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Multifamily Bulky Waste Project Report

2022-2023

Clackamas County

Sustainability & Solid Waste

Published April 2024

Submitted by Sophie Richards

CLACKAMAS COUNTY

Sustainability
& Solid Waste

Thank you to all the collectors, property managers, and communities involved. This project could not have been successful without the support and involvement from all parties in collaboration with the Clackamas County Sustainability and Solid Waste team.

For questions, contact Clackamas County SSW at wasteinfo@clackamas.us.

Table of Contents

Project Overview 5
Background 5
Funding 5
Timeline & Communities 5
Timeline 5
Term 1 5
Term 2 5
Term 3 6
Term 4 6
Table 1: Participating Collectors 6
Participating Communities 6
Non-Participating Communities 7
Table 2: Communities and Unit Counts 7
Tracking 7
Loose Item Collections 8
Table 3: Items and Size Categories 8
Drop Boxes 9
Process 9
Pre-Project 9
During the Project 10
Post-Project 10
Data Results 11
Table 4: Weight of Bulky Waste, Terms 1 - 4 11
Loose Item Collection 11
Graph 1: Items Disposed by Size, Terms 1 - 4 12
Graph 2: Loose Item Counts, Terms 1 – 4 13
Graph 3: Item Counts by Property, Term 4 14
Graph 4: Weekly Disposal by Property, Terms 1 – 4 14
Table 5: Items Disposed Per Unit, Terms 1 & 4 15
Graph 5: Weekly Item Counts and Route Time, Term 4 16
Graph 6: Time On Site and Properties' Item Counts, Terms 2 & 3 17
Drop Boxes 17

Table 6: Drop Box Disposal, Terms 1 - 4 18
Graph 7: Drop Box Disposal by Properties, Terms 1 - 3 18
Reuse 19
Survey Results 19
Table 7: Survey Responses 19
Property Managers 19
Residents 20
Lessons Learned, Feedback, and Suggestions for Future Implementation 21
Appendix A: The Driver Tracking sheet 22
Appendix B: The Invoice-Tracking Sheet 23
Appendix C: Resident Flyers 24
Appendix D: Various Property Setups 27
Appendix E: Drop Box Signage and Industrial Magnet 30
Appendix F: Items Disposed per Unit 31
Appendix G: Count and Percentage per Item 34
Appendix H: Drop Box Hauls and Tonnage 35
Appendix I: Total Costs 36
Appendix J: Survey Results - Property Managers 37
Appendix K: Survey Results - Residents 40

Project Overview

Clackamas County Sustainability & Solid Waste (SSW) conducted a 4-term bulky waste project with select multifamily communities within the Metro boundary, from October 2022 to December 2023. The predominate goal was to gather data about multifamily bulky waste collection to inform future "regularly occurring bulky waste collection services, with particular emphasis on lower-income households," as stated in the 2030 Regional Waste Plan (Action 10.5). Additionally, 5.15 of the Solid Waste Administrative Rule states the multifamily regional service standard must "Ensure provision of regularly-occurring bulky waste collection service by July 1, 2025." This project aimed to provide a service that is not usually available to those living in multifamily communities, but it also had a large focus directed towards those living in affordable multifamily housing communities or communities in equity focus areas. By providing regularly occurring bulky waste collection and disposal through various methods that best served each community, the project had a large impact on the well-being of residents and their community and the data generated will help to inform the design and implementation of an effective future program.

Background

Funding

Funding for Clackamas County SSW's bulky waste project originally stemmed from House Bill 5202, which allocated $10 million in state funds to Metro for "trash and sanitation services." Clackamas County SSW submitted a request to Metro for $300,000, with $90K designated for the "collection of bulky waste at low-income/affordable multifamily communities through franchised haulers." Once SSW staff received confirmation, they developed an intergovernmental agreement (IGA) with Metro to manage the funds.

Timeline & Communities

Timeline

Project planning started months before implementation, with an expectation that the project would operate for the month of October 2022, with the possibility of an extension. Funding during the first month demonstrated a large capacity to continue the project for several more months, first prompting an extension, then a second, third, and fourth term.

Term 1

For the first term of the project, 40 communities were selected to participate in October 2022, with disposal service from six franchised garbage collectors (Table 1). The 40 selected communities were all the properties that fell within the Metro boundary and were listed as affordable housing communities, per the 2021 Oregon Affordable Housing Inventory.[1] Of the 40 communities invited, 20 actively participated in Term 1, resulting in a 50% participation rate. As SSW staff tracked spending throughout October, funds went further than expected, prompting an extension through November 2022.

Term 2

At the end of November, it was evident that enough funding remained to continue the project, prompting SSW staff to facilitate another term. Having good traction with the previous communities, the properties

[1] At the start of the project, the list of communities from Oregon's 2021 Affordable Housing Inventory was last updated July 2019.

and collectors invited to participate were largely the same 40 affordable housing communities as Term 1.[2] Due to already established relationships with the communities that actively participated in Term 1, SSW staff was able to focus on reaching the remaining 20, raising the amount of participating communities to 32 (out of 41). The second term started in February 2023 and planned to end in April but similarly to Term 1, funding went further than expected, extending Term 2 to the end of June 2023.

Term 3

Building off the extension from Term 2, Term 3 took place during the month of June 2023. SSW staff assessed funds and determined there was enough capacity to invite a few more communities, expanding the project to 10 more communities for Term 3. Since all the affordable housing communities within the Metro boundary had already been invited to participate (Term 1 and Term 2), Term 3 targeted communities on Metro's EFA (Equity Focus Area) index. The index list had over 200 communities listed, so the selected communities were those that fall within two or more EFAs. The 10 additional communities brought the total to 51—41 communities from Term 2 and 10 from Term 3—for the month of June. Of the 10 additional communities, seven actively participated, bringing the total amount of participating communities in June to 39 (out of 51).

Term 4

After a brief break, SSW staff assessed remaining funds and determined there was enough left to conduct one final term. Term 4 operated from October through December 2023 and only included two collectors. Due to only having two collectors—B&B and Clackamas Garbage—for the term,[3] the criteria was slightly different. All multifamily communities serviced by Clackamas Garbage were invited to participate, unless previously invited in Terms 1, 2, or 3. The communities selected for B&B were those that had at least 100 units and had not been previously invited. Overall, Clackamas Garbage serviced 20 properties and B&B had 11, totaling 31 multifamily communities for Term 4.

Table 1: Participating Collectors

Franchisees
Clackamas Garbage
Hoodview Disposal & Recycling
Oregon City Garbage & Gladstone Disposal (B&B)
Republic Services
Sunset Garbage
Waste Management

Participating Communities

For each term, select communities were identified and invited to participate in Clackamas County SSW's bulky waste project. If SSW staff was able to coordinate service with the property manager and conduct outreach to residents, they were considered a participating community.

[2] A couple communities that were a part of the Housing Authority of Clackamas County were added to Term 2, while one community was removed due to already having regularly occurring bulky waste disposal events.

[3] SSW staff decided to only use two franchised collectors for Term 4, as opposed to the six collectors that serviced Term 1 to Term 3. This decision was made to streamline the term and to not overburden any single collector.

Non-Participating Communities

In each term, there were some communities where SSW staff could not get ahold of a property manager or they declined to participate. In those instances, they were considered a non-participating community and either received stealth pickups—residents received no outreach but their collector would pick up any bulky waste on site—or were removed from their collectors' bulky waste route.

Table 2: Communities and Unit Counts

	Communities invited to participate	Communities actively participating	Non-participating communities with stealth pickups	Non-participating communities with no stealth pickups	Percentage of properties participating	Percentage of units participating
Term 1 Oct-Nov '22	40 (2,902 units)	20 (1,940 units)	12 (525 units)	8 (437 units)	50%	67%
Term 2 Feb-June '23	41 (2,733 units)	32 (2,073 units)	6 (373 units)	3 (287 units)	78%	76%
Term 3 (additions) June '23	10 (1,753 units)	7 (1,523 units)	1 (334 units)	2 (278 units)	70%	87%
Term 4 Oct-Dec '23	31 (2,816 units)	14 (1,393 units)	15 (1,295 units)	2 (128 units)	45%	49%
Total Unique Communities Oct '22 – Dec '23	**83 (7,502 units)**	**54 (4,819 units)**			**65%**	**64%**

Tracking

The bulky waste project had several objectives, but some of the main outcomes were to track items disposed (type of item and quantity), weight of disposal (per item, route, and/or drop box), and time (on site or route). To track effectively and serve the community conveniently, SSW staff determined two different methods of collection:

- **Loose Item Collection**: Intended for communities with less than 100 units. Residents would place their bulky items in a designated location—typically one or two parking spots—on a pre-determined day of the week (e.g. every Thursday). Residents were informed to set their items out the day before their actual collection (e.g. if a community's collection was on Fridays, residents were informed to put their items out on Thursdays). During the collector's weekly route, drivers would pick up every bulky item placed in the designated location(s). Collection vehicles (box truck, flat bed, rear-loader)[4] and routing (commercial route, bulky-only route, etc.) varied by collector and term.

[4] Term 4 is the only exception, as both collectors had a bulky-only route and serviced all their communities with a rear-loader.

- **Drop Box**: Typically intended for communities with more than 100 units. Drop boxes were placed in one to four unreserved/visitor parking spot in the community's parking lot for the duration of the term. Drop boxes were delivered on an agreed-upon date, monitored by the community's regular garbage and recycling drivers, and disposed as needed.

Loose Item Collections

During the planning phase, SSW staff created two different tracking sheets for each collector: one for collectors' drivers and one for collectors' admin. Both sheets were comprised of 22 different bulky items, separated into four different size groups (Small <75 lbs, Medium 76 – 150 lbs, Large 151 – 250 lbs, and XL >251 lbs.) (Table 3).[5] The sheet for collectors' drivers listed the items (by size) with room to tally the quantity of each item collected and how much time was spent at each property or, in the case of Term 4, how much time was spent on route (Appendix A). There was a separate page for each property so by the end of the route, drivers would submit a completed packet to their admin to be entered into the invoice template created by SSW staff (Appendix B). The invoice template was intended for collector's admin to compile the item counts from their drivers, calculate wages, incorporate the additional admin fee, and generate a total cost for the week. The tracking sheet created an invoice that was shared with SSW staff on a weekly or biweekly basis, which allowed SSW staff to create a running balance to ensure funds were not over spent.

Table 3: Items and Size Categories

Small (<75 lbs.)	Medium (76 - 150 lbs.)	Large (151 - 250 lbs.)	XL (>250 lbs.)
Metal items	Mattress/Box springs - King	Large furniture (entertainment center)	Hide-a-bed
Mattress/Box springs (not king)	Medium furniture	Large sofa/sectional (4+ cushions)	Piano-Console
Small furniture	Medium appliances	Refrigerant Ex. Side-by-side refrigerator	Tires->18 inches
Small appliances	Refrigerant-Ex single door fridge	Large Items - Other	XL Items - Other
E-Cycles	Tires-On Rim		
Refrigerant-ex. water cooler, window AC,	Medium Items - Other		
Tires-Off Rim			
Small Items - Other			

[5] The item list and categories stemmed from a larger list (https://www.scribd.com/document/350560157/Average-Weight-Furniture) of common household items and their expected weights. SSW staff analyzed the original list to determine which items could be expected at a multifamily dwelling and of those, what are the most disposed of. As a way to decide which items would go in which size group, the item list was plotted onto histograms to find where the natural weight/size breaks were. After a full analysis, the items and size groupings were determined, with a fixed price set for each size group.

Drop Boxes

Drop boxes were primarily used to service the larger participating communities. All bulky items were placed inside of the drop box, but e-cycles and refrigerant-containing items collected outside of the box, to allow for proper disposal and recycling. The e-cycles and refrigerant-containing items were tracked with the loose item tracking sheets, while the drop boxes tracked volume, weight, and haul frequency. When the drop box neared full, the driver would report to admin to request disposal and would note if there were additional items outside of the drop box that required a separate truck. Before disposing of the bulky items in the drop box, drivers would photograph the contents. After disposal, drivers would acquire the disposal weight and any relevant drop box fees for SSW staff and return the drop box back to the community's designated location. Compensation for the drop boxes included all associated fees (delivery fee, haul fee, etc.), disposal costs, and an additional admin fee to fully capture the costs of the project.

Process

Pre-Project

Before reaching out to each community to participate in the project, SSW staff shared the lists of properties with each collector. By either Zoom, phone, or email, collectors shared their thoughts, concerns, and suggestions for collection method and location for each of their properties. After receiving collectors' feedback, SSW staff emailed the property manager(s) for each community, inviting them and their residents to participate in Clackamas County SSW's bulky waste project. The email outlined the project and timeline and provided examples of the flyers intended for residents (Appendix C). Two of the example flyers—one for loose item collections and one for drop box collection—outlined the project timeline, specified the location for disposal, and listed which items are and are not accepted for the project. The third example flyer shared was the end of project flyer, designed to remind residents of the end date or inform them of an extension. The end of project flyer also included recommendations for bulky waste disposal once the project was complete: 1) donate, 2) self-haul to the Metro South transfer station, and 3) contact the property manager to facilitate collection between residents and their garbage collector.

