents of larger (5 or more unit) buildings recycle less frequently than residents of smaller (2 to 4 unit) buildings.
- Those who live in larger buildings generally have their recycling paid for by building management.
- Mailings, pamphlets, and the garbage bill are the best sources of recycling information for smaller building residents.
- Residents of larger buildings are not convinced that recycling does not lead to a dirtier kitchen.
- Smaller building residents are concerned about the effects of recycling on their neighborhoods.
- Providing more information about what can be recycled and allowing people to use one bin for all recycling were factors that would induce higher recycling levels in all multi-family residents.
- Encouraging good recycling habits in large buildings will go a long way towards closing the gap between the recycling levels of smaller and larger buildings;
- Landlords and building managers are crucial links in the waste reduction chain in multi-family housing.



# SURVEY FINDINGS

## Multi-Family Building Size

Alameda County residents in multiple-family housing are widely distributed among different-sized apartment buildings or complexes. Over one-quarter (26%) of multi-family residents live in buildings with four units or less. Another quarter (28%) live in medium-sized buildings, with five to nineteen units each. The remainder, 45%, live in large buildings or complexes with twenty units or greater.



Residents who live in single-family housing and residents who live in multi-family housing with four units or fewer hold very similar opinions with respect to their behaviors and attitudes about recycling. Looking at their responses to the questions about job ratings, source reduction behaviors, reuse behaviors, recycling behaviors, and recycling information sources<sup>1</sup>, we find that the average difference between single-family and 2 to 4 unit multi-family dwellers is 8 percentage points. Using the same questions, the average difference between residents of 2 to 4 unit buildings and residents of 5 to 19 unit buildings is 13 percentage points.

Looking at individuals in buildings with 5 or greater units, we find that they tend to respond similarly to each other on the same set of questions, regardless of whether the building has 5 units or over 100 units. The average difference between the responses of 5 to 19 unit dwellers, 20 to 99 unit dwellers, and those who live in buildings with 100 units or more, is 6 percentage points.

<sup>1</sup> See Appendix A for specific questions used and comparative percentages.



For this reason, for the duration of this analysis we will be breaking multi-family residents up into two main groups: those that live in buildings with two to four units, and those that live in buildings with five units or more.

## **Job ratings**

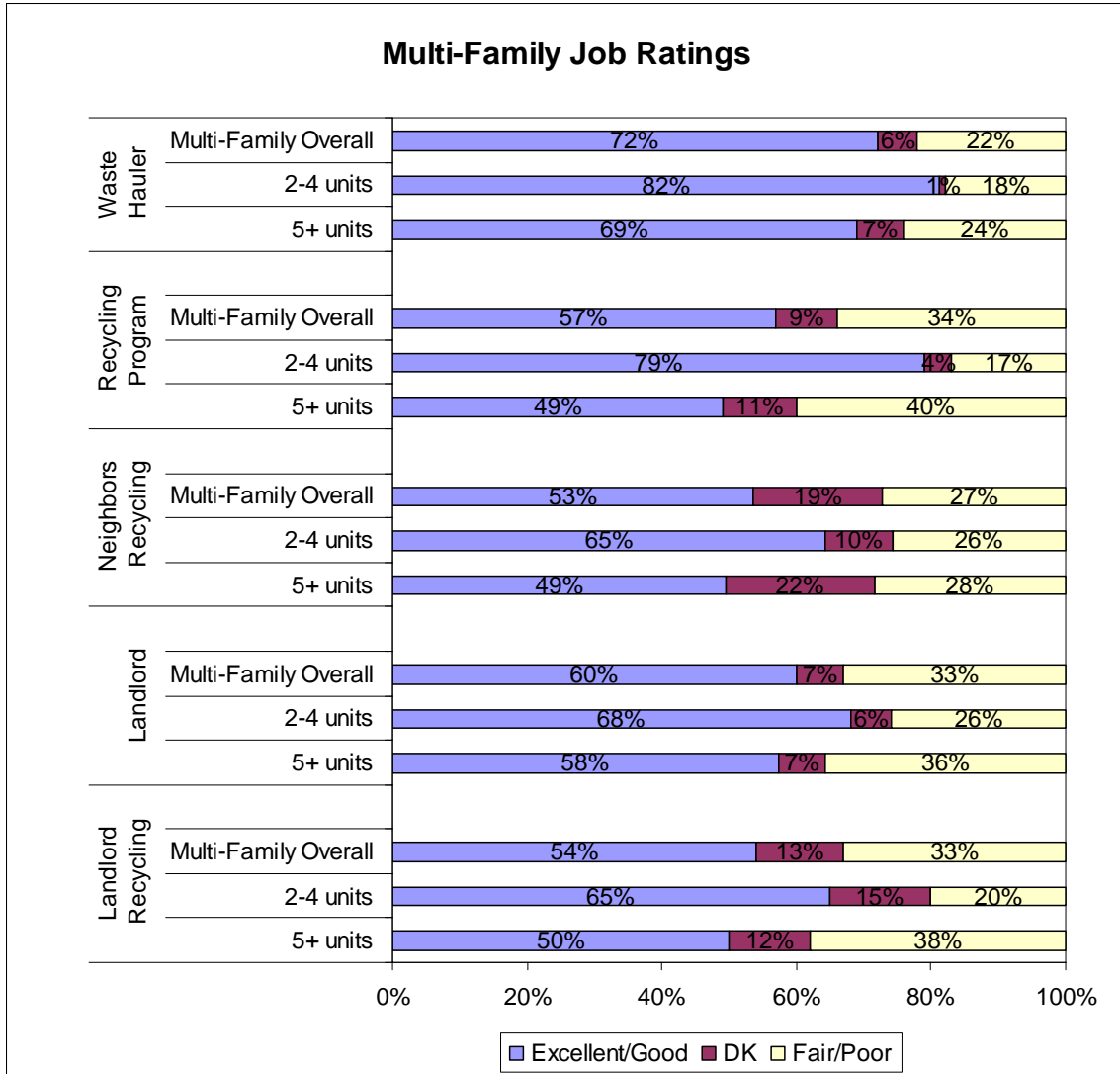
The vast majority of multi-family residents (72%) feel that their local waste hauler is doing a good or excellent job, with 22% feeling the hauler is doing a fair or poor job, and 6% not knowing. Residents of buildings with two to four units are even more positive about their local waste hauler, with 82% approving of the job being done, while 69% of those in buildings with five units or more give a positive rating.

There is even greater disparity in the ratings of building recycling programs. While just 57% of overall multi-family residents approve of their recycling programs, the positive rating rises to 79% when looking only at residents of duplexes to four-plexes, and drops to less than half (49%) when looking at residents of five-plus unit buildings.

When asked how their neighbors are doing recycling, almost one-fifth (19%) of multi-family residents are unable to give a rating (10% of those in two to four unit buildings, 22% of those in five-plus unit buildings). Just over half (53%) think that their neighbors are doing a good job recycling, with 65% of two to four unit buildings giving a positive rating, and 49% of five-plus unit buildings.

The majority of multi-family residents give their landlords a positive job rating (60%), with 68% of smaller (two to four unit) building residents rating their landlords positively and 56% of residents of larger (5 unit-plus) buildings rating them positively.

When it comes to the job they do with recycling, just over half (54%) of multi-family residents overall rate their landlord positively, with 65% of smaller building residents and 51% of larger building residents giving a positive rating.



