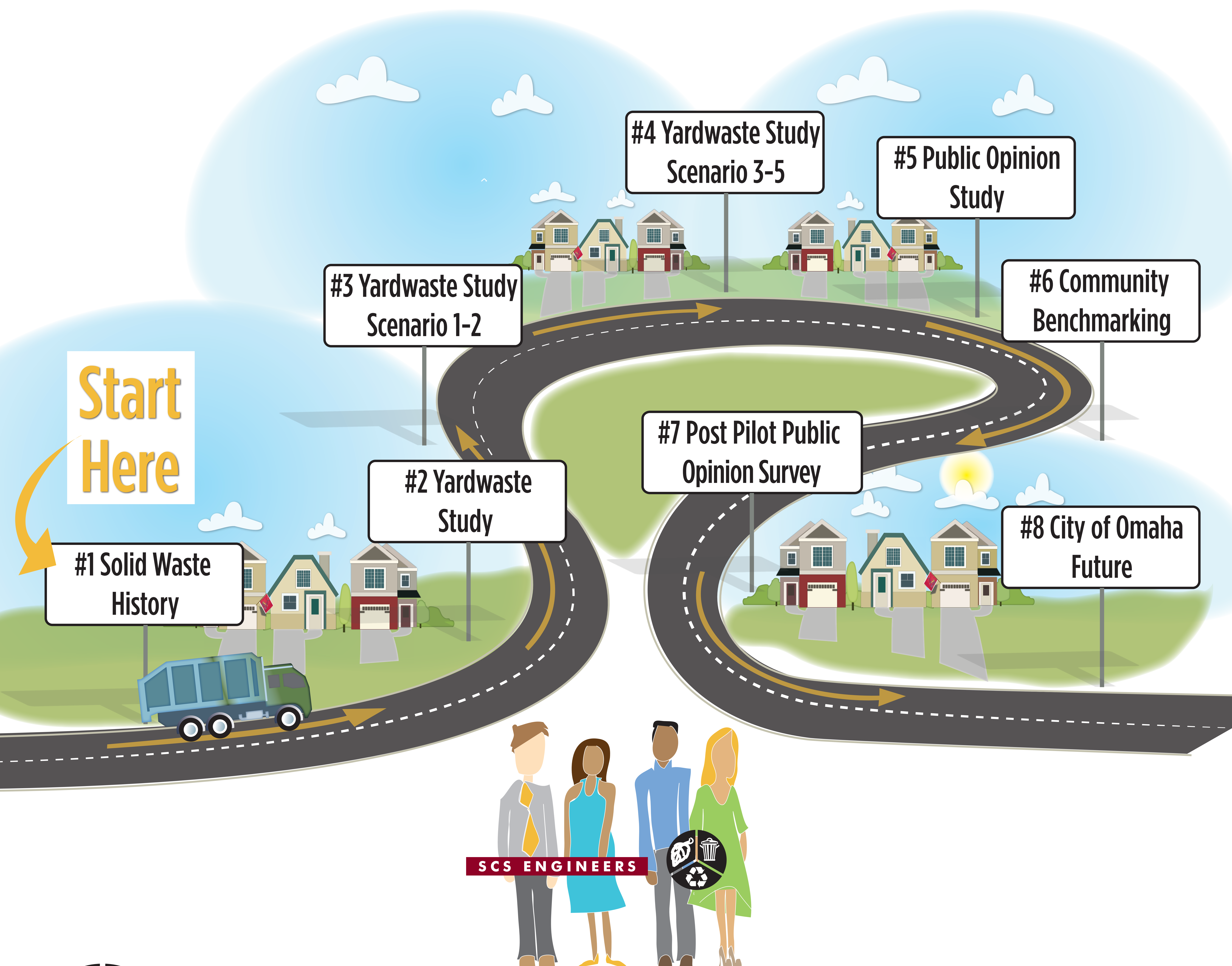


WELCOME!

Please Note That There Is No Formal Presentation

We suggest you **view** the **displays** in order. Just follow the **road map**!



City and SCS staff available to answer **questions**.