Property managers' replies came in at a steady rate, with the majority expressing interest in participating. SSW staff encouraged meeting in-person to discuss details, collaborate to determine a location(s) for collection, and to take a picture of the specific collection location for the flyer and collectors. Accommodating property managers' preferences was a priority, but SSW staff also needed to consider central, accessible, and adequately sized locations that are also serviceable by their collector. Determining whether the community would have loose item pickups or drop boxes was typically decided ahead of contact, but there were a few instances where the community opted for the other type of collection.[6] Once logistics (method, location, timeline, and frequency) were finalized with property managers, information was relayed to collectors. With collectors' confirmation of each property and their timeline

[6] A few large properties (100+ units) opted to have loose item pickups due to space constraints in the parking lot. In other instances, smaller properties (less than 100 units) opted to have a drop box due to ample or specific space available in the parking lot(s).

(either weekly collection day or drop box drop-off date[7]), flyers were finalized in both English and Spanish and shared with property managers. In most cases, SSW staff was responsible for distributing the flyers by posting them on doors (with tape or pre-existing door clips). In the other cases, flyers were delivered to properties for the property manager/staff to distribute, property managers would print the flyers and have their staff distribute, or property managers would electronically distribute the flyers to their residents.

Despite SSW staff's attempts to get every community on board, there were instances where property managers declined to participate, never responded, or stopped communicating in the planning process. When a property manager indicated that they will not participate or be involved, SSW staff informed their collector, and they were typically removed from the route. In the instances where property managers did not respond but did not explicit say they weren't willing to participate, collectors serviced them by 'stealth pickups.' Stealth pickups meant that collectors would swing by those properties on their route, collect any bulky item they saw, log it on the tracking sheets, and submit those sheets to admin—like the other properties. The main difference with stealth pickups compared to participating communities was that with stealth, residents were not informed of the project and did not receive any outreach.

During the Project

Throughout the project, SSW staff would routinely receive tracking sheets to monitor funds, track items, and to ensure collections were happening as planned. Property managers reached out to SSW staff if any issues came up, which included: 1) a request to change the location for one week (due to cars being parked in designated parking spots), 2) if their bulky item pile was accidently missed, or 3) if they needed an additional location for loose item collection on their property. Issues were addressed promptly to ensure collection be convenient and to prevent any disruptions.

Once the term passed the halfway mark, emails were sent to property managers describing the remaining timeline, along with either the end-of-project flyer or a project extension flyer.[8] In either case, the flyer outlined the remaining timeline and provided three suggestions—donate, self-haul, and coordinate with their property manager for disposal—for disposing bulky items once the project concluded. In several instances, property managers indicated they did not want to be involved in assisting with bulky waste disposal post-project, so the flyer was adjusted to indicate that residents could call their garbage company directly to coordinate. Once the final flyer was approved, SSW staff coordinated flyer distribution with property managers to determine whether SSW staff or property manager(s)/staff would share with residents.

Post-Project

After each term concluded, SSW staff sent emails to the property manager at participating properties to express appreciation and provide recycling and bulky waste resources. After Terms 2 and 3, the email also included an online survey link for property managers, with the intent to:

[7] Properties with loose item pickups would have their bulky items collected on the same day each week (e.g. every Friday). A few communities with loose item pickups opted for monthly pickups (e.g. first Friday of every month). Those that had drop boxes usually had them for the duration of the project (e.g. first week of October – last week of December), but in a few instances, property managers requested that the box be on site for only a week or two.
[8] Communities in Terms 1 and 2 received extension flyers. Communities in Term 3 and 4 received end of project flyers.

- Gather direct feedback, challenges, and successes
- Understand if/how their bulky waste messaging would change
- Understand how they'd prefer to have regularly-occurring bulky waste collection at their property
- Determine if they would allow SSW staff to survey their residents

Ten property managers (representing 15 properties) responded to the survey with almost entirely positive and invaluable feedback (Appendix J). All but one property manager that filled out the survey approved SSW staff to survey their residents to gather additional feedback and experiences from the project. For resident surveys, SSW staff created flyers with a QR code, abbreviated URL link, and a phone number to provide several ways for residents to access the online survey and share their feedback. To incentivize responses, a free, reusable recycling bag was offered for those who complete the survey. SSW staff shared resident surveys with property managers in advance, to ensure the content would be okay. After approval, SSW staff coordinated distribution of the flyers, and in almost all cases, SSW staff was responsible for hanging flyers on doors. The survey remained open for four weeks and received 50 responses from nine different communities (Appendix K).

Data Results

The two methods used to collect bulky waste—loose item pickups and drop boxes—generated invaluable and informative data. In some instances, data from both methods and all terms were combined, but predominately, the two methods were kept separate with terms either combined or compared, depending on the variables.

Table 4: Weight of Bulky Waste
Terms 1 - 4

	Weight (tons)
Loose Items	82.9[9]
Drop Boxes	62.5
Total	**145.4**

Loose Item Collection

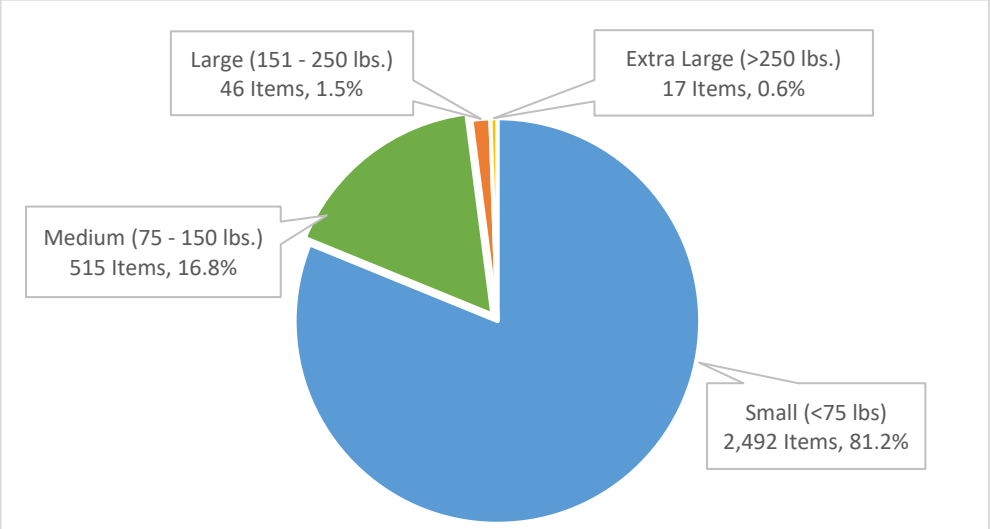
Loose item collection produced copious amounts of data, due to the quantity and quality of information from the weekly tracking sheets. The tracking sheets were able to provide item types, counts, disposal weight[10] and costs, and time (on site or per route). With each additional term, more data was able to be combined or compared, generating a wider variety of results from the project.

All four terms demonstrated the same trend: small items (weighing less than 75 lbs.) were the most disposed item. The percentage of small items ranged slightly from term to term, but the overall distribution found small items to make up 81% of all loose items by item count (Graph 1). The next most disposed size was medium items (weighing between 75lbs and 150 lbs.), which accounted for almost 17% of loose items. Large items (weighing 151 – 250 lbs.) and extra-large items (weighing over 250 lbs.)

[9] Based on average weights per item category. Weights include e-cycles.
[10] Precise disposal weight was only available during Term 4, as the collectors had exclusive bulky-only routes. Disposal weights from Term 1-3 were based on averages from each item size category.

represented 1.5% and 0.5%, respectively. Collectively, loose item collections from Term 1 to Term 4 generated a total of 3,067 items, with an estimated weight of 82.9 tons (or 165,800 lbs.). All items averaged out to 54 lbs. per item, further reinforcing that the vast majority of bulky items disposed are small(er) items, weighing under 75 lbs.

Graph 1: Items Disposed by Size
Terms 1 - 4



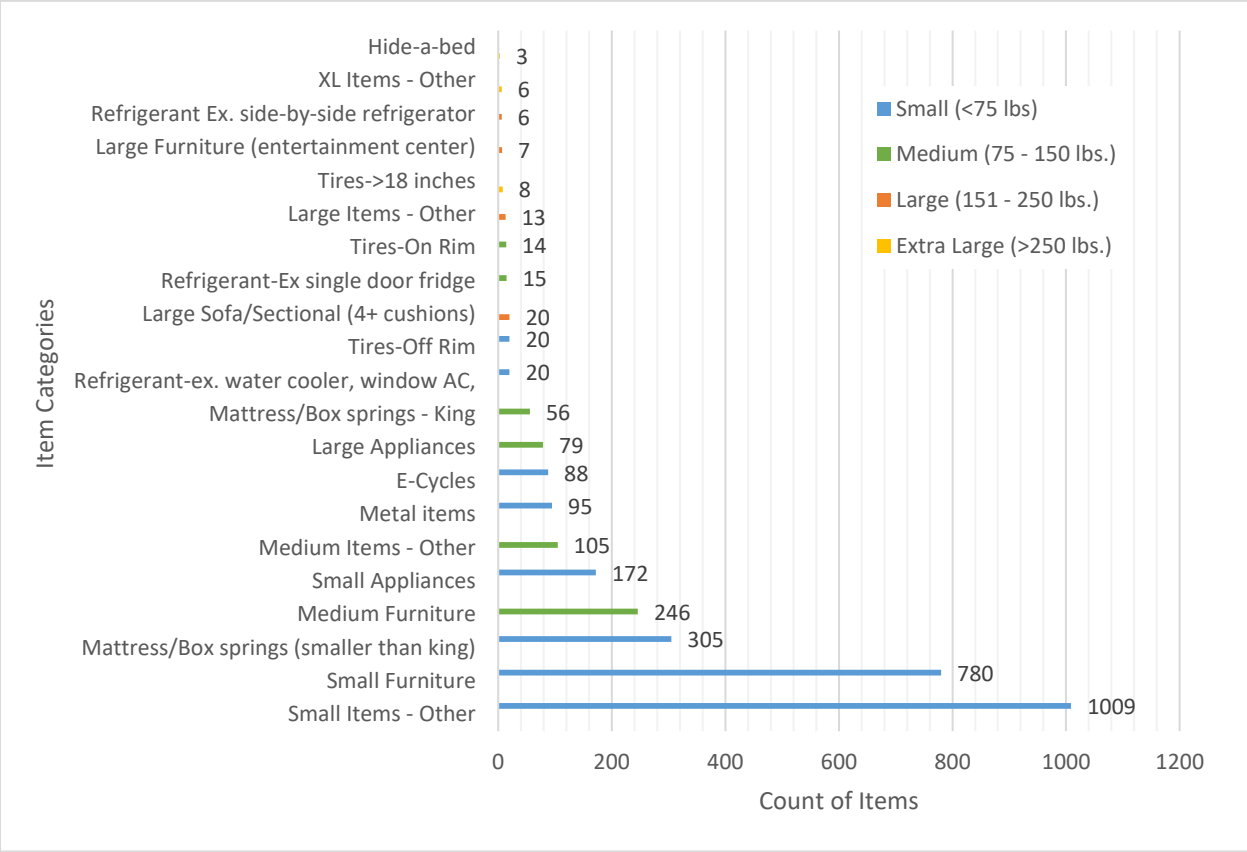
With the majority of items categorized as small, it was not surprising that 'other' small items were the most disposed item, accounting for 33% of loose items collected (Graph 2). Small furniture was found to be the next most disposed, with a count of 780 items, or 25.4% of all loose items (Appendix G). Collectively, those two items made up more than 58% of all the loose items collected, furthering that the majority of items being disposed are small. The third most disposed item—mattresses and box springs smaller than a king—came up only 9.9% of the time, demonstrating a large drop in the frequency of item types. The rest of the items' disposal rate continued to drop steadily, as seen in Graph 2.

An interesting piece of data came from the item counts for all mattress and box springs. The data showed that—with Oregon's upcoming mattress recycling program[11]—there may be the potential to eliminate 12% of items in the bulky waste stream and thus, the landfill. The impact that the program could have demonstrates a substantial opportunity to recover resources, reduce the amount going to landfills, create jobs, and reduce the impact on and from our community.

[11] More information about Oregon's upcoming Mattress Recycling Program can be found at: https://www.oregon.gov/deq/recycling/pages/mattress-recycling.aspx.