## Reduce, Reuse, Recycle & Environmentalism

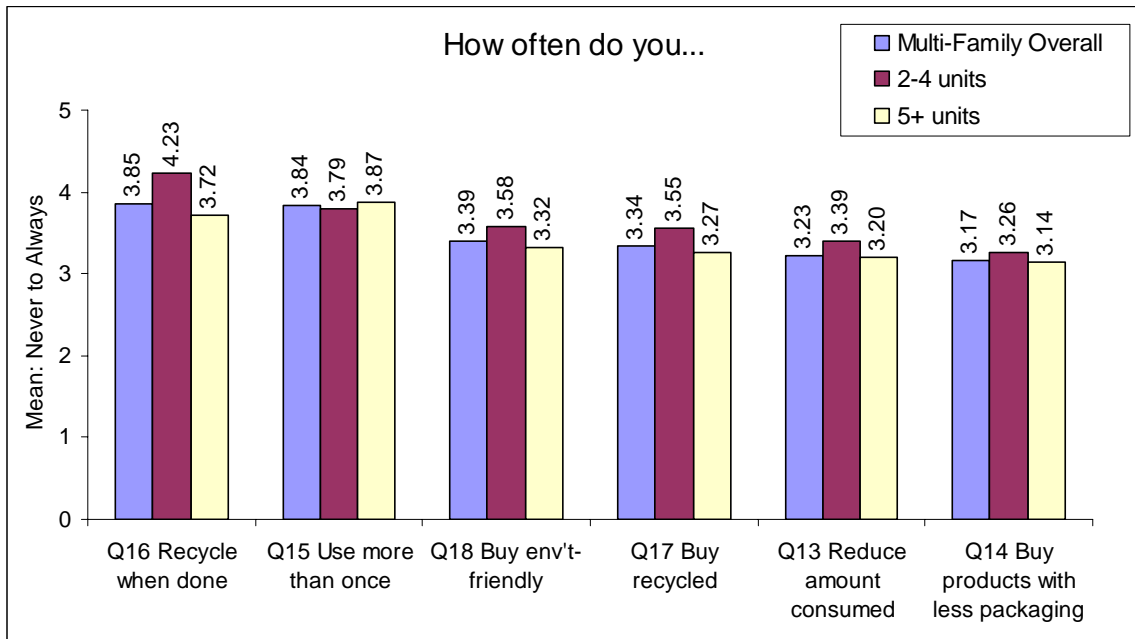
Respondents were asked a series of questions about source reduction, reuse, and recycling, and asked to rate each one on a scale from one to five where one meant they never did it and five meant they always and conscientiously did it.

Among the overall multi-family population, the highest mean scores (meaning, the activity they most often engage in) were for “Recycling things once you’re done with them” with a mean score of 3.85 points, and “Using things more than once” with a mean of 3.84 points. “Buying environmentally-friendly products” was third with a mean of 3.39 points, then “Buying recycled products” (3.34), “Reducing the amount that you consume” (3.23), and “Buying products with less packaging” (3.17).



Among residents of buildings with two to four units, the means were generally a little higher than the overall multi-family score across the board, with the exception of “Using things more than once” with a mean score of 3.79 points, compared to the overall score of 3.84. The residents of smaller buildings were particularly more likely to “Recycle things once you’re done with them” at a mean of 4.23 points, a jump of .38 points from the overall mean.

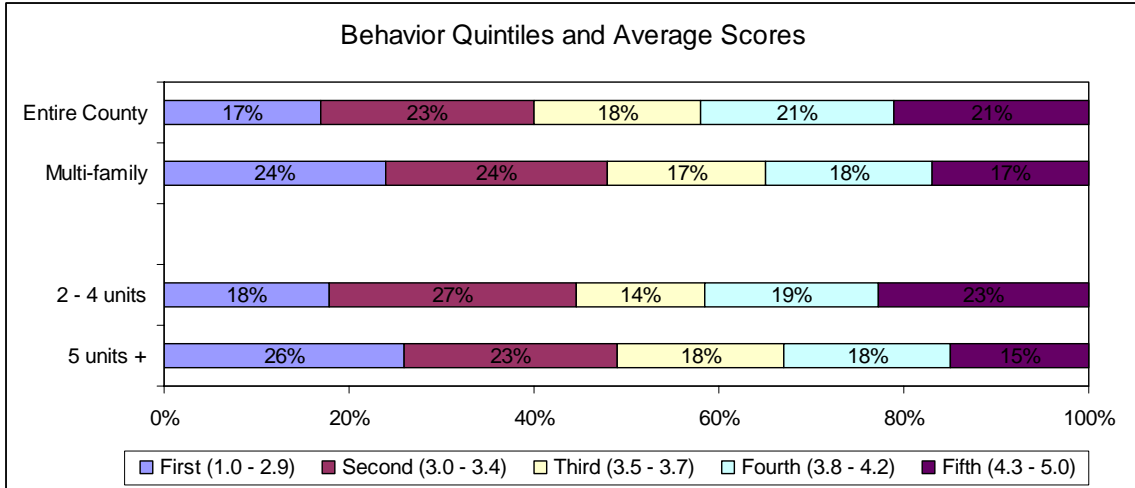
Residents of larger buildings (five or more units) say “Using things more than once” is the thing they do the most frequently (mean of 3.87), even slightly more frequently than the overall multi-family population (mean of 3.84) or residents of smaller buildings (mean of 3.79).



**Behavior Quintiles**

Another way to look at the differences in responses on these questions between residents of smaller and larger buildings is by the use of quintiles. Using the above questions, the ratings were combined and the entire County was divided into quintiles. The fifth quintile contains the highest average scores: They almost always reduce, reuse and recycle.





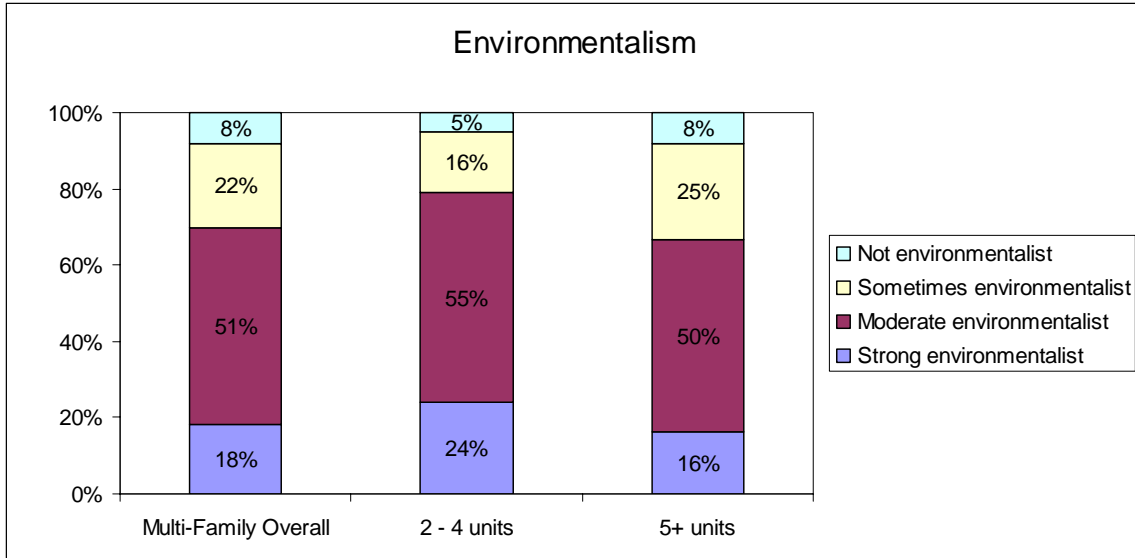
Multi-family residents tend to score lower on the behavior scale when compared with the County as a whole. Seventeen percent (17%) of the multi-family population are in the top behavior quintile, as compared with 21% of the County, while a quarter (24%) fall in the bottom quintile, as compared with 17% of the County.