SCS ENGINEERS

City of Omaha Solid Waste History

Municipal Garbage Truck
1 x Per Week to Pheasant Point Landfill

Recyclables Truck
1 x Per Week to First Star Recycling

Yardwaste Truck
1 x Per Week to Oma-Gro Compost Facility



2004 Original Contract with Deffenbaugh, Inc.

The original **collection contract**, initiated in **2004**, with Deffenbaugh, Inc. (**acquired by Waste Management, Inc.**) currently runs to the end of **2020** and includes:

- Weekly **municipal garbage** pickup – Truck to Pheasant Point Landfill. Limited to (5) 32 gal. bags or cans.
- Weekly **recyclables** pickup – Truck to Firststar Recycling. No Limit.
- Separate weekly **yardwaste** pickup from the first Monday of April through the week following Thanksgiving – Truck to Oma-Gro Compost Facility. No Limit. (co-collected and comingled remainder of year)

Challenges

2015

For **several** years, and **most significantly** in 2015, Waste Management, Inc has had **difficulty recruiting** enough qualified drivers to be fully staffed. A **shortage of drivers** with the necessary commercial drivers license endorsements has been a national problem and especially acute here in the Midwest and Omaha. This **resulted** in ongoing **collection delays** of yardwaste. **In response**, Mayor Stothert **authorized yardwaste** and garbage to be co-collected and taken to the landfill at the beginning of July.



EARLY
2016

Mayor Authorized Co-Collection

Given the ongoing challenges, **Mayor Stothert authorized** the co-collection of **yardwaste with garbage** in 2016. Collected together, the material goes to the **Pheasant Point Landfill** where most of the **methane gas** generated from waste decomposition is **collected and used to fuel** the Omaha Public Power District's Elk City Station.

Co-Collecting



MID
2016

Yardwaste Study Commissioned by the City

Visited
Sites

Observed
Collections

Identified
Alternatives

Developed
Pro Forma
Model

Performed
Environmental
Modeling

Performed
Peer Community
Benchmarking

Performed
Public Opinion
Survey

In **June 2016** the Omaha City Council **approved** a contract with SCS Engineers **to evaluate** sustainable materials management for **yardwaste** collection and management. The **report** developed by SCS **evaluated** 5 management **scenarios**. The study is intended to **help the City Council**, administration, and the Public Works Department **understand** the **economic** and **environmental** aspects associated with current yardwaste management practices and **5 possible** yardwaste collection and management **alternatives**.



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Yardwaste Study



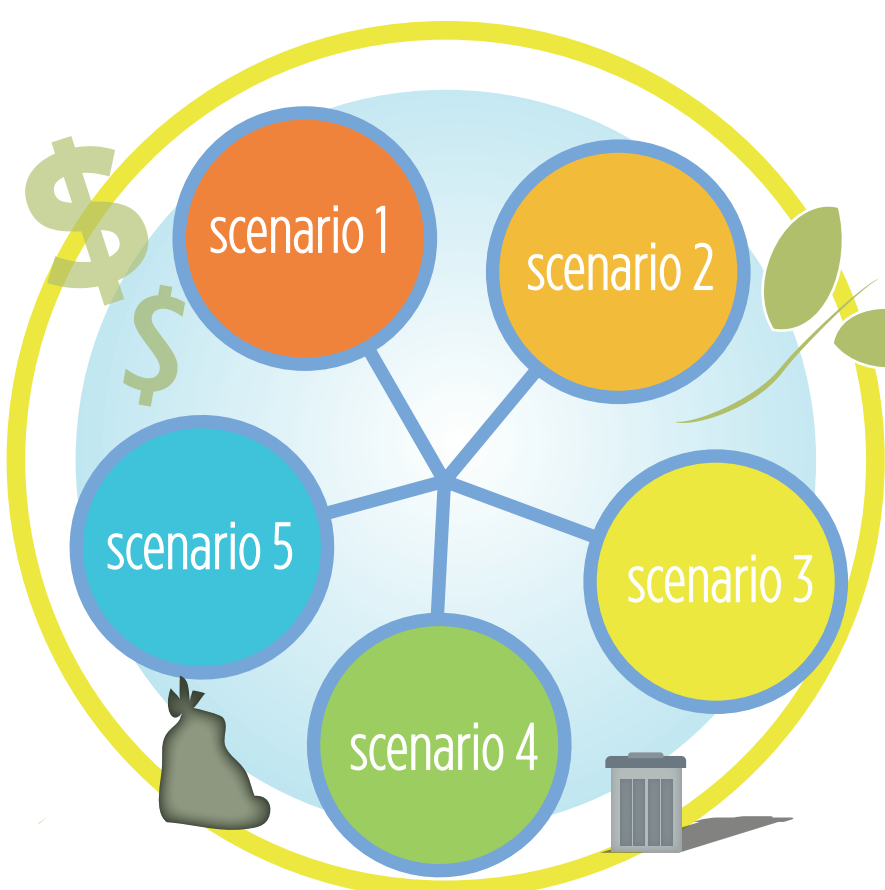
Visited Sites

- Site visits to the City's Oma-Gro Compost Facility, WMI-operated Pheasant Point Landfill, Omaha Public Power District-owned and WMI-operated Elk City Station, and private compost operations.