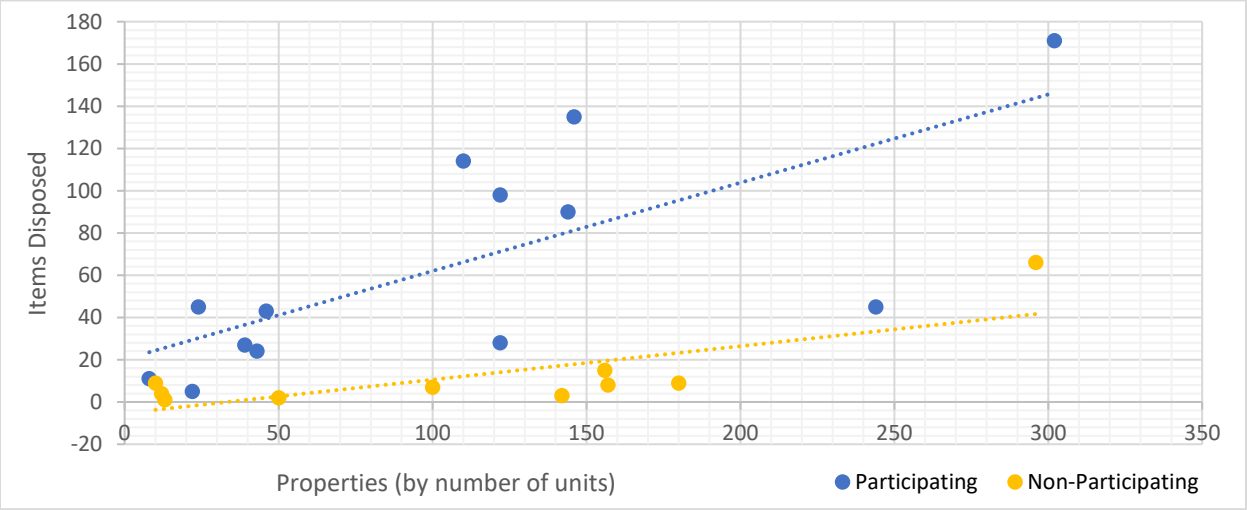
Graph 2: Loose Item Counts

Terms 1 – 4



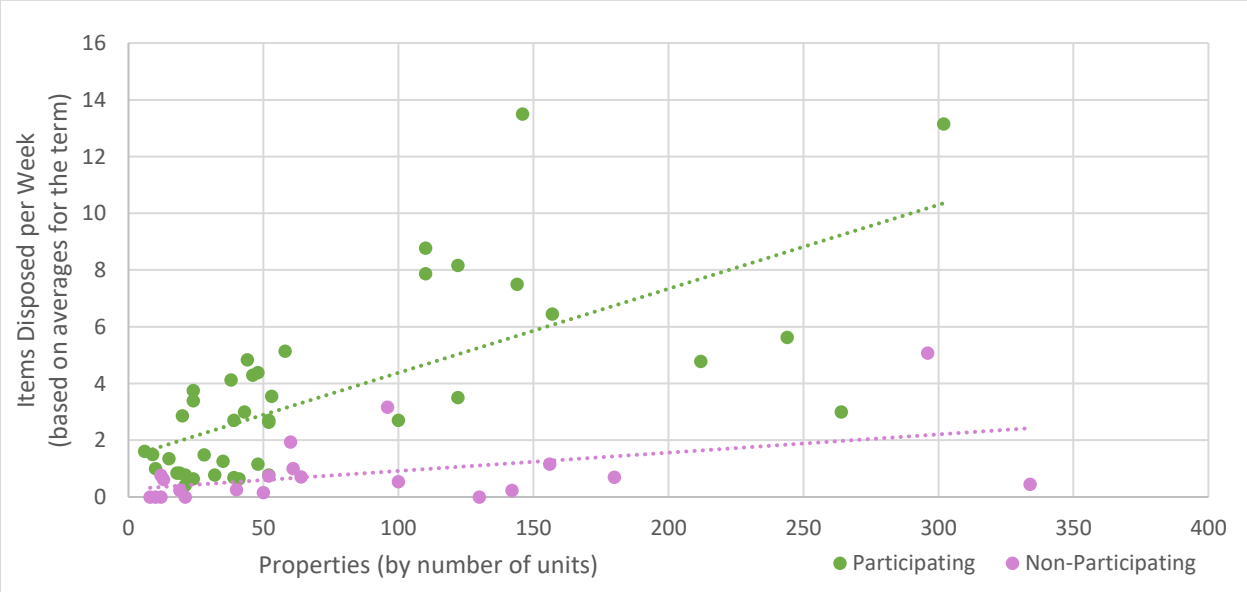
The data from item counts and categories illustrated what was most disposed, but paring item counts with property size demonstrated lager disposal trends. Utilizing Term 4 data—which only invited properties that had no prior access to bulky waste collection—properties were separated into two groups: participating (residents received outreach) and non-participating (residents did not receive outreach but collectors conducted stealth pickups). Demonstrated in Graph 3, there was a significant positive trend between items disposed and property size (based on unit count). Undoubtedly, the trend was stronger for participating properties, but it still came out positive for properties that did not participate. Collectively, the data largely indicated that regardless of knowing about a disposal opportunity, the more units at a community, the more bulky items will be disposed.

Graph 3: Item Counts by Property
Term 4



While there was a positive relationship between property size and items disposed, there are always discrepancies and variations between weeks, properties, and collectors. Expanding the amount of items disposed to all terms in Graph 4—which include properties with (Term 2) and without (Terms 1, 3, and 4) prior access to bulky waste collection—the same trends were still reflected: a positive relationship between number of units and items disposed. Additionally, all terms also demonstrated a higher amount of items disposed for communities that received outreach. There were undoubtedly some outliers, but for communities that received outreach, one to four items could be expected per week for properties under 50 units, while those between 100 and 300 could expect quantities between four and eight items, per week.

Graph 4: Weekly Disposal by Property
Terms 1 – 4



To assess the average amount of items disposed per unit, two terms with similar criteria—no prior opportunity to bulky waste collection and similar timeframes—were analyzed and the data was standardized by property size. Participating communities in Term 1 and Term 4 disposed of 0.7 or 0.8 items per unit, respectively, over the duration of the term. Non-participating communities in the same terms both disposed an average of 0.2 items per unit (or 1 item for every 5 units). Collectively, the terms demonstrate that informing residents of the opportunity generates more bulky items than those without knowledge of the opportunity. Because each property is unique, data from every property undoubtedly had variation, as evident in Appendix F, but the patterns of disposal display parallel trends over similar timeframes and when comparing participating communities to non-participating communities.

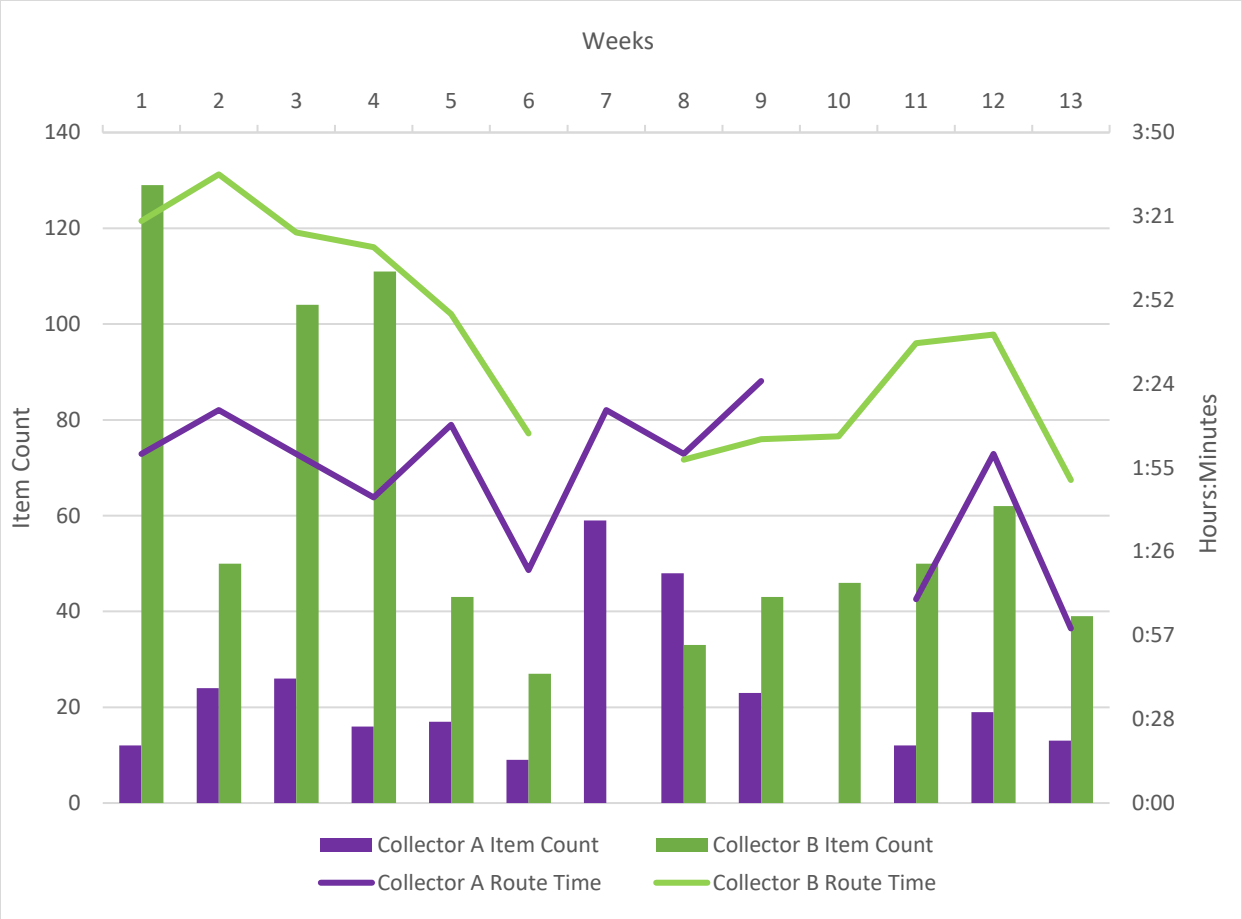
Table 5: Items Disposed Per Unit

Terms 1 & 4

Items Disposed per Unit				
	Min	Median	Max	Average
Term 1, 12 Weeks (participating communities)	0.2	0.6	2	**0.8**
Term 1, 12 Weeks (non-participating communities)	0.1	0.2	7.3	**0.2**
Term 4, 13 weeks (participating communities)	0.2	0.7	0.9	**0.7**
Term 4, 13 weeks (non-participating communities)	0	0	1	**0.2**

Focusing on Term 4, Graph 5 demonstrated some of the variations that occur, as every week looked different for both collectors' bulky-only route. Some weeks, especially at the start of the term, Collector B's properties showed very high item counts, while later weeks, showed lower. Collector A had a slightly different distribution, as their item count peaked around the midway point in the term. With both, there was a lot of variation in the amount collected over the thirteen weeks, so naturally, route times also fluctuated. It was expected that the more items collected, the longer the route would take, but was not always the case. For example, the second week of Collector B's route showed a much lower item count than the first week, while the count jumps back up for the third and fourth week. Despite the dip in items collected during the second week, the route time actually increased, demonstrating one of the many variations. Looking at another discrepancy, time spent on route was not solely influenced by the amount of items. For Collector A, both routes from weeks 5 and 7 took around two hours, yet drivers collected 17 items in week 5, and almost 60 items in week 7. Within a collector's set route, there were many factors that played a role, which included, but were not limited to traffic, weather, item count, type of item, item size, and item and property maneuverability. There are also inherent differences in route time between collectors due to the proximity from their lot to properties and disposal locations.

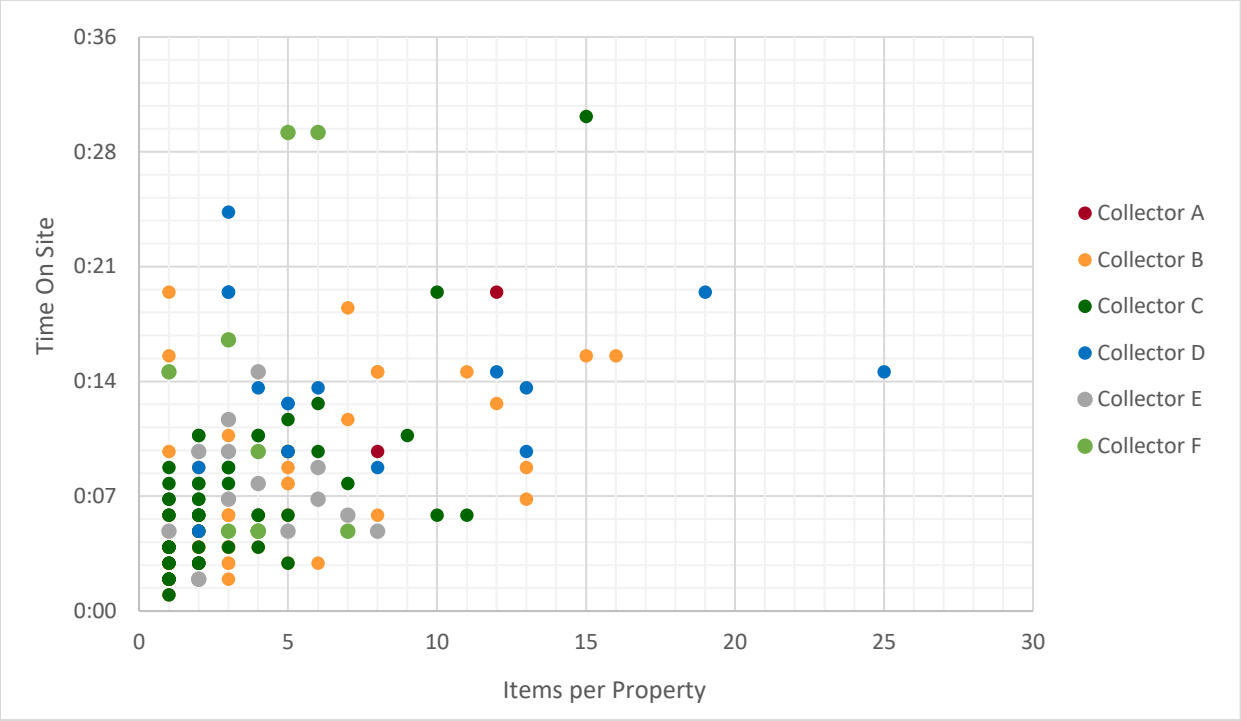
Graph 5: Weekly Item Counts and Route Time
Term 4[12]



The differences continue to stand out when looking at time on site—predominately loading items—and item counts for each collector, as evident in Graph 6. The time it took to collect one item ranged from one minute to 10 minutes, and in some instances, reached up to 20 minutes. Similar ranges were seen with any item count, as three different collectors reported loading seven items at their properties, with times ranging between five and 19 minutes. Focusing on just one collector, Collector B picked up eight items twice, which took six minutes one week but 15 minutes another week. Predominately, the amount of items have a positive influence on the time on site, but undoubtedly, there are many factors that influence the time[13] which are not solely influenced by the collector.