Similar differences are also apparent between residents of smaller and larger buildings. Twenty-three percent (23%) of residents of smaller buildings are in the top behavior quintile, while just 15% of larger building residents are in that category. At the other end of the scale, 18% of smaller building residents are in the bottom behavior quintile, while over one quarter (26%) of larger building residents are in that category.

***Environmentalism***

Residents of smaller buildings see themselves as much better environmentalists than their larger building counterparts. A quarter (24%) of small building residents describe themselves as strong environmentalists, and another 55% say they are moderate environmentalists. On the larger building residents side, just 16% are strong environmentalists, and 50% rate themselves as moderate environmentalists.



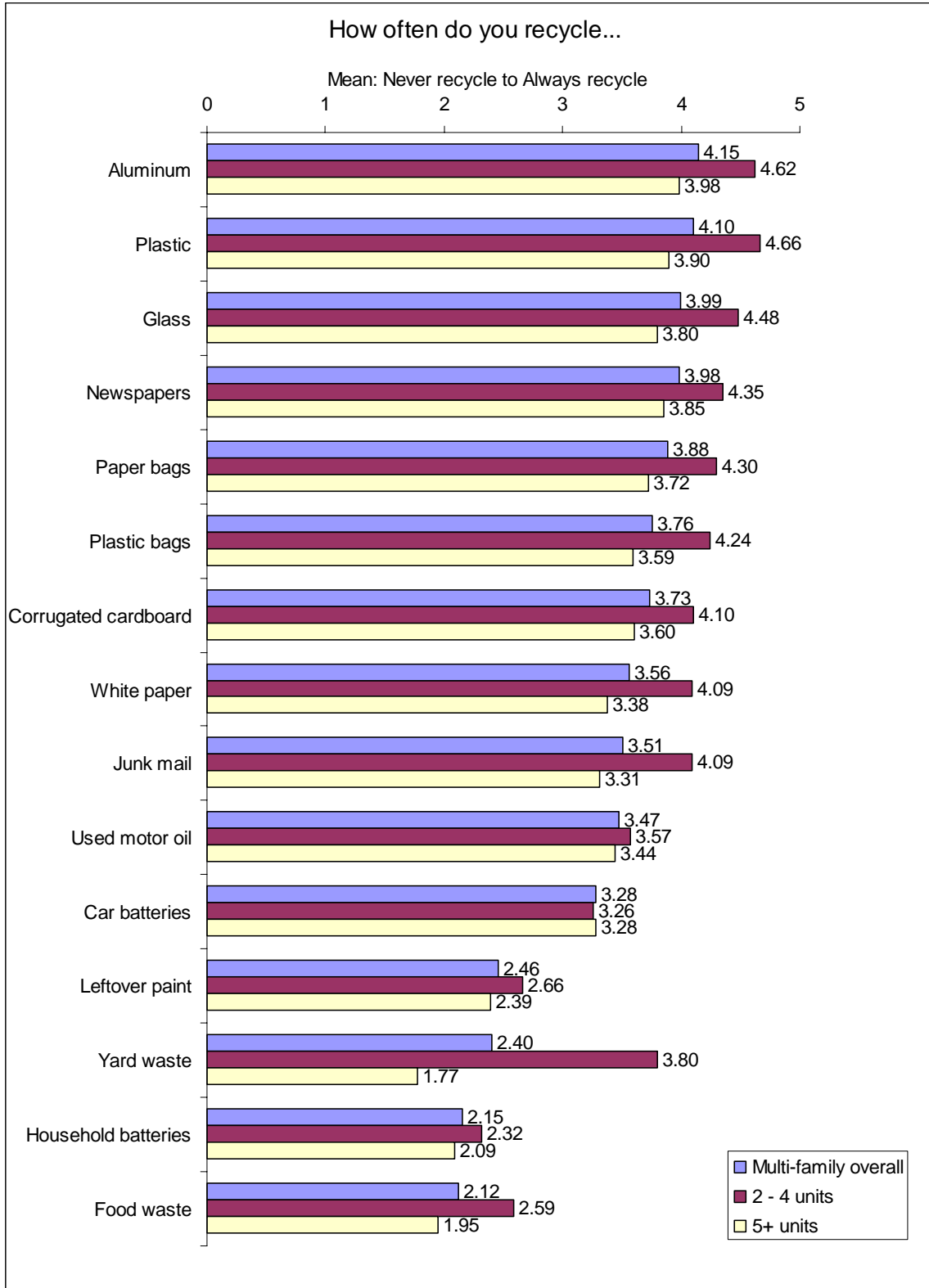


## Recyclable Materials

Respondents were asked how often they recycle a variety of materials on a scale from one to five, where one means they never recycle and five means they always and conscientiously recycle.

The most frequently recycled materials by multi-family residents are aluminum cans and other aluminum containers (mean score of 4.15 points), plastic bottles and other plastic containers (mean 4.10), glass bottles (mean 3.99), and newspapers (mean 3.98). On the other end of the spectrum, leftover paint (mean 2.46), yard waste (mean 2.40), household batteries (mean 2.15), and food waste (mean 2.12) are not recycled frequently by multi-family residents.





**Rank of materials:  
Most frequently to Least frequently recycled**

Aluminum cans and containers, plastic bottles and containers, glass bottles, newspapers, paper bags, plastic bags, and corrugated cardboard are the top seven materials recycled by all groups of multi-family residents, with little variation in order. Residents of 2 to 4 unit buildings give yard waste recycling a higher rank (10<sup>th</sup>) than do residents of buildings with five or more units (15<sup>th</sup>). Used motor oil does better with residents of larger buildings, with a ranking of 8<sup>th</sup>, as compared to 10<sup>th</sup> overall and 11<sup>th</sup> among smaller building residents.

	Multi-Family Overall	2 - 4 units	5+ units
Aluminum	1 <sup>st</sup>	2 <sup>nd</sup>	1 <sup>st</sup>
Plastic	2 <sup>nd</sup>	1 <sup>st</sup>	2 <sup>nd</sup>
Glass	3 <sup>rd</sup>	3 <sup>rd</sup>	4 <sup>th</sup>
Newspapers	4 <sup>th</sup>	4 <sup>th</sup>	3 <sup>rd</sup>
Paper bags	5 <sup>th</sup>	5 <sup>th</sup>	5 <sup>th</sup>
Plastic bags	6 <sup>th</sup>	6 <sup>th</sup>	7 <sup>th</sup>
Corrugated cardboard	7 <sup>th</sup>	7 <sup>th</sup>	6 <sup>th</sup>
White paper	8 <sup>th</sup>	8 <sup>th</sup>	9 <sup>th</sup>
Junk mail	9 <sup>th</sup>	9 <sup>th</sup>	10 <sup>th</sup>
Used motor oil	10 <sup>th</sup>	11 <sup>th</sup>	8 <sup>th</sup>
Car batteries	11 <sup>th</sup>	12 <sup>th</sup>	11 <sup>th</sup>
Leftover paint	12 <sup>th</sup>	13 <sup>th</sup>	12 <sup>th</sup>
Yard waste	13 <sup>th</sup>	10 <sup>th</sup>	15 <sup>th</sup>
Household batteries	14 <sup>th</sup>	15 <sup>th</sup>	13 <sup>th</sup>
Food waste	15 <sup>th</sup>	14 <sup>th</sup>	14 <sup>th</sup>

Most of the differences in recycling behavior between residents of buildings with two to four units and residents of buildings with five or more units are at a statistically significant level. The only materials for which there is **not** a statistically significant difference are used motor oil, car batteries, household batteries, and leftover paint.