Observed Collections

- Observed WMI collection operations in various locations throughout the City which included a mix of collection conditions (i.e. curbside, alley way, on-street parking, heavy vegetative canopy, etc.).



Identified Alternatives

- SCS evaluated the economic and environmental benefits and drawbacks of 5 different collection and handling scenarios.



Developed Pro Forma Model

- Developed a pro forma model (financial model) for the above identified 5 scenarios.



Performed Environmental Modeling

- Performed landfill gas recovery modeling and projections, and prepared greenhouse gas emissions estimates for Scenarios #1 and #2.



Performed Peer Community Benchmarking

- Conducted a benchmark survey of local and regional cities concerning their residential curbside waste collection services of household garbage, recyclables, bulky waste, and yard waste.



Performed Public Opinion Survey

- Developed a comprehensive public opinion survey for purposes of gauging the attitudes and opinions of residents across the City as a whole.



12 Passes
per house
per month:

- Traffic
- Emissions
- Street Wear & Tear
- Safety



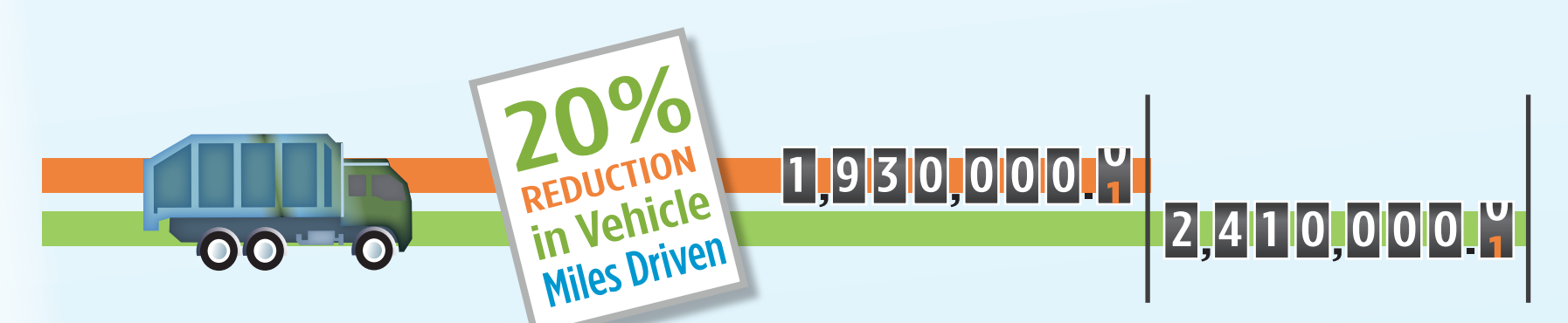
Challenges:

- Number of Trucks
- Certified Drivers - Shortage
- Cost of Collection
- Cost of Transporting
- Cost of Processing



8 Passes
per house
per month:

- Less Traffic
- Less Emissions
- Less Street Wear & Tear
- Safer



The **key economic** and **environmental** findings of the Study are summarized below

Scenario #1

(Baseline Scenario)

100% Separate Collections for Garbage, Yardwaste, & Recycling

Total Estimated Cost for Scenario #1 is \$30,280,000 Annually or \$216 Per Household Per Year