[12] The were two weeks in the term—week 7 and week 10—where no data was shared from one collector, due to misplacement.
[13] There was also potential for discrepancies in the data, due to collectors recording and logging time differently.

Graph 6: Time On Site and Properties' Item Counts[14]
Terms 2 & 3



Suffice to say, every collector is different, every property is unique, and items can have a wide variety of size, shape, and maneuverability. While variation is inevitable and remains an important consideration, over time, it largely levels out and displays the same patterns:

- More items typically require more time (on site or on route)
- The more units at a property, the more bulky items that will be set out for disposal
- More items were disposed when residents were informed of collection opportunities

Drop Boxes

Between Term 1 and Term 4, 13 communities were serviced by drop boxes, though not all stuck with that method of collection.[15] The total weight disposed from drop boxes was 62.65 tons from 63 hauls, which averaged 0.99 tons per haul. The majority of properties opted for 20 cubic yard drop boxes, but when space would allow (or constrain), some properties chose 30, 40, or 10-yard drop boxes.

Demonstrated in Table 6, the size of each drop box influenced the amount of weight it could hold, as 40-yard drop boxes averaged 1.5 tons per haul, 30-yards averaged 1.1 tons, 20-yards averaged 0.7 tons, and 0.5 tons for 10 yard drop boxes. Drop boxes of 40-yards went almost 17 days before needing disposal,

[14] Outliers have been removed.

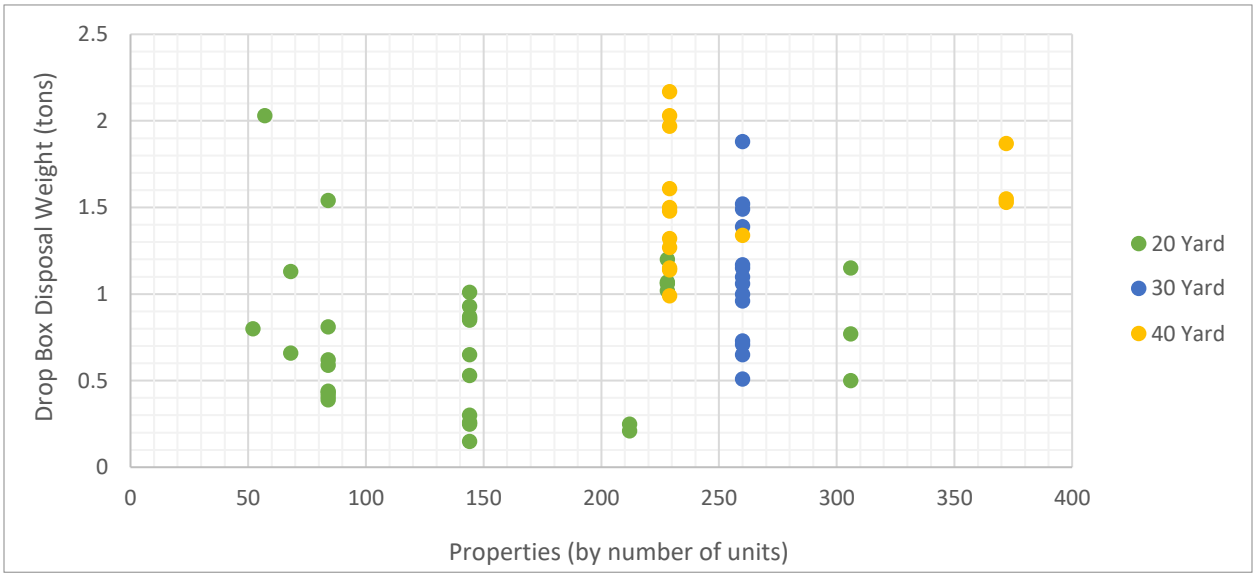
[15] Due to various reasons, a few properties had to change the duration they had their drop box on site. One reason that came up for a couple properties was that their drop box attracted illegal dumping and non-bulky items being dumped. Another reason was, in Term 1, one collector preferred all their properties be serviced by drop boxes, but during Term 2—which had the same communities—many of the properties opted to have loose item collections instead.

while 20-yard and 30-yard drop boxes averaged 13.5 days. Reviewing average disposal weights and frequency of hauls illustrates benefits of using larger drop boxes when space and need allow.

Table 6: Drop Box Disposal
Terms 1 - 4

Size (cubic yards)	Total Weight (tons)	Total Hauls	Average Weight Per Tip (tons)	Average days Between Hauls
10	0.47	1	0.47	7
20	23.74	33	0.74	13.4
30	15.32	14	1.09	13.5
40	22.92	15	1.53	16.7

Graph 7: Drop Box Disposal by Properties
Terms 1 - 3



The average disposal weights reflect the size of each drop box, as seen in Graph 7, but the variety between disposal weights was also evident. The range of disposal weights from 20-yard drop boxes were 0.15 to 2.03 tons, while 30-yards had 0.51 to 1.88 tons, and 40-yards ranged between 0.99 and 2.17 tons. With a variety of weights per drop box size, there was also variety within each property. Looking specifically at the property with 260 units, they mostly had a 30-yard drop box on-site, with weights reported between 0.51 and 1.88 tons. The one time they had a 40-yard, the disposal weight was 1.34 tons, relatively consistent their 30-yard drop boxes.

There were expected patterns that were continuously illustrated throughout the project, but there was also inherent variation from numerous factors. Each property had a unique amount of units, with a different number of residents—and occasionally neighbors—accessing the drop box. Different properties also had a unique collection of items, with different sizes and weights. Drop boxes were surely packed differently as well, and collectors had their own timeline between the container being reported as full and hauling. There were also external factors that undoubtedly affected the project. Weather had an influence, as it deterred some from disposing their bulky items while it also it increased the weight of all

items that sat in the rain or snow. Another influence was the presence of holidays, such as Christmas and Black Friday, which may have resulted in higher disposal rates. Nevertheless, every property and resident had unique factors that influenced disposal needs. As is common with multifamily, no two properties are the same and while that was exhibited throughout the project, it continued to be evident in the data.

Reuse

There was a strong consideration of incorporating reuse in the project but the logistics proved too challenging. Nonetheless, the idea of incorporating reuse into collection seemed much more feasible for loose item collections, as items are individually loaded on a truck as opposed to being thrown into a drop box. Throughout the project, several individuals—both residents and property managers—mentioned they and/or others had gleaned from the loose item piles, prolonging the life of certain items. Giving consideration to the gleaning that occurred throughout the project, the data for loose item collections likely underrepresented the amount of items placed for disposal.

Survey Results

To gain better insight about participants' experience and feedback on the project, and to understand if the project had any influence on how bulky waste could be addressed after the project, SSW staff sought to conduct a survey with property managers and residents. Once Term 2 and Term 3 concluded at the end of June, SSW staff reached out to property managers from participating communities to share manager surveys and seek approval to survey residents.

Table 7: Survey Responses

	Responses	**Properties Represented**
Property Managers	10 (of 28)	15 (of 39)
Residents	50 (of 936)	9 (of 15)

Property Managers

Ten property managers responded with almost entirely positive feedback (Appendix J). All property managers expressed appreciation for the project and acknowledged that the project was a great service for their residents. They reported the biggest value the project had was:

1. Added convenience (10 of 10 responses)
2. Items placed only in designated areas (10 of 10 responses)
3. Resident appreciation (10 of 10 responses)
4. Monetary benefit (8 of 10 responses)

Half of the responses reported that their property's staff experienced a reduction in their time managing bulky waste while four said their staff had spent the same amount of time managing bulky waste as before the project. Additionally, 80% of responses indicated that the amount of bulky waste collected in the project was more than the typical amount of bulky waste they see on site. All property manager responses indicated that they intend to share information with residents about how they can property dispose of

bulky waste. Few also noted that they either plan to offer residents a way to dispose of bulky waste on site, or they would assist with coordinating donations of gently used items. Continued in Appendix J, some property manager's feedback on what went well, included:

> *"Everything, location, amount of time it was there, regular renewal, etc."*
>
> *"Pretty much everything [went well]! Planning was great, communication to residents was excellent, and [S&SW staff] even helped by including some incentive/information for our residents to get rid of bulky items while we performed unit inspections at our property."*
>
> *"The tenants and management appreciated the service as it freed up staff time, and helped residents clear out unwanted items."*

Residents

Nine out of 10 property managers that responded to the survey allowed S&SW staff to share surveys with their residents. The intention was to generate more data, feedback, suggestions, and to understand challenges with the project. After creating a resident survey and flyer, posting flyers on doors, and waiting four weeks, 50 responses came in from nine different properties (Appendix K). The responses were overwhelmingly positive, despite only half of the respondents indicating they utilized the project to dispose of their bulky waste. From resident perspectives, the biggest value added from the project was:

1. Added convenience (45 of 50 responses)
2. Monetary benefit (29 of 50 responses)
3. Items only placed in designated areas (27 out of 50 responses)

Some of the questions inquired about resident preferences for future regularly occurring bulky waste service. The majority indicated they would prefer monthly service,[16] with the next preference being staff/management to coordinate disposal. The vast majority of responses noted that they'd prefer the costs of regularly occurring bulky waste disposal to fall on management,[17] but the next preference was for bulky waste collection to be included in the regular cost of garbage service. Throughout the survey, residents consistently shared positive feedback from the project and indicated they were tremendously appreciative of the service. Specific feedback about the project included:

> *"Just the sheer fact that people had somewhere to dispose of their unwanted bulky things is helpful because not everybody has transportation to be able to take their unwanted bulky stuff to be properly disposed of...."*
>
> *"The trash area at my apartment was easier to use."*
>
> *"It went long enough [so] everybody had a chance to get their stuff down regardless of how busy their lives were."*

[16] Some residents indicated they would prefer regularly occurring bulky waste service be offered quarterly or every six months. Because the survey answers only had the option for weekly or monthly pickups, the choices residents made may not reflect the frequency they most prefer.

[17] The preference for the cost to fall on management may be partially due to most respondents residing in affordable housing communities.

"Just the whole idea is great and needed."

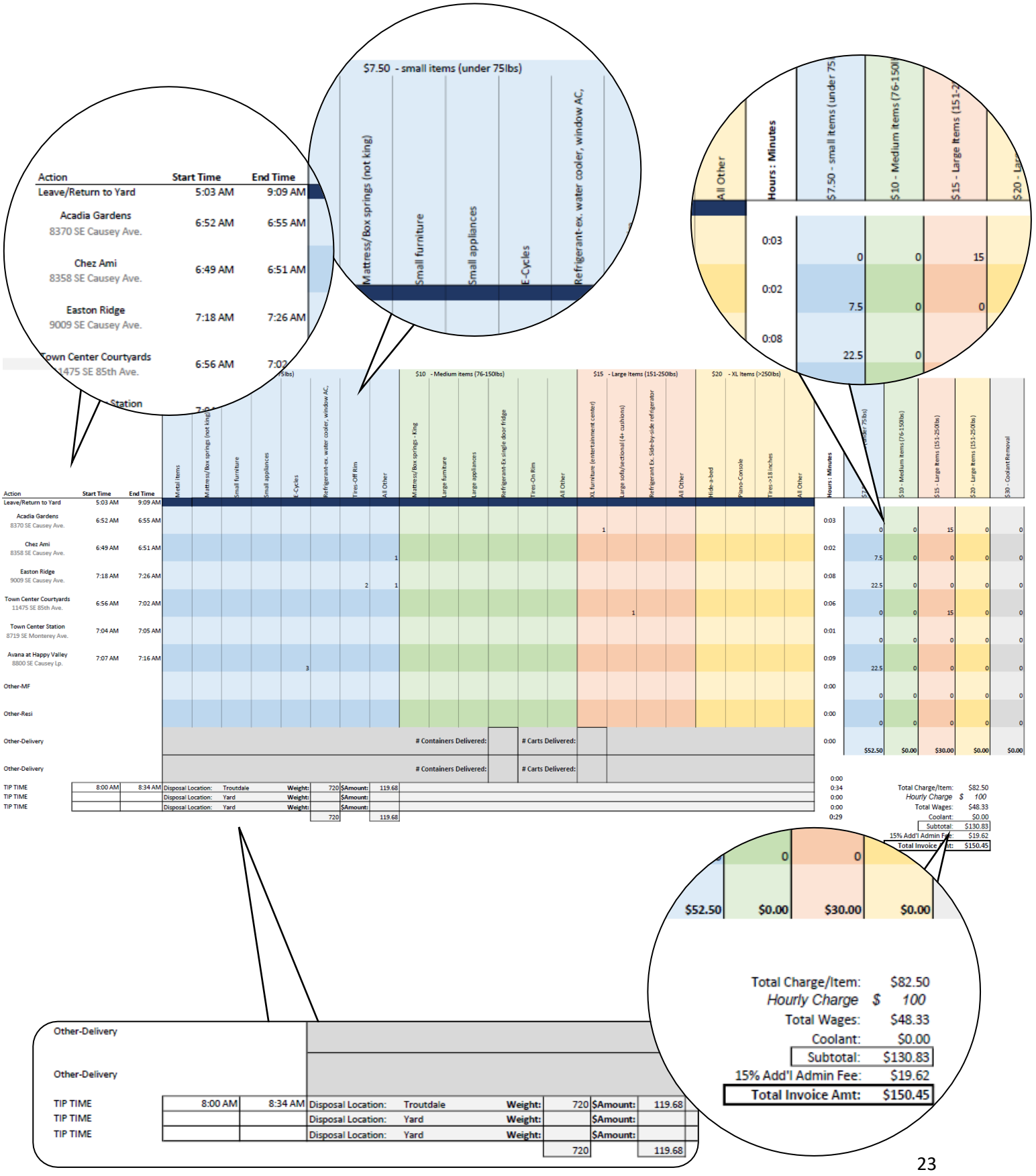
Lessons Learned, Feedback, and Suggestions for Future Implementation