***Differences in Recycling Levels: Possible Controls***

*On-site recycling availability*

Over two-thirds (70%) of multi-family residents overall are provided with a way to recycle in their building or complex. In the smaller buildings with four units or less that number climbs to 86% with on-site recycling, but in larger buildings with five or more units the number drops to 64% with on-site recycling.

Looking only at those who are provided with on-site recycling, the average disparity between smaller and larger building resident recycling rates lessens somewhat, to +.37 points, although it does not disappear completely.

*Yard waste*

Another possible factor contributing to the difference between smaller and larger building resident recycling rates is the inclusion of yard waste as a recyclable



material. Although this question was not posed in the survey, it is a fairly safe assumption to make that residents of larger buildings are less likely to have yards, and therefore, yard waste.

When yard waste is removed from the equation, the disparity between smaller and larger building residents' recycling rates drops even farther, to +.26 points, but does not disappear entirely.

Even after controlling for the situational factors that may make residents of larger buildings appear less likely to recycle than residents of smaller buildings, there is still a real difference in the rate at which they recycle. The difference in recycling rates between smaller and larger buildings cannot be explained by controlling for on-site recycling availability and yard waste.

### Mean Recycling Rate

(1 = never recycle and 5 = always recycle)

	All multi-family			Those with on-site recycling		
	2 - 4 units	5+ units	Difference	2 - 4 units	5+ units	Difference
Aluminum	4.62	3.98	0.64	4.65	4.31	0.34
Plastic	4.66	3.90	0.76	4.65	4.22	0.43
Glass	4.48	3.80	0.68	4.50	4.10	0.40
Newspapers	4.35	3.85	0.50	4.36	4.18	0.18
Paper bags	4.30	3.72	0.58	4.26	3.99	0.27
Plastic bags	4.24	3.59	0.65	4.20	3.71	0.49
Corrugated cardboard	4.10	3.60	0.50	4.16	4.06	0.10
White paper	4.09	3.38	0.71	4.08	3.76	0.32
Junk mail	4.09	3.31	0.78	4.10	3.63	0.47
Used motor oil	3.57	3.44	0.13	3.49	3.47	0.02
Car batteries	3.26	3.28	-0.02	3.24	3.32	-0.08
Leftover paint	2.66	2.39	0.27	2.60	2.68	-0.08
Household batteries	2.32	2.09	0.23	2.42	2.17	0.25
Food waste	2.59	1.95	0.64	2.59	2.07	0.52
Yard waste	3.80	1.77	2.03	3.70	1.79	1.91
Average: <b>With yard waste</b>	3.81	3.20	<b>0.61</b>	3.80	3.43	<b>0.37</b>
Average: <b>Without yard waste</b>	3.81	3.31	<b>0.50</b>	3.81	3.55	<b>0.26</b>

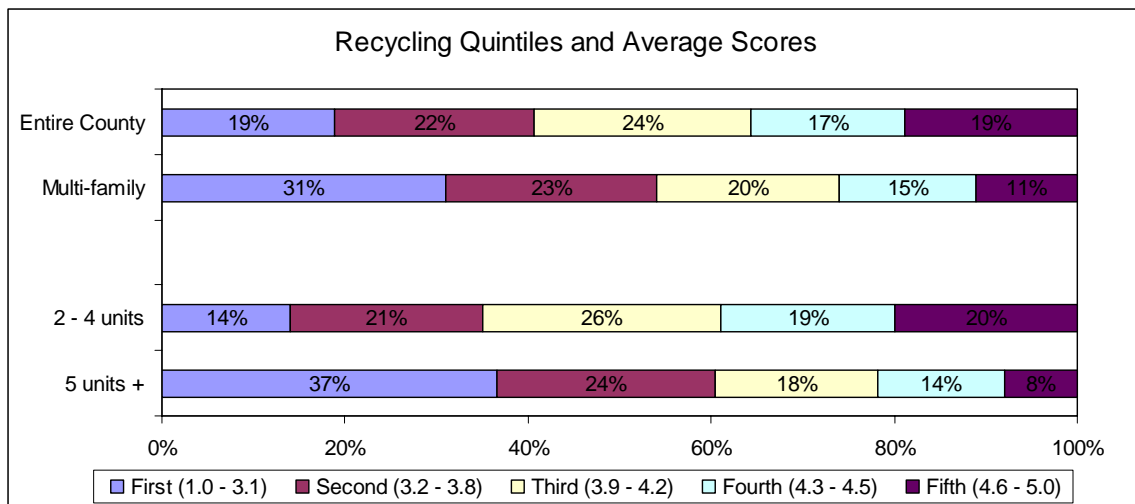


## Recycling Quintiles

All Alameda County residents (single- *and* multi-family) were divided into different groups depending on their recycling levels. On a scale of one to five where one means “never recycles” and five means “always recycles,” residents rated themselves on how often they recycle certain materials.

The scores for ten common household items were combined to create five segments. The materials combined in the rating were: aluminum cans, glass bottles, plastic bottles, newspapers, junk mail, white paper, paper bags, plastic bags, household batteries and food waste. Left out of the calculations were used motor oil, left over paint, yard waste and car batteries, which significant numbers of respondents reported not having personally disposed of.

Once these ratings were combined, the entire county population (single- *and* multi-family) was divided into quintiles, meaning that we looked at respondents with the top 20% of scores as a group, the next 20% of scores, and so on. The fifth quintile contains the best recyclers with the highest average scores. Respondents that reported the lowest level of recycling are in the first quintile.



As is shown in the above chart, multi-family residents have very different recycling habits from the county as a whole. Just 11% of multi-family residents are in the top quintile for recycling, as compared with 19% of the overall population. At the opposite extreme, almost one-third (31%) of multi family residents are in the lowest recycling quintile, versus 19% of the entire population.

Looking at building size, there is a striking difference in the recycling levels of those multi-family residents that live in buildings with two to four units and those that live in buildings with five or more units. The top quintile contains 20% of the small building dwellers, while larger buildings have only 8% of their population in the top recycling

quintile. The majority of residents of larger buildings (61%) are in the bottom two recycling quintiles, with 37% in the first quintile and another quarter (24%) in the second.

## **Recycling Logistics**

A series of questions was posed about how recycling is handled within the respondent's household and building.