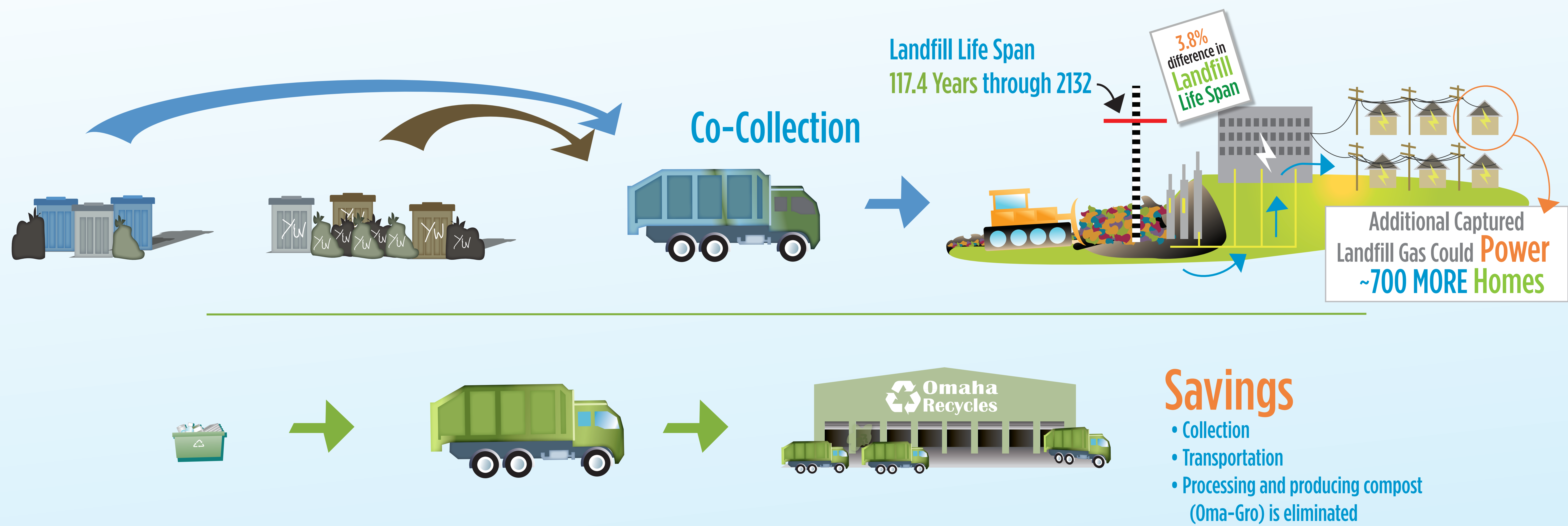


The separate collection costs for yardwaste is a significant expense to the City and, while this practice allows for diverting yardwaste from the landfill and beneficial use of this organic waste stream, the revenues achieved through the Oma-Gro sales do not cover the costs of processing, and marketing of the finished compost.

Scenario #2

100% Co-Collection for Garbage & Yardwaste, Separate Collection for Recycling

Total Estimated Cost for Scenario #2 is \$8,350,000 Less Annually or \$59.70 Less Per Household Per Year Than Scenario #1



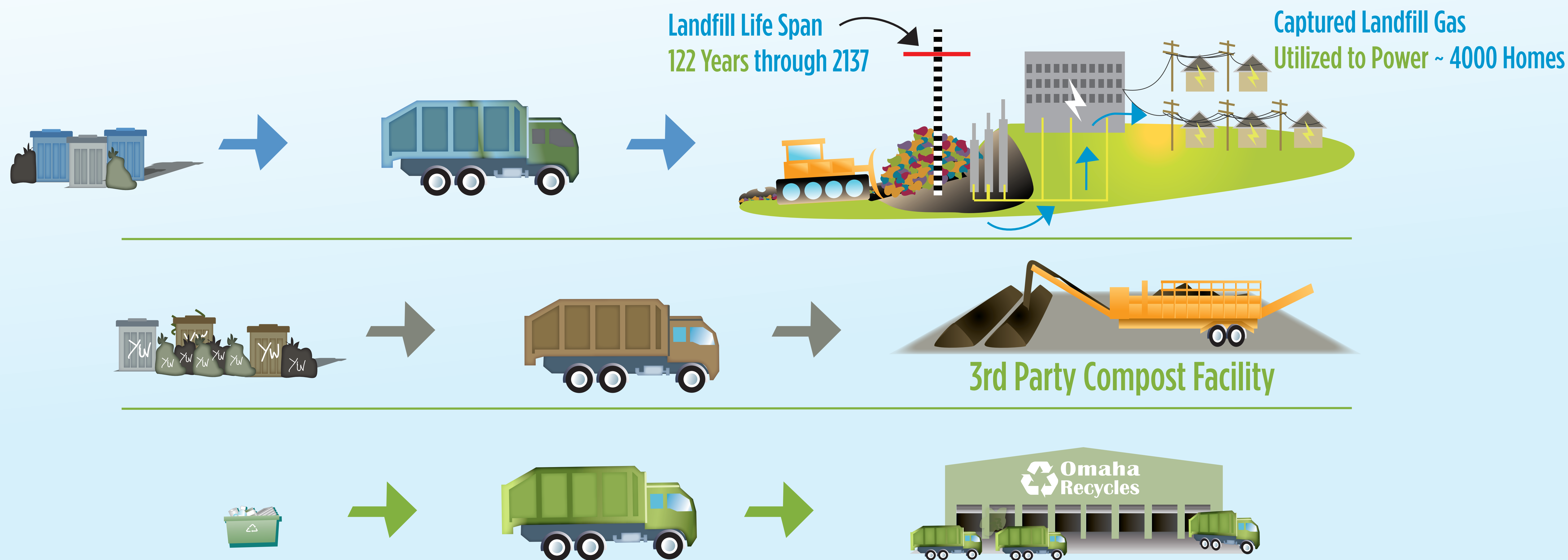
Green House Gas emissions were estimated for scenarios #1 and #2, and included emissions from collection, compost processing, and landfilling. GHG reductions from the use of compost are offset by increased emissions from the extra vehicle mileage incurred for the separate collection of yardwaste. Also, about half of the increased landfill methane emissions (from landfilling yardwaste instead of diverting it to compost) are offset by increased electricity production from higher methane recovery rates at the landfill. Based upon analytical assumptions about carbon storage of landfilled yardwaste, net emissions from diverting yardwaste to composting are higher than placing it in the landfill. Additional emissions from separate collection and composting is equivalent to the annual tailpipe emissions of ~ 3,560 passenger vehicles.