- Local government—as opposed to the collector—should take initiative in coordinating the project and conducting outreach.
- Consider looping in HOAs and other relevant organizations/entities. HOAs and property management companies may have limitations to participate or rules against leaving bulky waste outside of a property.
- Non-centralized bulky waste collection locations lead to more items being disposed in enclosures or around the property.
- Seniors (and occasionally other residents) need assistance to move/dispose of their items.
    - Volunteers are a good option, but require coordination and designated times for moving/loading items.
    - Dollies and shopping carts are also a viable solution, but do not work for all items.
- In certain neighborhoods/communities, expect neighbors to utilize drop boxes.
- Loop maintence staff in on the project. Residents do not always dispose of their bulky waste in the designated area(s), so it falls on maintence to move the items. It seemed that maintence was more proactive with moving items when they were thoroughly informed about the project.
- Inform maintence that e-cycles and refrigerant-containing items need to be left outside of drop boxes for proper disposal.
- Consider adding tires to the list of items to be left outside of drop boxes (to allow for separate disposal).
- Utilize 'Bulky/Large Item Only' and 'Place E-Cycles/Refrigerant-Containing Items Here' flyers on drop boxes. Tape or industrial-strength magnets were best for securing onto boxes (Appendix E).
- Encourage collectors and their drivers to open the doors of drop boxes after they (re)place them on site.
- Rain, hail, and snow increases weight of drop boxes and may overstate data in wetter months.
- Labor/time may be logged differently between collectors and may misrepresent time and/or create unequal compensation.
- Third party collectors (e.g. WRS) may alter/decrease data and may charge the community for bulky item disposal. Additionally, property managers are not always aware their property has a third party collector, so it may be difficult to address and/or suspend service.
- Reported by residents and property managers, kids and non-residents may pull items out of drop boxes, creating large messes and/or obstructing access to the drop box.
- Bulky items in drop boxes may overflow the container or exceed the top of the box. Encourage collectors to be proactive about dumping it when it nears full and clarify to collectors that they need to level the contents when needed (there may be fees associated with leveling).
- Remind collectors near the end of the project when they need to remove drop boxes and that they will need to collect any/all bulky items that may be outside of the container.

Appendix A: The Driver Tracking sheet

Route#	Driver(s):	Date:
	North Main Village Apartments **10554 SE Main St. Milwaukie**	
	← Time Site Entered Time Site Left →	
$7.50 Small items (under 75lbs)	Metal items	
	Mattress/Box springs (not king)	
	Small furniture	
	Small appliances	
	E-Cycles	
	Refrigerant-ex. water cooler, window AC,	
	Tires-Off Rim	
	All Other	
$10 Medium items (76-150lbs)	Mattress/Box springs - King	
	Large furniture-2-3 cushion sofa	
	Large appliances	
	Refrigerant-Ex single door fridge	
	Tires-On Rim	
	All Other	
$15 Large Items (151-250lbs)	XL furniture (entertainment center)	
	Large sofa/sectional (4+ cushions)	
	Refrigerant Ex. Side-by-side refrigerator	
	Tires->18 inches	
	All Other	
$20 XL Items (>250lbs)	Hide-a-bed	
	Piano-Console	
	All Other	

Appendix B: The Invoice-Tracking Sheet



OPPORTUNITY TO DISPOSE OF LARGE UNWANTED HOUSEHOLD ITEMS AT KINGSBERRY HEIGHTS!

Do you have large household items you no longer want and are unable to donate (e.g. an old sofa)?



From **FEBRUARY 1ST to APRIL 30TH**, place large, unwanted items in the large dumpster near the recycling area.



Accepted Items

Furniture
Mattresses
TVs/Electronics (place NEXT to bin)

Items NOT Accepted

Hazardous waste (oil, batteries, etc.)
Garbage that fits in the garbage bins

Questions? Please contact the office at (503) 656-5258

CLACKAMAS COUNTY

OREGON CITY GARBAGE Company, Inc.

OPPORTUNITY TO DISPOSE OF LARGE UNWANTED HOUSEHOLD ITEMS AT IKOI SO TERRACE!

Do you have large household items you no longer want and are unable to donate (e.g. an old sofa)?



On **MONDAYS**, from **FEBRUARY 6TH to APRIL 24TH**, place large, unwanted items, in the corner parking spot across from the Loading Zone.



Accepted Items

Furniture
Mattresses
TVs/Electronics

Items NOT Accepted

Hazardous waste (oil, batteries, etc.)
Garbage that fits in the garbage bins

Questions? Please contact the office at (503) 659-7019.

CLACKAMAS COUNTY

WM

END OF OPPORTUNITY REMINDER!

JUNE 29TH

IS THE LAST DAY TO LEAVE LARGE, UNWANTED ITEMS IN THE LARGE FENCED AREA IN THE BACK CORNER OF THE PROPERTY.



Accepted Items

Furniture
Mattresses
TVs/Electronics

Items NOT Accepted

Hazardous waste (oil, batteries, etc.)
Garbage that fits in the garbage bins
Paint

Options after June 29th:



1 Donate

For usable items in good condition, call 503-234-3000 or visit www.oregonmetro.gov/findarecycler to find local donation options; sell or give away online (e.g. Facebook Marketplace, Craigslist, etc.).

2 Take to the Dump

Haul your unwanted items to Metro South Transfer Station - 2001 Washington St. in Oregon City across from Home Depot. ($40 for up to 300 lbs.)

3 Contact the Office

Call us at 503-655-6665 and we can help you coordinate disposal. (Fees vary by item.)

Appendix D: Various Property Setups



Barclay Village, 10-27-23. Their loose item collection location was in the parking spot outside of their waste enclosure. This parking spot was specifically chosen due to its known location and the enclosure provided a barrier to reduce visibility from the street/public. Maintenance taped it off to make it extra visible and ensure no one parks in the parking spot.



Charbern, 1-31-23. Their loose item collection location was inside a large fenced enclosure that had historically been used to contain bulky items.



Stone Creek, 2-22-23. Due to limited space, their loose item collection location was inside a grassy area on the side of their parking lot.



Clackamas Trails, 6-26-23. A 20-yard drop box, taped and coned off to ensure residents don't park in or near the area. Items were left outside of drop box once the container reached capacity.



Kingsberry Heights, 2-9-23. A 30-yard drop box with laminated signs to indicate that the access door is on the other side of the container and e-cycles and refrigerant-containing items need to be placed outside of the container.



Lake Road Square, 11-29-23. A 10-yard drop box was placed in their visitor parking spot for one week only, due to a challenging property layout and space constraints.

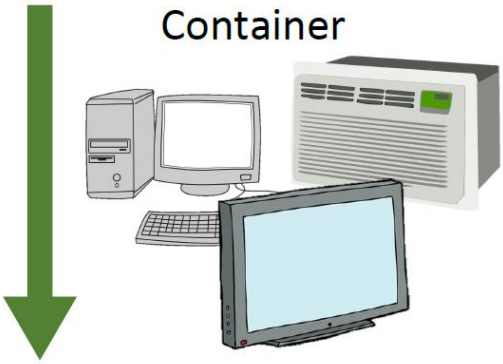
Appendix E: Drop Box Signage and Industrial Magnet

The **Access Door** is at the **Other End**

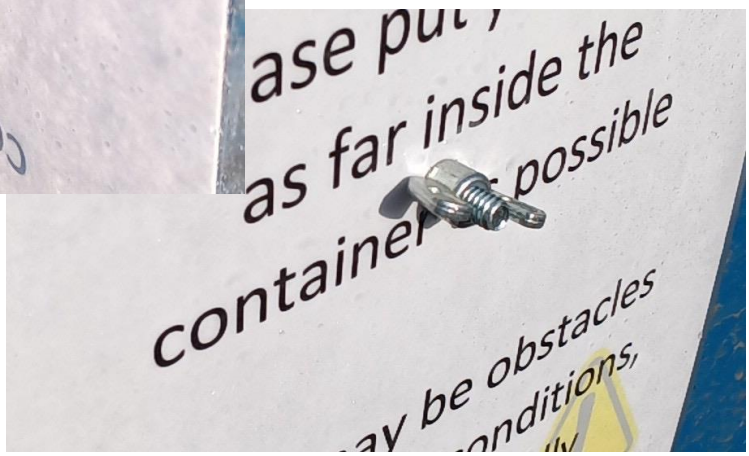
Please put your items as far inside the container as possible

There may be obstacles and slippery conditions, proceed carefully

Please leave TVs, Computers, and Items with Refrigerant (AC Units, Fridges, etc.), **HERE**, Outside of the Container







Appendix F: Items Disposed per Unit

Properties, by Collector	Units	Weeks Participated	Sum of Item Count	Items Disposed per Unit	Items Disposed per Unit (NPC)[18]	Items Disposed per Week	Items Disposed per Week (NPC)
B&B	**2606**	**44**	**1525**	**1.98***	**0.08***	**2.98***	**1.36***
Clayton Mohr Commons	24	31	20	0.83		0.65	
Fisher Ridge	19	31	26	1.37		0.84	
Jackson Place	6	31	50	8.33		1.61	
Meadowlark	15	31	42	2.80		1.35	
Oregon City Terrace	48	31	136	2.83		4.39	
River Glen	44	31	150	3.41		4.84	
Rivergreens Apartments	334	4.5	2		0.01		0.44
Rosewood Terrace	38	31	128	3.37		4.13	
Stone Creek	110	31	244	2.22		7.87	
Tukwila Springs	48	31	36	0.75		1.16	
The Landing	302	13	171	0.57		13.15	
Pioneer Ridge	296	13	66		0.22		5.08
Edgewater at the Cove	244	8	45	0.18		5.63	
Timberview	180	13	9		0.05		0.69
Aspire Oregon City	156	13	15		0.10		1.15
Barclay Village	146	10	135	0.92		13.50	
Two Rivers Homeowners Coop	142	13	3		0.02		0.23
Somerset Lodge	122	8	28	0.23		3.50	
Webster Ridge Apartments	122	12	98	0.80		8.17	
Fernwood Court	110	13	114	1.04		8.77	
Mountain View Apartments	100	13	7		0.07		0.54
Clackamas Garbage	**781**	**44**	**306**	**0.74***	**0.18***	**3.30***	**0.20***
Boulder Gardens	157	4.5	29	0.18		6.44	
Clackamas Apartments	21	22	9	0.43		0.41	
Village Place Apartments	144	12	90	0.63		7.50	

[18] NPC: Non-participating communities. Non-participating communities are also highlighted in grey.

The Springs at Clackamas Woods	130	13	0		0.00		0.00
Stockbridge Commons	50	13	2		0.04		0.15
Lake Road Courtyard	46	10	43	0.93		4.30	
Frontier Urban Village	43	8	24	0.56		3.00	
Kona Gardens Apartments	39	10	27	0.69		2.70	
Jannsen Village	24	12	45	1.88		3.75	
Pheasant Court Apartments	22	8	5	0.23		0.63	
Westwood Apartments	21	13	0		0.00		0.00
Webster Road Apartments	19	13	3		0.16		0.23
Cinderella Garden Apartments	13	13	8		0.62		0.62
Briarwood Townhomes	12	13	0		0.00		0.00
Jannsen Apartments	12	13	10		0.83		0.77
R-Vanco	10	13	0		0.00		0.00
P&M Apartments	10	11	11	1.10		1.00	
Jan Strecker Rentals	8	13	0		0.00		0.00
Hoodview Disposal	**161**	**31**	**115**	**0.84***	**0.51***	**2.71***	**1.00***
Cascade Meadows	61	31	31		0.51		1.00
Hillside Manor	100	31	84	0.84		2.71	
Republic Services	**214**	**22**	**344**	**1.78***		**2.58***	
Carriage Estates	39	22	15	0.38		0.68	
Rain Garden	20	22	63	3.15		2.86	
Renaissance Court Apartments	21	22	17	0.81		0.77	
The Charleston @Villebois	52	22	58	1.12		2.64	
Wiedemann Park	58	22	113	1.95		5.14	
Wilsonville Heights	24	23	78	3.25		3.39	
Sunset Garbage	**273**	**31**	**133**	**0.83***		**3.00***	
Lone Acre Court	9	4	6	0.67		1.50	
Rosewood Station	212	9	43	0.20		4.78	
Terrace at Mount Scott	52	31	84	1.62		2.71	
WM	**835**	**31**	**593**	**1.04***	**0.60***	**1.54***	**1.36***
Acadia Gardens	41	31	20	0.49		0.65	
Charbern	53	31	110	2.08		3.55	
Chez Ami	40	31	8		0.20		0.26
Columbia Care –	18	31	26	1.44		0.84	

Jennings Lodge							
Easton Ridge	264	31	93	0.35		3.00	
Fox Pointe	96	31	98		1.02		3.16
Ikoi So Terrace	35	31	39	1.11		1.26	
North Main Village Apartments	64	31	22		0.34		0.71
Seneca Terrace	32	31	24	0.75		0.77	
Town Center Courtyards	60	31	60		1.00		1.94
Town Center Station	52	31	24	0.46		0.77	
Walsh Commons Apts.	28	31	46	1.64		1.48	
Willamalane Apartments	52	31	23		0.44		0.74
Grand Total	**4870**		**3016**[19]				
Averages				**1.20**	**0.34**	**2.69**	**0.98**

*Averages, per collector

[19] Some items have been excluded (additional items collected from properties serviced by drop box), to better reflect loose item collection counts.