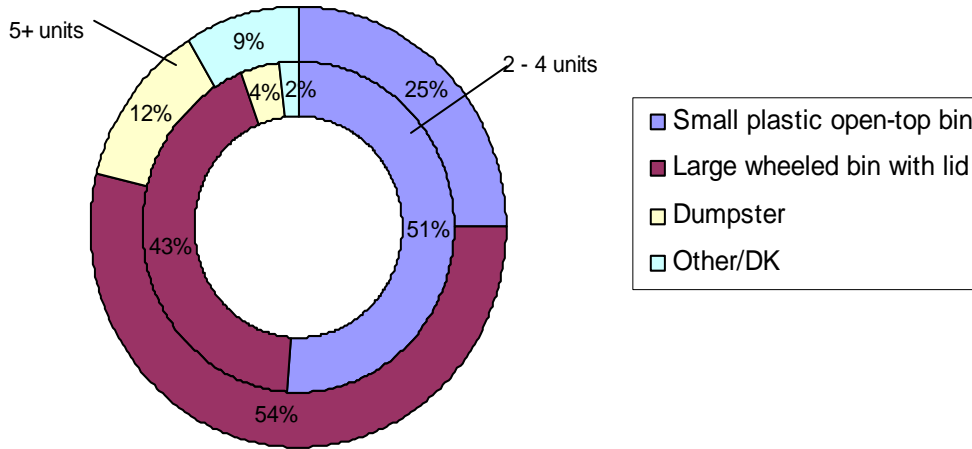
A majority (51%) of all multi-family residents keep their recycling somewhere in the kitchen, with another 23% keeping it somewhere else in the home, and a quarter (26%) keeping it somewhere outside their residence. These numbers do not change much when looking at residents of larger (five-unit plus) buildings, with 54% keeping recycling in the kitchen, 25% keeping it somewhere else inside the home, and 21% keeping it somewhere outside.

Sixty percent (60%) of all multi-family residents feel that they have enough space inside their home to keep recyclables. Those in larger complexes do not feel significantly more cramped with their recyclables, with 58% feeling that they do not have enough space.

Recycling is usually taken out in multi-family households once a week or less (47%), or a few times a week (32%), and it is more frequently taken out by a male member of the household (59%). In the majority of respondents' buildings (79%), recycling and garbage are kept in the same areas.

Recycling for the building or complex is most frequently kept in a large wheeled lidded bin (50%), or in a small plastic open-top bin (33%). Overall, 9% of residents' buildings keep their recycling in a dumpster. Of those who live in larger buildings, a greater number have building recycling in a large wheeled lidded bin (54%), with less in the smaller plastic bins (25%), and more in dumpsters (12%). Those in smaller buildings tend to have small plastic bins (51%) or large wheeled lidded bins (43%).

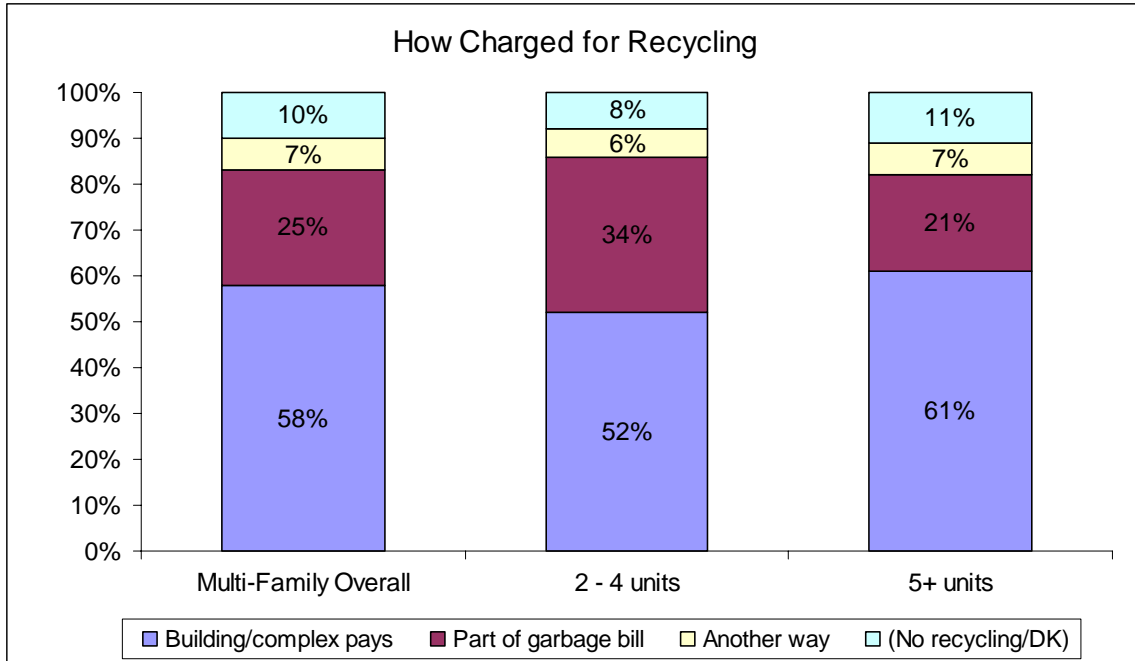
## Building Recycling Receptacle



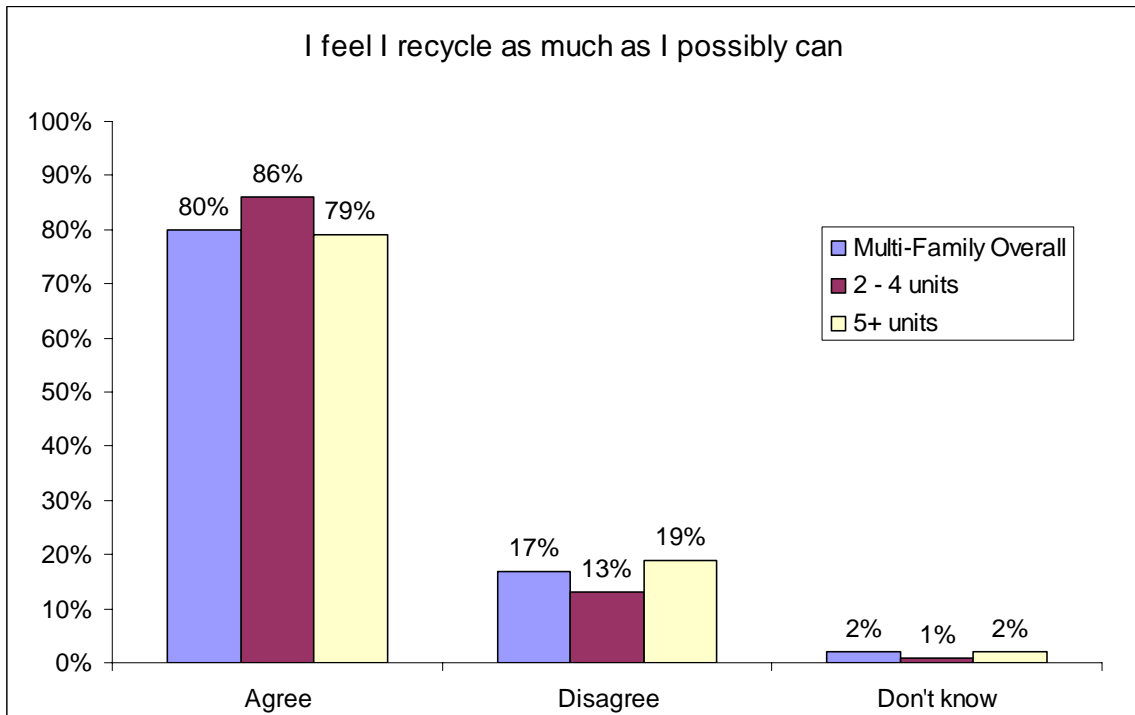
While a plurality of multi-family residents (47%) usually find their building’s recycling receptacles mostly full or full, that number climbs to 55% for smaller (2 to 4 unit) building residents, and drops to 44% for the larger building residents. Twenty-seven percent (27%) overall find their receptacles about half full (24% in smaller buildings, 28% in larger buildings), and 8% overall find the receptacles overflowing (6% in smaller buildings, 9% in larger buildings).