Scenario #3
(Similar to Scenario #1)

100% Separate Collection for Garbage, Yardwaste, & Recycling
Yardwaste Transported to 3rd Party Compost Facility

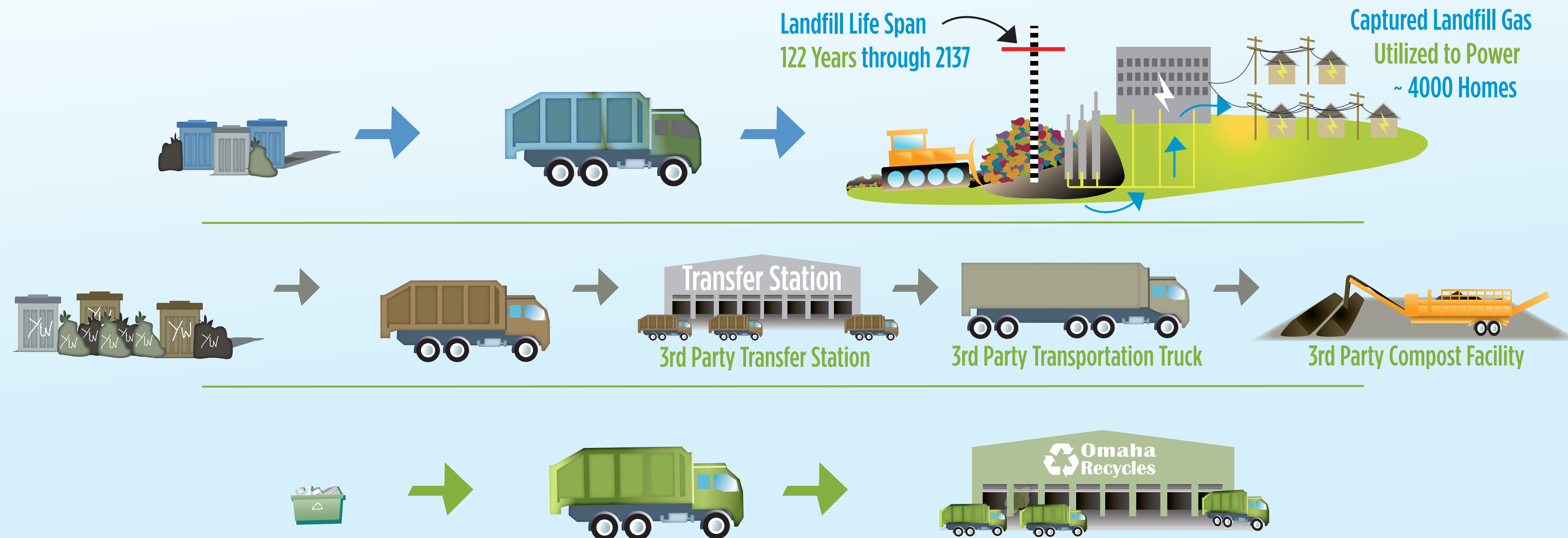
Total Estimated Cost for Scenario #3 is \$400,000 Greater Annually or \$2.80 More Per Household Per Year Than Scenario #1