Appendix G: Count and Percentage per Item

Item	Count per Item	Percentage of Total
Small Items - Other	1,009	33.0%
Small Furniture	780	25.4%
Mattress/Box springs (not king)	305	9.9%
Medium Furniture	246	8.0%
Small Appliances	172	5.6%
Medium Items - Other	105	3.4%
Metal items	95	3.1%
E-Cycles	88	2.9%
Large Appliances	79	2.6%
Mattress/Box springs - King	56	1.8%
Large Sofa/Sectional (4+ cushions)	20	0.7%
Refrigerant-ex. water cooler, window AC,	20	0.7%
Tires-Off Rim	20	0.7%
Refrigerant-Ex single door fridge	15	0.5%
Tires-On Rim	14	0.5%
Large Items - Other	13	0.4%
Tires->18 inches	8	0.3%
Large Furniture (entertainment center)	7	0.2%
Refrigerant Ex. side-by-side refrigerator	6	0.2%
XL Items - Other	6	0.2%
Hide-a-bed	3	0.1%
Grand Total	**3,070**	**100.0%**

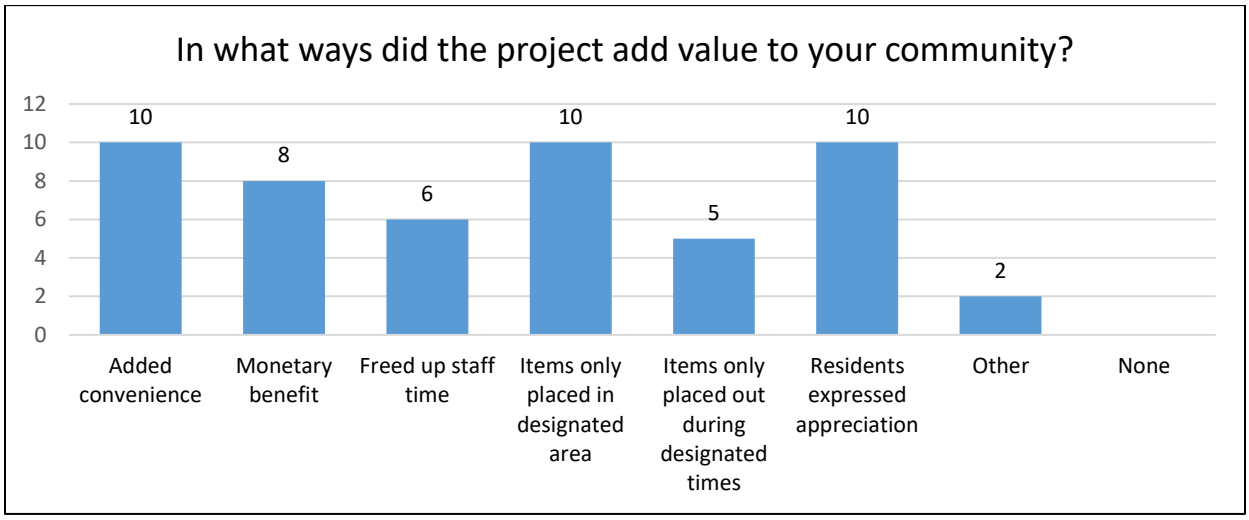
Appendix H: Drop Box Hauls and Tonnage

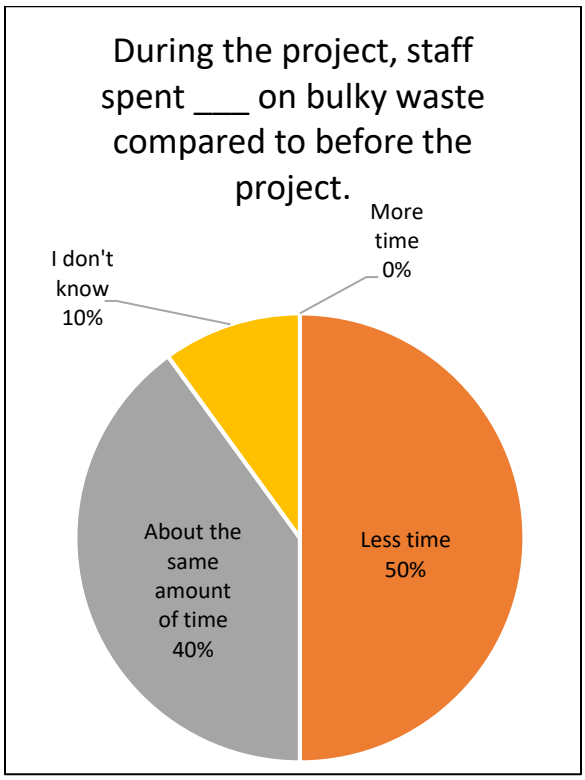
Properties serviced by drop box	Sum of Weight (tons)	Count of Hauls
10 Cubic Yards	0.45	1
Lake Road Square	0.45	1
20 Cubic Yards	27.85	36
Autumn Park	6.66	11
Clackamas Trails	2.42	3
Creekside Woods	0.84	2
Hawks Ridge Apts.	4.35	4
Holly Tree	2.03	1
Holly Tree + Lone Acre	1.79	2
Kingsberry Heights	4.32	4
Montebello	4.64	8
The Charleston	0.8	1
Rosewood Station	0.21	1
30 Cubic Yards	10.29	9
Kingsberry Heights	10.29	9
40 Cubic Yards	23.63	16
Avana at Happy Valley	4.95	3
Kingsberry Heights	2.05	2
Lake Crest Apts.	16.63	11
Grand Total	**62.5**	**63**

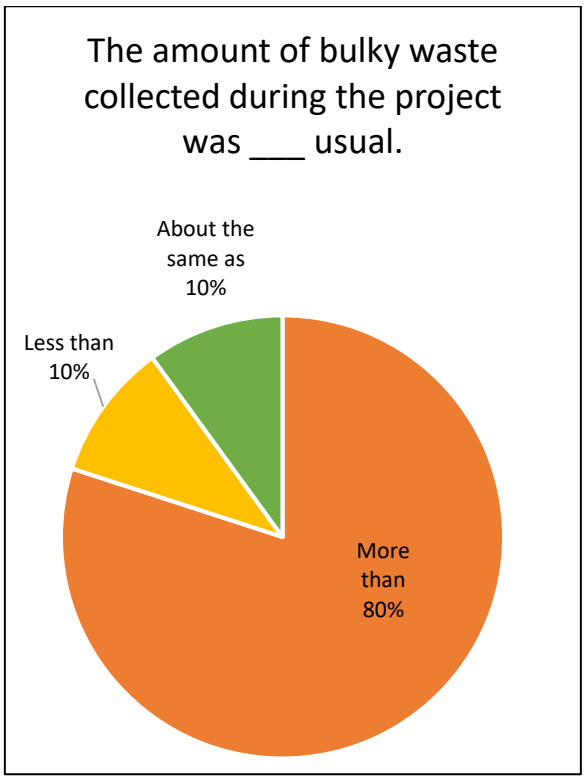
Appendix I: Total Costs

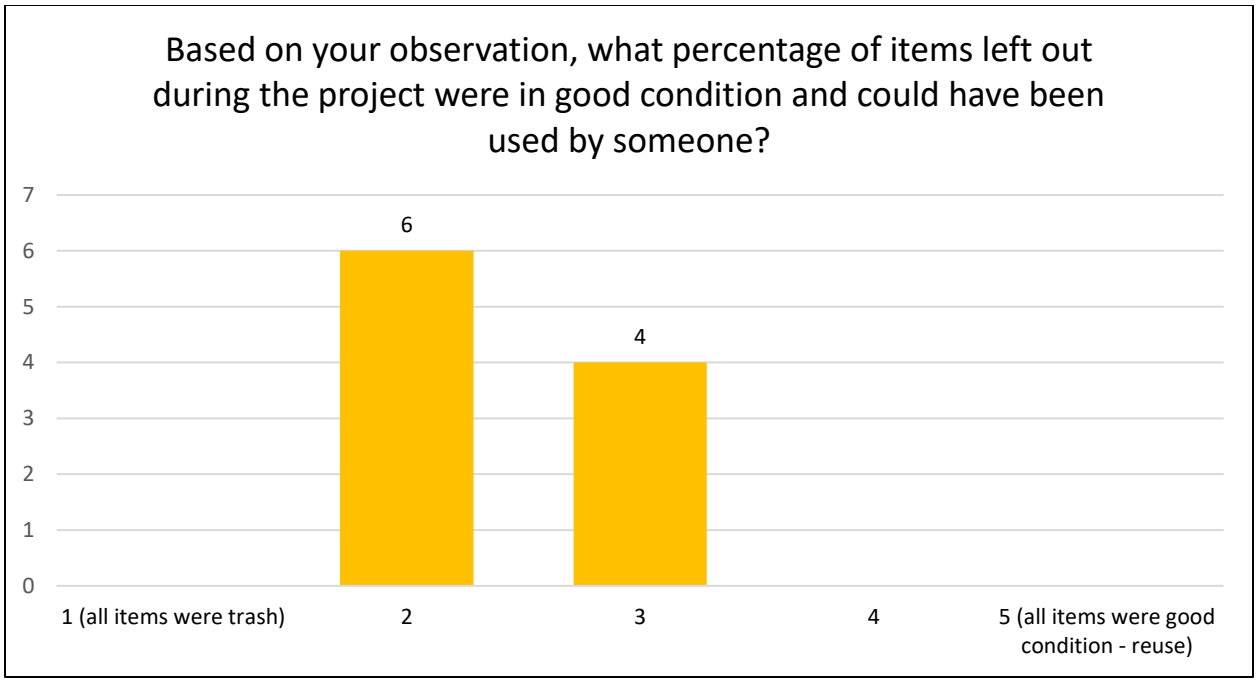
				Participating Units Only			Participating & Non-Participating		
Collector	**Invoiced**	**Tons**	**Cost per Ton**	**Number of Units**	**Cost per Unit**	**Pounds per Unit**	**Number of Units**	**Cost per Unit**	**Pounds per Unit**
Collector A	$11,117.00	25.89	$429.39	763	$14.57	67.9	1312	$8.47	39.5
Collector B	$27,217.20	57.33	$474.75	1658	$16.42	69.2	2866	$9.50	40
Collector C	$10,185.83	21.36	$476.86	895	$11.38	47.7	1207	$8.44	35.4
Collector D	$12,064.12	24.54	$491.61	526	$22.94	93.3	526	$22.94	93.3
Collector E	$3,928.30	9.22	$426.06	634	$6.20	29.1	869	$4.52	21.2
Collector F	$4,368.77	8.45	$517.01	123	$35.52	137.4	335	$13.04	50.4