Two-thirds (66%) of multi-family residents’ say their building recycling is emptied once a week or less, 16% have it emptied a few times a week, and 7% have their recycling emptied every day. By comparison, 59% of larger building residents have once-a-week recycling service, 19% have the recycling emptied a few times a week, and 8% have it emptied once a day.

Over half of multi-family residents (58%) have their recycling service paid for by their building or complex. Another quarter (25%) of multi-family residents are charged for their recycling as part of their garbage bill, and 7% say they pay for their recycling service in some other way. Looking only at residents of larger buildings (five units or more), 61% have their recycling paid for by their building, 21% pay as part of the garbage bill, and 7% pay in some other way. Smaller building residents are more likely to pay for their recycling on their garbage bill (34%), with just over half (52%) having it paid for by the building, and 6% paying in some other way.

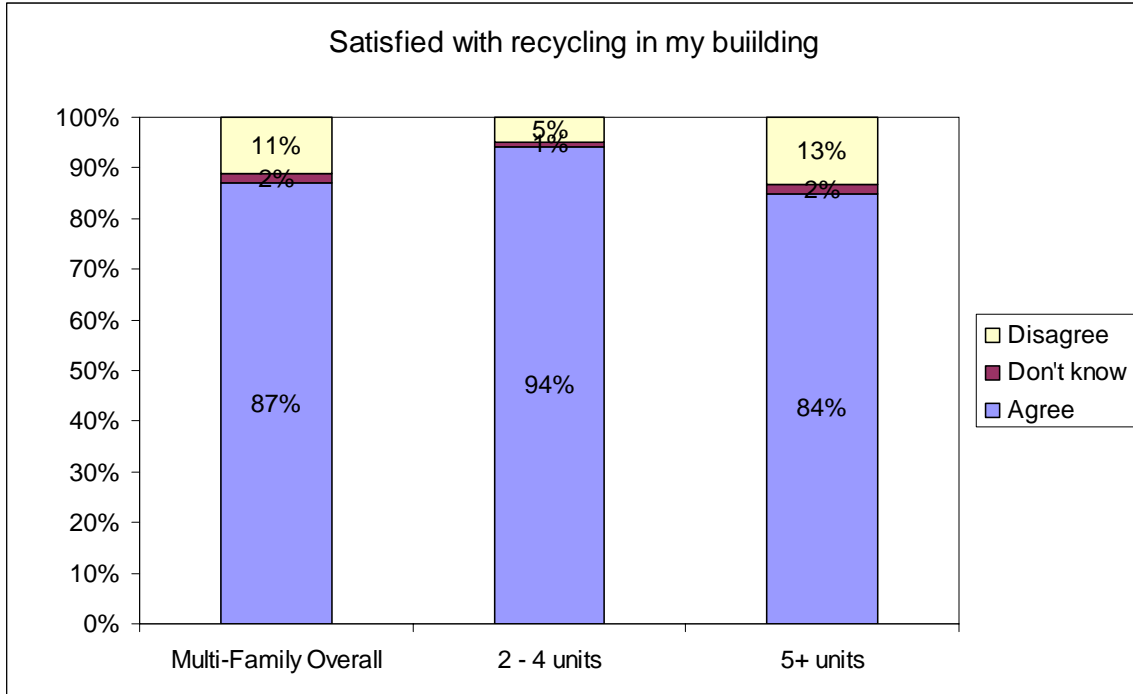


Of all multi-family residents, 80% feel that they recycle as much as they possibly can. The residents of smaller buildings are even more positive about their recycling habits, with 86% agreeing with the same statement, while 79% of multi-family residents say they recycle as much as they can.

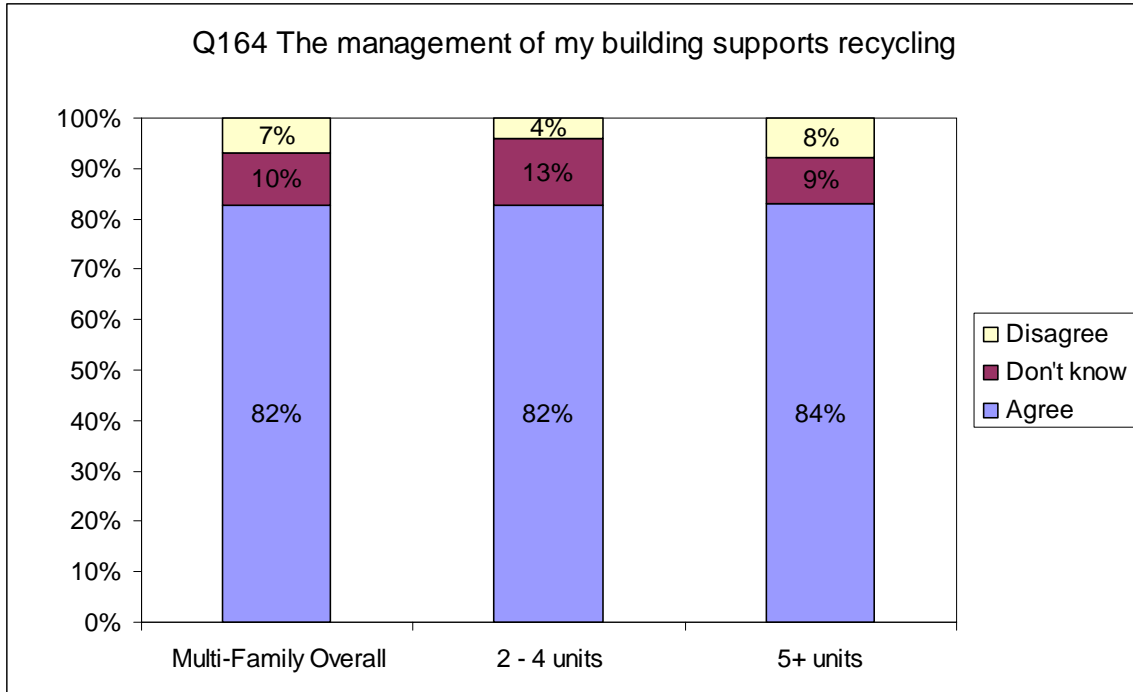


## Satisfaction with Building Recycling

For the most part, multi-family building residents are satisfied with the recycling system in their building. Residents of smaller buildings were more likely to agree with the statement “I am satisfied with the recycling system setup in my building or complex” than residents of larger buildings (94% of smaller building residents agree, versus 84% of larger building residents agree).