Scenario #4
(Similar to Scenario #1)

100% Separate Collection for Garbage, Yardwaste, & Recycling
Yardwaste Transported to 3rd Party Transfer Station and 3rd Party Compost Facility

Total Estimated Cost for Scenario #4 is \$640,000 Less Annually or \$4.60 Less Per Household Per Year Than Scenario #1



Scenario #5
(Similar to Scenario #2)

100% Co-Collection for Garbage & Yardwaste, Separate Collection for Recycling
& Voluntary Diversion of 15% Yardwaste by Citizens

Total Estimated Cost for Scenario #5 is \$8,430,000 Less Annually or \$60.30 Less Per Household Per Year Than Scenario #1



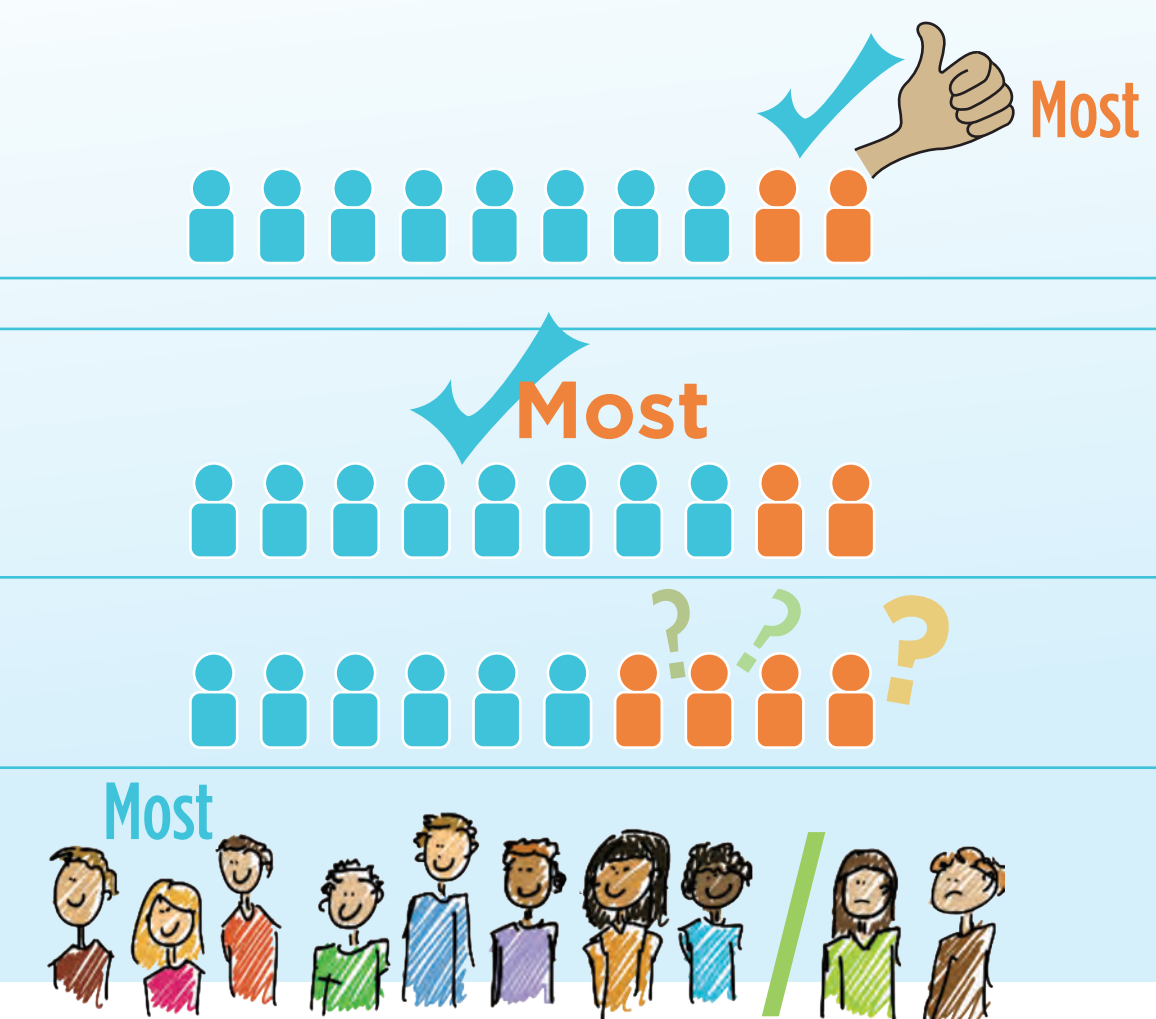
Public Opinion Survey

SCS, along with our subcontractor **Wiese Research Associates**, developed a comprehensive **Public Opinion Survey** for purposes of **gauging** the **attitudes** and **opinions** of residents across the **City** as a whole. Survey questions were developed and **refined** through City comment and **beta testing**. **Final questions** were "scripted" for use in the telephone survey effort.