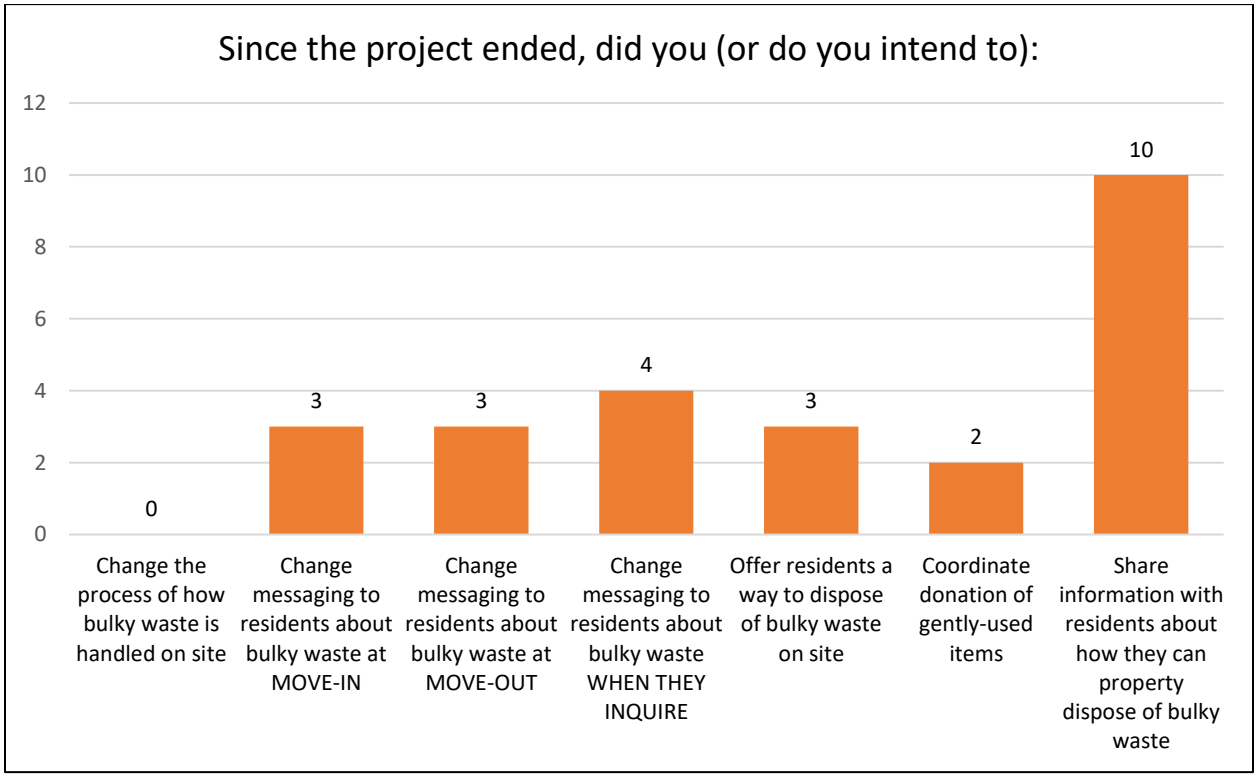
Appendix J: Survey Results - Property Managers





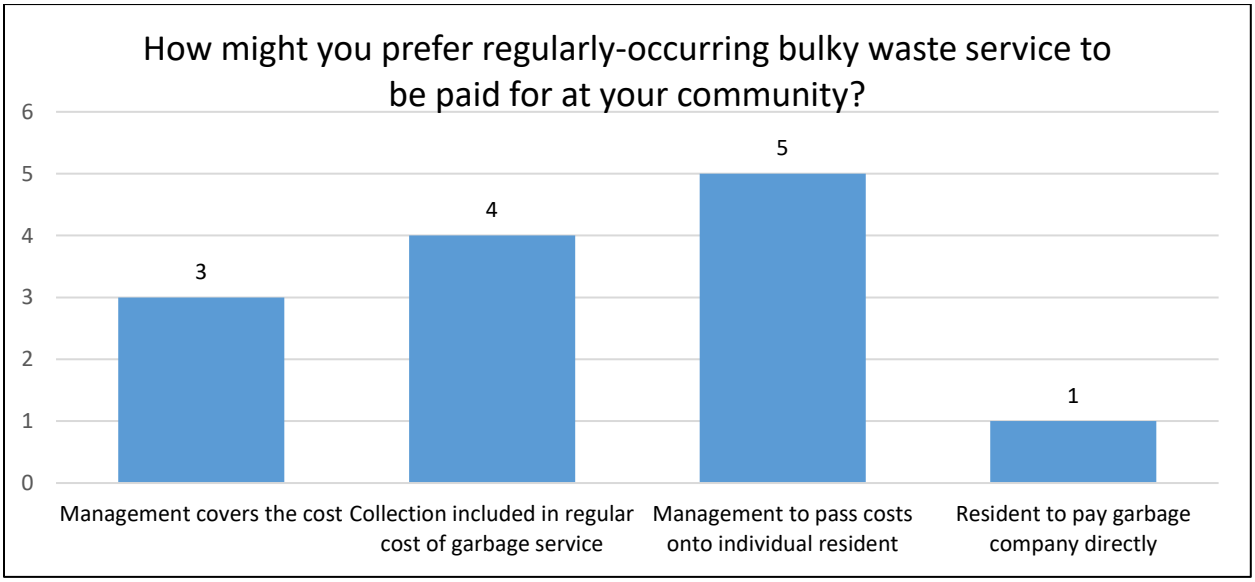



Based on your observation, what percentage of items left out during the project were in good condition and could have been used by someone?
7
6
5
4
3
2
1
0
6
4
1 (all items were trash)
2
3
4
5 (all items were good condition - reuse)

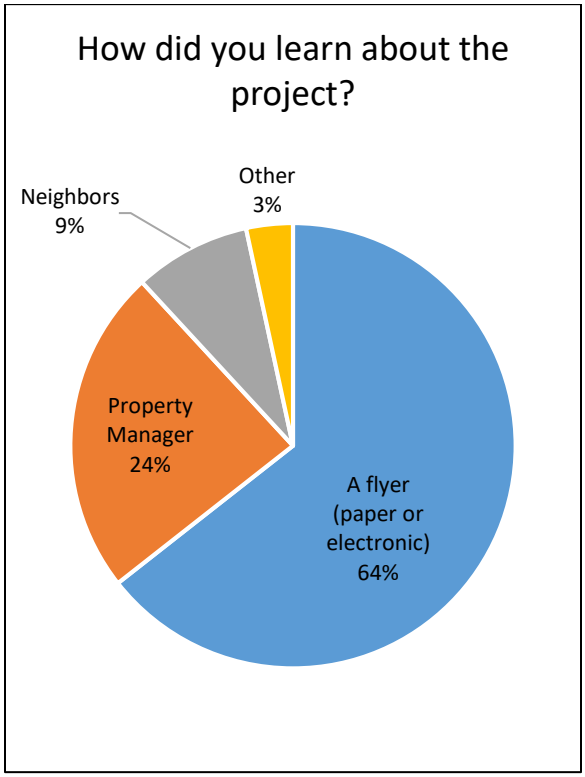

Since the project ended, did you (or do you intend to):
12
10
8
6
4
2
0
0
3
3
4
3
2
10
Change the process of how bulky waste is handled on site
Change messaging to residents about bulky waste at MOVE-IN
Change messaging to residents about bulky waste at MOVE-OUT
Change messaging to residents about bulky waste WHEN THEY INQUIRE
Offer residents a way to dispose of bulky waste on site
Coordinate donation of gently-used items
Share information with residents about how they can property dispose of bulky waste

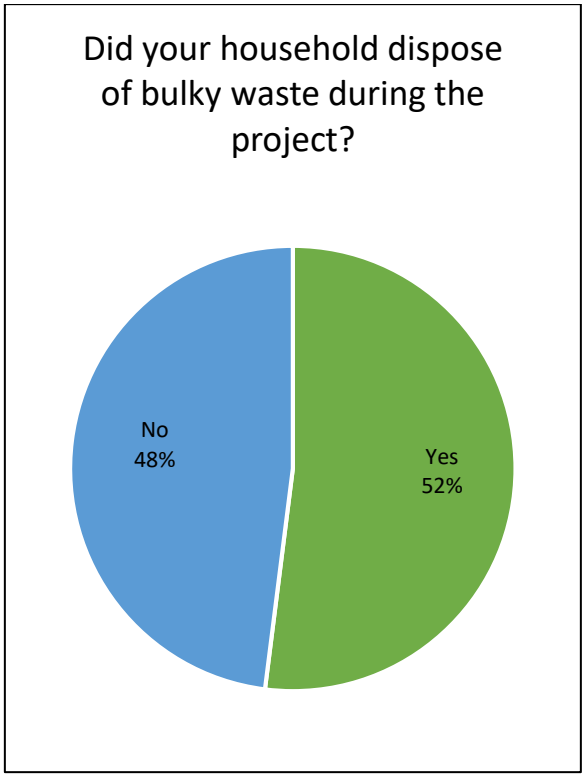
What went well during the project?
The convenience of not hauling large items to the dump or finding and paying someone to do it for the residents
For the most part I was really impressed with how the residents followed the rules and didn't put any yard debris out.
Container was in a visible place for residents to dispose of bulky items.
Everything, location, amount of time it was there, regular renewal, etc
Pretty much everything! Planning was great, communication to residents was excellent, and Sophie Richards even helped by including some incentive/information for our residents to get rid of bulky items while we performed unit inspections at our property.
Everything
Residents were able to utilize the bulky bin to dispose of items rather than leaving them in dumpsters
The tenants and management appreciated the service as it freed up staff time, and helped residents clear out unwanted items.
Residents used the service and love having the option to clean out the old
Residents were able to remove large bulk items without being charged.

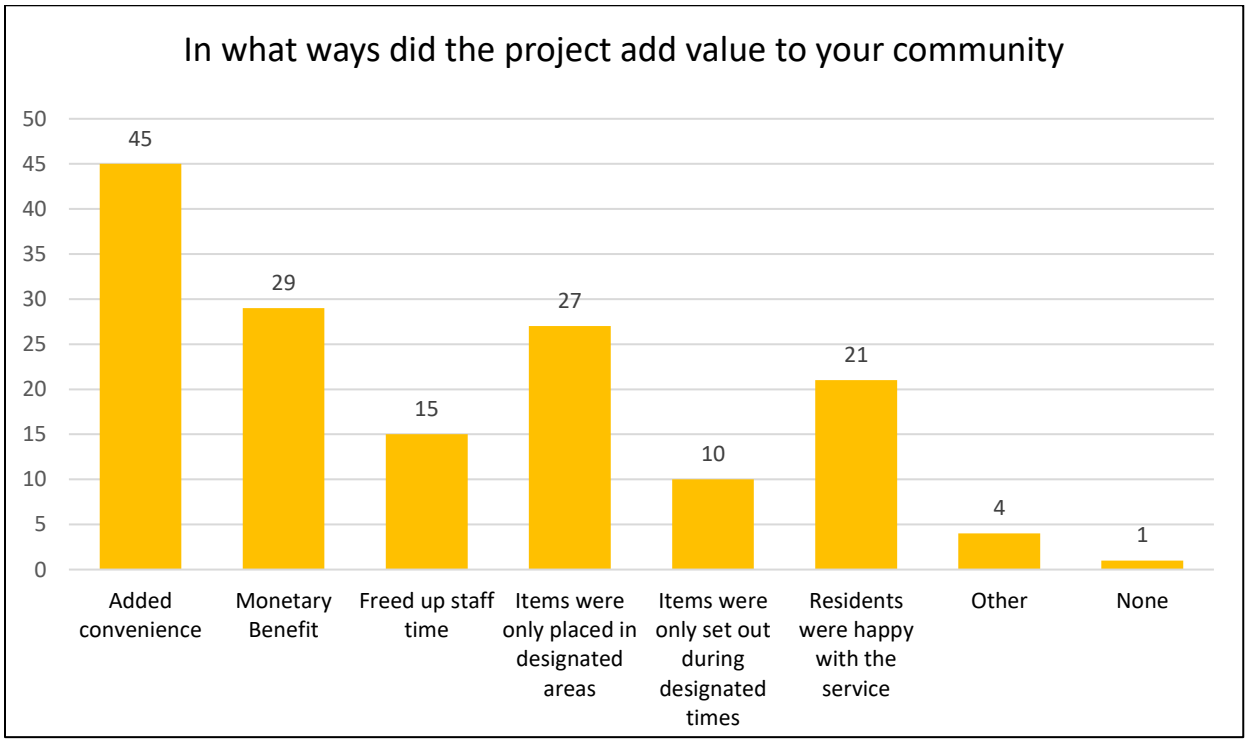
What challenged occurred during the project?
The start was slow
Things like paint being hidden in the pile.
No space at our property to have the container for the entire period (90 days)
Some residents lived on other side of complex so they had a hard time transporting items to the other side of the complex, especially large bulky items
None. The one time Clackamas Garbage didn't pick up our designated bulk items area, I contacted Sophie Richards and she was able to get that corrected within the day.
Homeless wanting to sift through and scatter it all over during the week.
We encountered people leaving items outside of the bin VS inside. Some transients felt the need to rummage through the waste.
The only challenge we experienced was that the bin was pulled 1-2 weeks early without communication. Other than that, the service was invaluable to our residents and staff and is greatly appreciated.