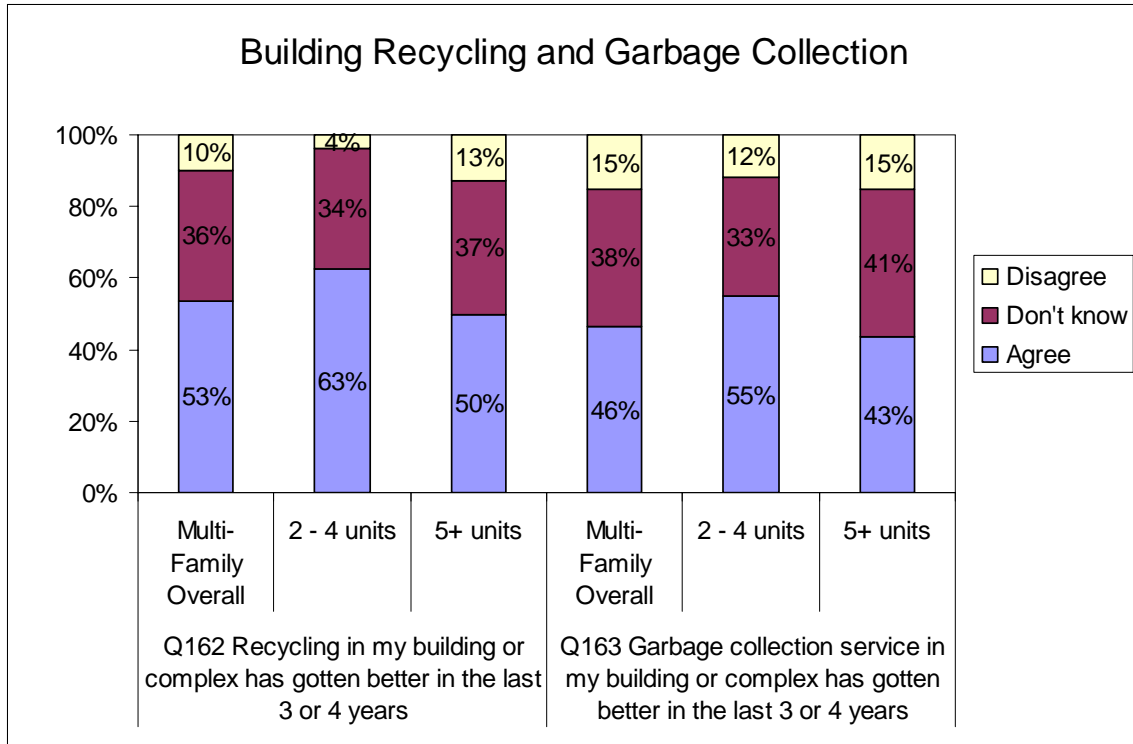
There is also widespread agreement that the management of their building is supportive of recycling. Eighty-two percent (82%) of all multi-family residents and 82% of residents of smaller buildings feel that their management supports recycling, along with 84% of residents of larger buildings.



When asked if recycling and garbage collection services in their building had improved in the last three or four years, about half of multi-family residents agree. Fifty-three percent (53%) agree that recycling in the building has gotten better (63% in smaller buildings, 50% in larger buildings), and 46% think that garbage collection has gotten better (55% in smaller buildings, 43% in larger buildings).

However, residents of larger buildings are less likely to have an opinion at all on these questions than residents of smaller buildings, with 37% of larger building residents saying they didn't know about recycling (versus 34% of smaller building residents), and 41% not knowing about garbage collection (versus 33% of smaller building residents).





## Building Recycling Area

For the most part, multi-family residents are very positive about the recycling area in their buildings and complexes, with residents of buildings with two to four units particularly positive. Most agree that it's easy to gain access to the recycling area (92% overall, 97% in small buildings, 89% in large buildings), feel safe when they are in the recycling area (90% overall, 93% in small buildings, 89% in large buildings), and feel that their recycling areas are well-organized (90% overall, 97% in small buildings, 88% in large buildings). There is also widespread agreement that the recycling containers are well marked (88% overall, 92% in small buildings, 88% in large buildings) and the recycling area is usually clean (95% overall, 90% in small buildings, 82% in large buildings).

Similarly, there is strong **disagreement** with the negative statements tested: That the recycling area usually smells bad (73% **disagree** overall, 83% in small buildings, 68% in large buildings) and that the floor around the recycling bins is usually wet and sticky (70% **disagree** overall, 83% in small buildings, 65% in large buildings).



		<b>Multi-Family Overall</b>	<b>2 - 4 units</b>	<b>5+ units</b>
Q157 It is easy to gain access to the recycling bins in my building or complex	Agree	92%	97%	89%
	Disagree	5%	1%	6%
	Don't know	3%	1%	5%
Q156 I feel safe when I am in my building or complex's recycling area	Agree	90%	93%	89%
	Disagree	5%	4%	5%
	Don't know	4%	3%	5%
Q153 The recycling area in my building or complex is well-organized	Agree	90%	97%	88%
	Disagree	7%	3%	9%
	Don't know	2%	1%	3%
Q152 The recycling containers in my building or complex are well-marked	Agree	88%	92%	88%
	Disagree	8%	7%	9%
	Don't know	3%	1%	4%
Q151 the recycling area in my building or complex is usually clean	Agree	85%	90%	82%
	Disagree	11%	9%	13%
	Don't know	3%	1%	4%
Q155 The recycling area in my building or complex usually smells bad	Agree	22%	12%	27%
	Disagree	73%	83%	68%
	Don't know	5%	4%	5%
Q154 The floor under and around the recycling bins in my complex is usually wet or sticky	Agree	20%	14%	23%
	Disagree	70%	83%	65%
	Don't know	9%	4%	12%

## **Building Management**

Smaller and larger building residents are generally in agreement on relations with management. Eighty-seven percent (87%) of multi-family residents overall agree that they are responsive to management requests (84% in smaller buildings, 89% in larger buildings), and 81% agree that the management of the building is responsive to tenant requests (78% in smaller buildings, 83% in larger buildings). When it comes to management/tenant communications, there is 71% agreement across all groups that building management communicates with tenants frequently enough.

		Multi-Family Overall	2 - 4 units	5+ units
Q166 I am responsive to requests that the management of my building or complex makes of me	Agree	87%	84%	89%
	Disagree	7%	6%	7%
	Don't know	7%	10%	5%
Q165 The management of my building or complex is responsive to tenant requests	Agree	81%	78%	83%
	Disagree	10%	14%	9%
	Don't know	8%	9%	8%
Q167 The management of my building or complex communicates with tenants frequently enough	Agree	71%	71%	71%
	Disagree	23%	23%	23%
	Don't know	6%	7%	6%

## Recycling Negatives

There is widespread disagreement among residents of multi-family housing with the statements “Recycling takes too much time and effort” (85% disagree), “Recycling makes my kitchen dirtier (81% disagree) and “Recycling takes up too much space in my home” (76% disagree). When looking at smaller unit building residents, disagreement is even greater, with 90% disagreeing that recycling takes too much time and effort, 83% disagreeing that recycling makes their kitchen dirtier, and 78% disagreeing with “Recycling takes up too much space in my home.” Residents of larger buildings don’t have as strong a disagreement with “Recycling takes too much time and effort,” with 82% disagreeing, but they disagree as strongly with the second statement “Recycling makes my kitchen dirtier (81% disagree) and almost as strongly with “Recycling takes up too much space in my home (76% disagree).

Although the disagreement with these statements is widespread, the intensity of feeling is very different between residents of smaller buildings and residents of larger buildings. While 79% of smaller building residents **strongly** disagree that recycling takes too much time and effort (with another 11% somewhat disagreeing), just 58% of larger building residents have strong disagreement with the same statement (and 24% somewhat disagree).