550 Residents Randomly Selected
Proportionately Represented
Geographically By Each Zip Code



General Knowledge



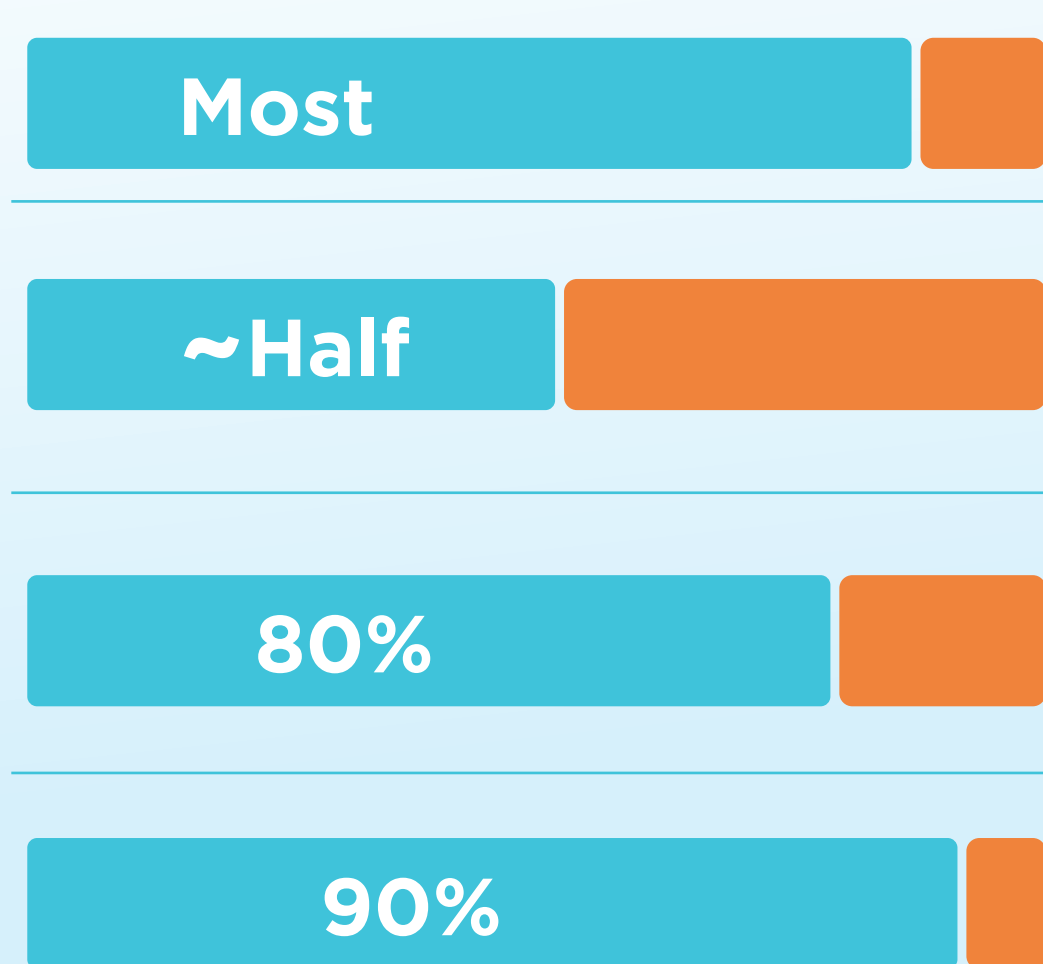
Familiar with the **current** garbage, recycling and yardwaste **collection**

Know that **that there are** current **limits** on number of cans/bags for garbage pick up