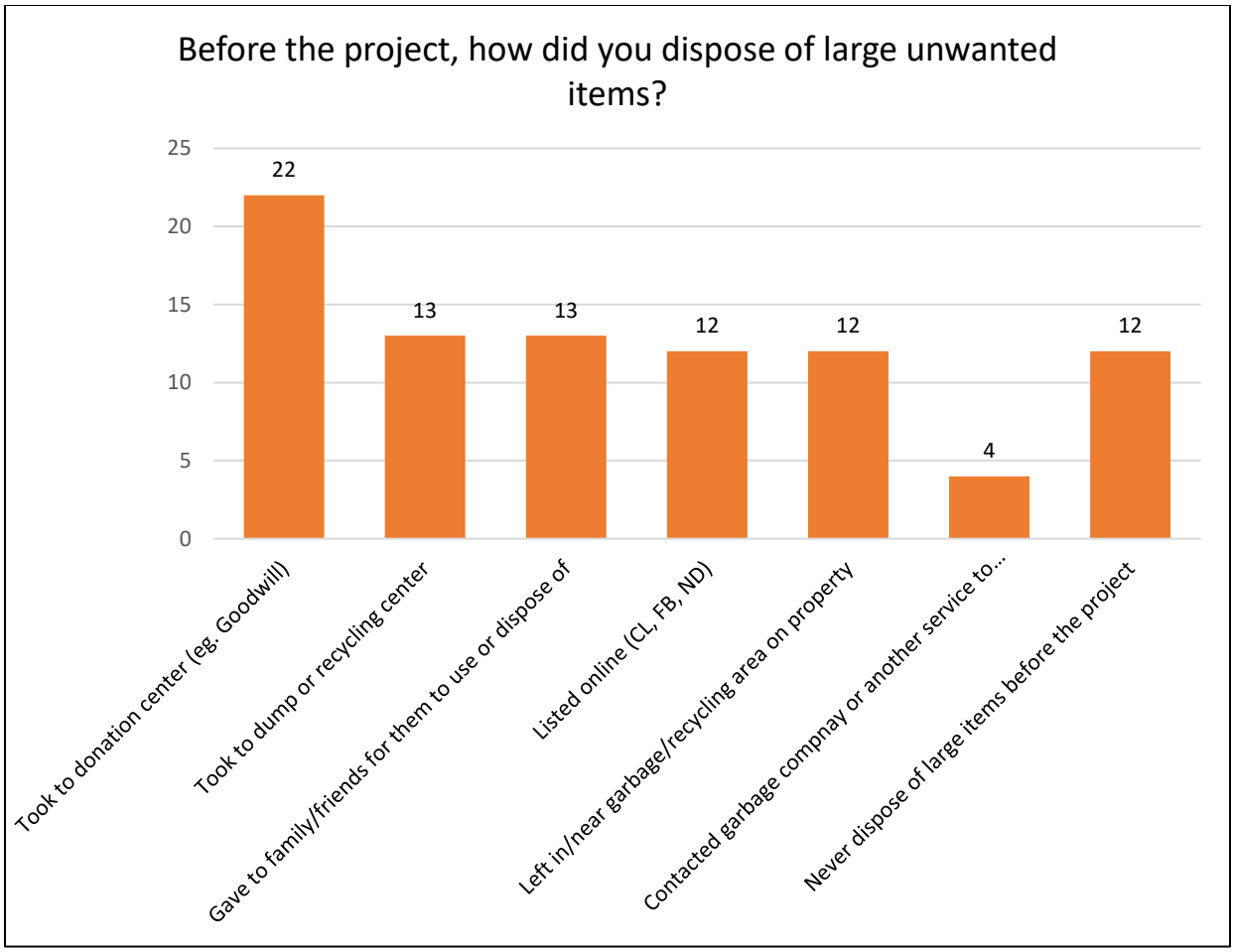


Appendix K: Survey Results - Residents





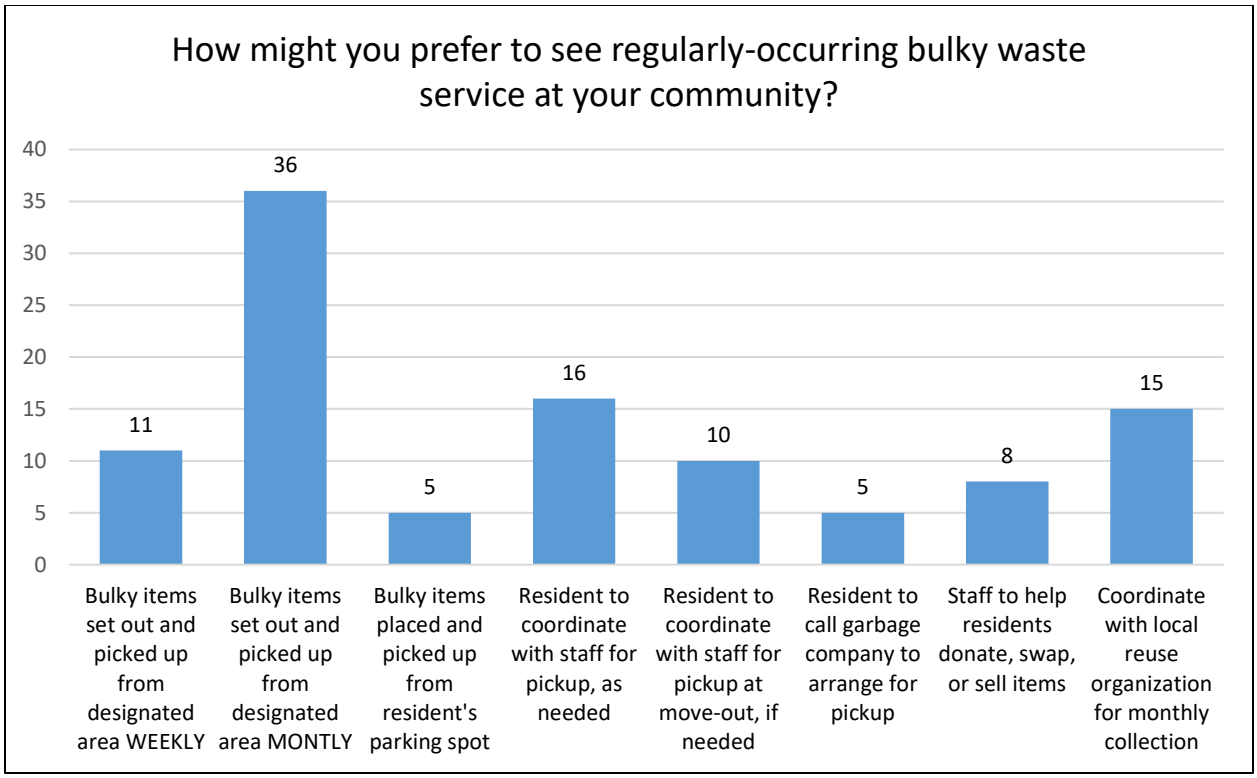


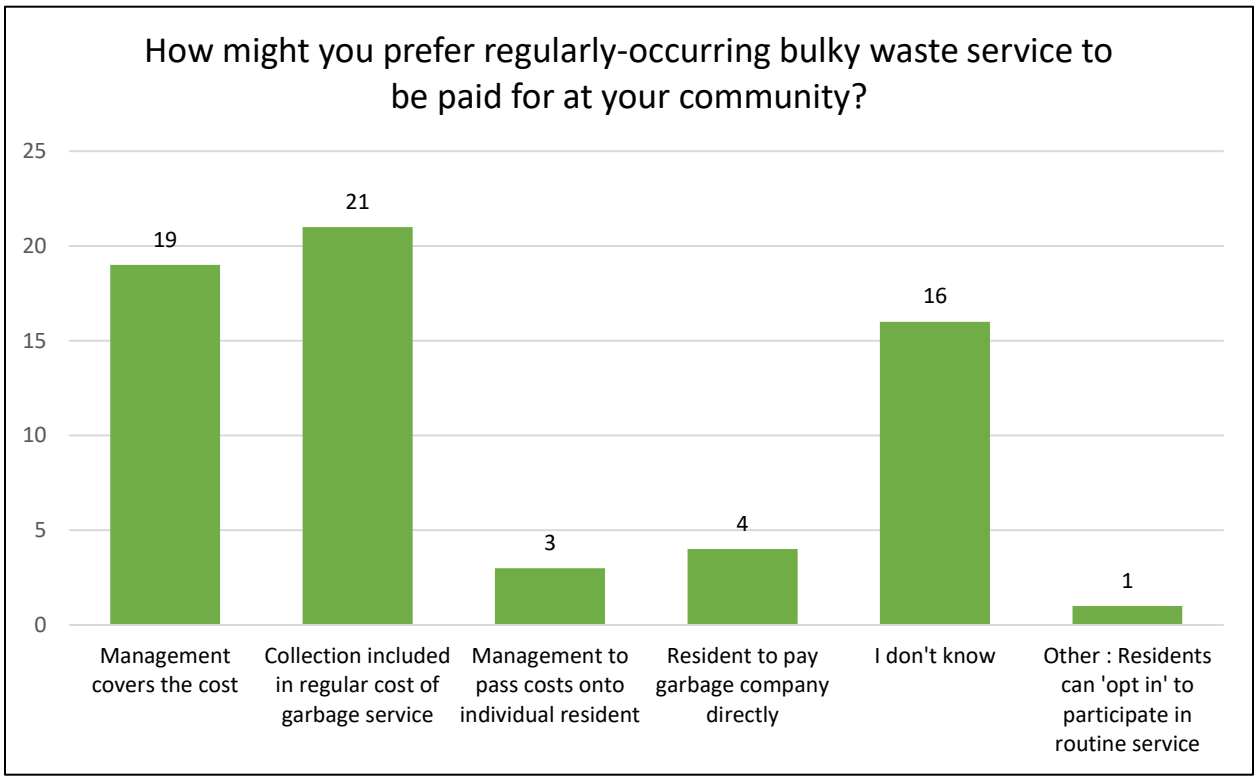


What worked well during the project?
Helped out neighbors.
It was nice to have space in dumpster, it's never good to have it overflowing
That broken unneeded furniture was disposed of properly
Being able to Get rid of bulky items
To leave objects by the dumpster
flyers
the face that we had it in the first place. I was down at the garbage area and someone put a walker in there... i can't imagine that they cant think of some other way to get rid of that. if nothing else, take it over to the senior center
Good idea!
The area for collection seemed easily accessible to everyone but out if the traffic areas
Si
The location was easy to access
Being on site
It was super

Giving people a space to dispose of these items that was really convenient was great! I am sure it cut down on illegal dumping.
items placed in a spot where if others needed it could take.
i liked that you could do it on a certain day and it could be done.
The length of time allowed gave people time to think about what they had.
I think it all worked well. Would love to do it again!
Advanced notice it was Galesburg, Iditarod on what was allowed to be dropped off, and information on location on when and where to drop items.
Just the whole idea is great and needed.
The fact that it was there for people to put their large items in (and mitigates blocking the bins).
It gave people the opportunity to get rid of stuff responsibly.
I noticed many people participated in the project
The pickup place was in a mostly unused section of the parking lot...easy to get to
I was close to my apartment so could easily put stuff in it
Having such a project will help alleviate unwanted large bulky trash at the dumpsters.
Having the area in the parking lot was helpful.
Less oversized garbage in garbage area
It went long enough to everybody had a chance to get their stuff down regardless of how busy their lives were
That I got rid of my large stuff.
Availability where previously not having it
I think it was great to have the dumpster available for a long period of time. We were able to dump things at any given time.
it was good because before the project people would put all kinds of stuff out there and it would get scattered and looked really bad
Seemed like people was getting rid of large pieces looked like a success
The location of the dumpster, the length of time it was there
Just the sheer fact that people had somewhere to dispose of their unwanted bulky things is helpful because not everybody has transportation to be able to take their unwanted bulky stuff to be properly disposed of....
The trash area at my apartment was easier to use.
People got rid of a lot of large items. At this complex, People do that anyway
The whole thing worked like a swiss watch. The dolly they had for heavy items was great and there was someone there to help place it in the drop box.
Community coordinator’s efforts to get us help with moving items to dumpster
Just moved in.
Property communication was great!
Flyers
good location for the drop box.
co-operation between tenants and management
having a free $$$ way to dispose of large items.
Is good to have this project to clean up the house and garages from items we no longer use. Otherwise we have to bring them to the big trash dumps and they charge pretty expensive.

What problems, if any, occurred during the project?
The only problem occurred when over, items are still being placed for disposal.
Kids destroying items left there
People and kids breaking items that were left for pick up
Could happen more frequently
People didn't have enough time to use it.
Not sure, making a mess when picking items to take home.
I can't think of any, but I didn't really participate. So I never went too close.
The receptacle for bulky waste was some distance away from my apartment and that did not allow me to get my bulky items there.
Kids taking stuff out and putting it in the parking lot. We told the manager they were doing it to stop the kids.
I noticed a lot of people putting their bulky items at many other dumpsters.
The only problem was that some people still left their bulky waste by the regular garbage bin.
It filled up really quick. Some people may have used it to put stuff that could have gone into the smaller dumpsters.
Something that's been fixed. Taking out large items to the area could be difficult. They have since put in a ramp by that area. Yay!
Inconsiderate people not actually putting their stuff inside of the bins
Only problem that occurred was that the dump took up about 4 free parking spaces.
people putting items out too early, kids playing with items
Well I'm not so sure that what I'm about to say is a problem but like for example at my apartment complex there was a table that was left outside of the dumpster area for several weeks.... However, I guess I would say that, the closest to what I saw as a problem is maybe the fact that since everybody was throwing away these big bulky things, it got kinda crowded around the dumpster area....
Parking was taken up in the visitor parking area, which made other people park in other open spots filling the lot.
The dumpster area was always inundated with huge items that sat there for days
Some residents not following instructions


How might you prefer to see regularly-occurring bulky waste service at your community?
40
35
30
25
20
15
10
5
0
11
36
5
16
10
5
8
15
Bulky items set out and picked up from designated area WEEKLY
Bulky items set out and picked up from designated area MONTLY
Bulky items placed and picked up from resident's parking spot
Resident to coordinate with staff for pickup, as needed
Resident to coordinate with staff for pickup at move-out, if needed
Resident to call garbage company to arrange for pickup
Staff to help residents donate, swap, or sell items
Coordinate with local reuse organization for monthly collection


How might you prefer regularly-occurring bulky waste service to be paid for at your community?
25
20
15
10
5
0
19
21
3
4
16
1
Management covers the cost
Collection included in regular cost of garbage service
Management to pass costs onto individual resident
Resident to pay garbage company directly
I don't know
Other : Residents can 'opt in' to participate in routine service