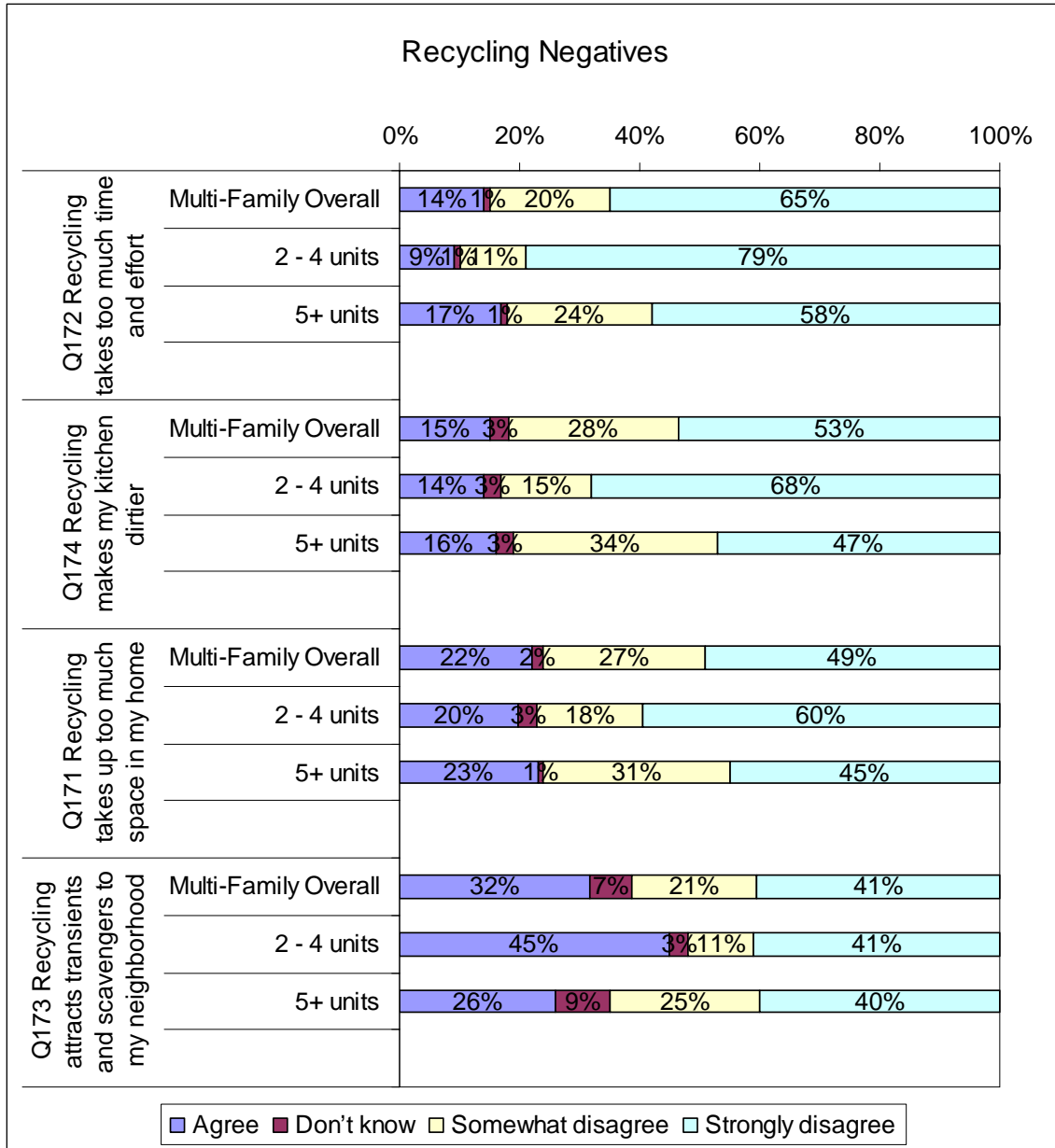
Even though the general level of disagreement on the statement “Recycling makes my kitchen dirtier” is about the same across building sizes, the residents of smaller buildings have much more intense disagreement with the statement, with over two-thirds (68%) registering strong disagreement and just 15% saying they somewhat disagree. The larger building residents, however, don’t feel as strongly, with 47% saying they disagree strongly that recycling makes their kitchen dirtier, and another 34% somewhat disagreeing.

On the statement about recycling taking up too much space, in smaller unit buildings residents register 60% strongly disagree, with another 18% somewhat disagree, while

residents of larger buildings have only 45% that strongly disagree and another 31% that somewhat disagree.

When read the statement “Recycling attracts transients and scavengers to my neighborhood,” one-third (32%) of all multi-family residents agree with the statement while 62% disagree, but there are marked differences in the responses of residents of smaller versus larger buildings. Of the smaller building residents, almost half (45%) register **agreement** with the statement, while larger building residents do not share their concern, with only a quarter (26%) in agreement with the statement. The levels of strong **disagreement** are, interestingly, about the same regardless of building size, with 41% of smaller building residents and 40% of larger building residents strongly disagreeing with the statement. Another 11% of small building residents somewhat disagree with the statement, while another quarter (25%) of larger building residents somewhat disagree.





## The Recycling Process

Logistics are not a major obstacle to recycling in multi-family housing. Ninety-two percent (92%) of all multi-family residents agree with the statement “Taking out the recycling is as easy as taking out the garbage,” with 97% of small building residents agreeing with the statement and 91% of larger building residents in agreement.

Similarly, people understand what they can and cannot recycle in their building (89% agree overall, 94% in smaller buildings, 86% in larger buildings). They also feel that



they have enough information on what they can recycle (82% agree overall, 82% in smaller buildings, 84% in larger buildings).

There are some areas, however, where the recycling system in the building could be improved. The simple solution of providing more information on what can be recycled would convince more than half (58%) of multi-family residents to recycle more (63% in smaller buildings, 56% in larger buildings). Over half (54%) of the multi-family population also agrees that they would recycle more if they could put all kinds of recycling into one bin (58% in smaller buildings, 51% in larger buildings). Thirty-one percent (31%) agree that they would recycle more if the recycling area in their building were more convenient (25% in smaller buildings, 33% in larger buildings).

		<b>Multi-Family Overall</b>	<b>2 - 4 units</b>	<b>5+ units</b>
Q158 Taking out the recycling is as easy as taking out the garbage	Agree	92%	97%	91%
	Disagree	5%	3%	7%
	Don't know	2%	0%	2%
Q161 I understand what I can and cannot recycle in my building or complex's recycling containers	Agree	89%	94%	86%
	Disagree	7%	4%	10%
	Don't know	3%	2%	4%
Q160 I have enough information about how to recycle in my building or complex	Agree	82%	82%	84%
	Disagree	14%	15%	13%
	Don't know	3%	3%	4%
Q175 I would recycle more if I had more information on what I can and cannot recycle	Agree	58%	63%	56%
	Disagree	38%	36%	38%
	Don't know	4%	0%	6%
Q170 I would recycle more if I could put all kinds of recycling into one bin	Agree	54%	58%	51%
	Disagree	41%	40%	42%
	Don't know	5%	2%	6%
Q168 I would recycle more if the recycling area in my building or complex was more convenient	Agree	31%	25%	33%
	Disagree	62%	64%	61%
	Don't know	7%	10%	6%

## Information Sources

Sources of information about recycling differ according to the size of the building, as well. Residents of smaller buildings (two to four units) are most likely to get information from the mail (22%), a pamphlet or newsletter (15%) or from the garbage company or garbage bill (15%). Eleven percent (11%) get recycling information from television or radio, and another 10% get recycling information from the newspaper. Ten percent (10%) also say they get recycling information from their residence manager or building office.

More of the larger building residents, however, tend to get their information from their residence manager or building office (19%). Additionally, 17% say their recycling information comes from the television or radio, 13% get information from the newspaper, and 11% get information in the mail.

### Recycling Information Sources

Source	2 - 4 units	5+ units
Mail	22%	11%
Pamphlet/Newsletter	15%	7%
Garbage company/bill	15%	5%
TV/Radio	11%	17%
Newspaper	10%	13%
Residence manager/office	10%	19%
City	9%	7%
County	8%	3%
Internet/online	7%	3%
Word of mouth	7%	9%
Waste Management	5%	6%
Recycling company	4%	4%
Work/job	4%	2%
Other sources	15%	14%
Common sense/already know	11%	2%