Know **what** the current **limits are** for bags and cans

8 out of 10 Satisfied with **current collection services**

Garbage

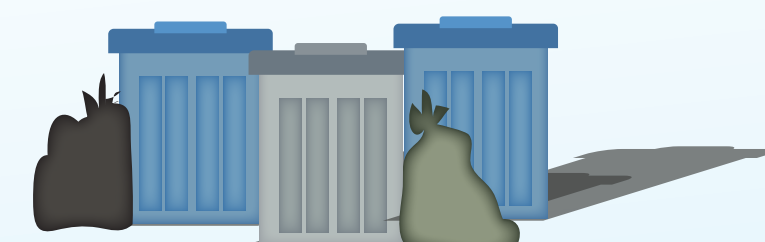


Use 32-gal. **containers** or mix of containers and bags

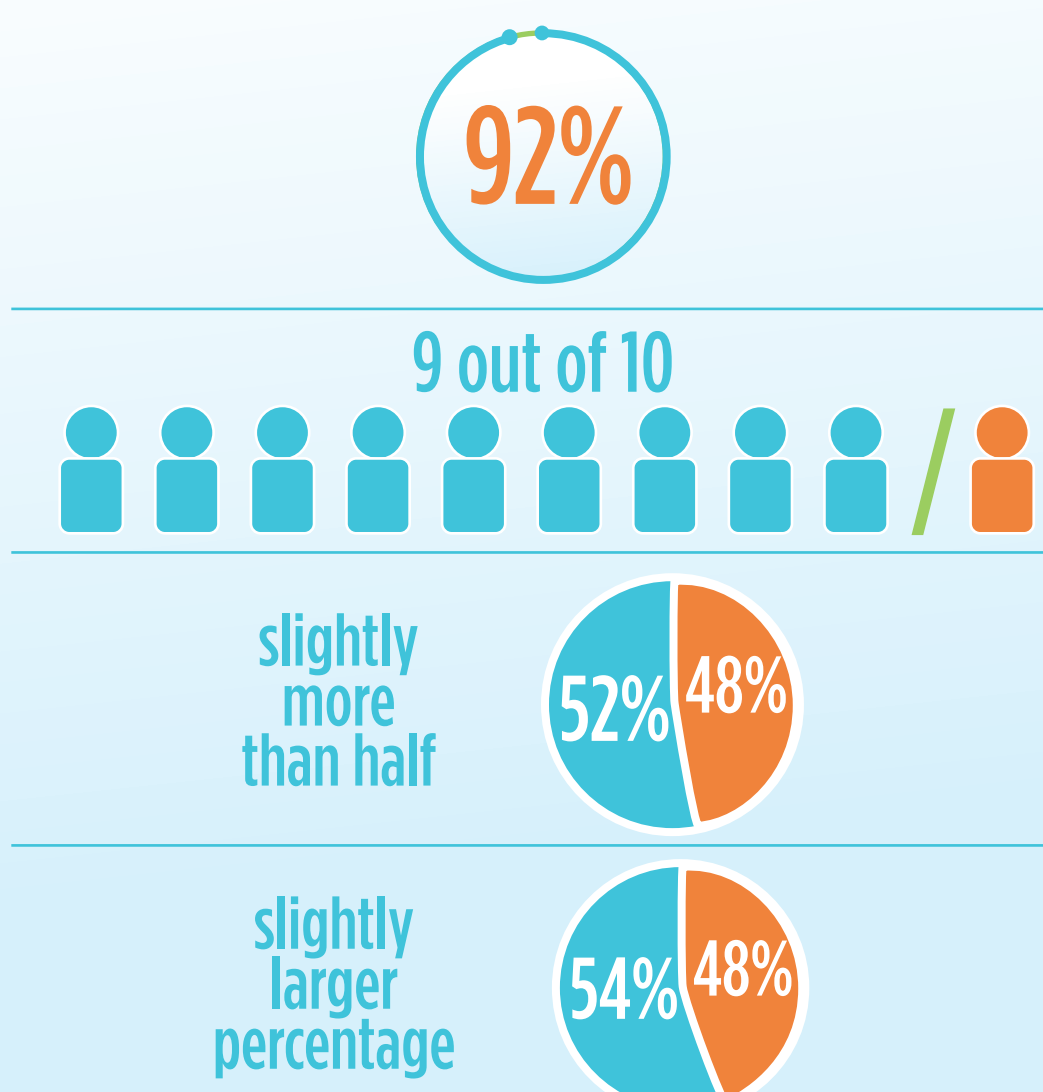
Indicate that **One** 32-gal. container **meets their typical** weekly volume

Indicate that **Two** 32-gal. containers **would meet their needs** for garbage

Indicate that **Three** 32-gal. containers **would meet their needs** for garbage



Yardwaste



Place yardwaste out **at least** on **occasion**

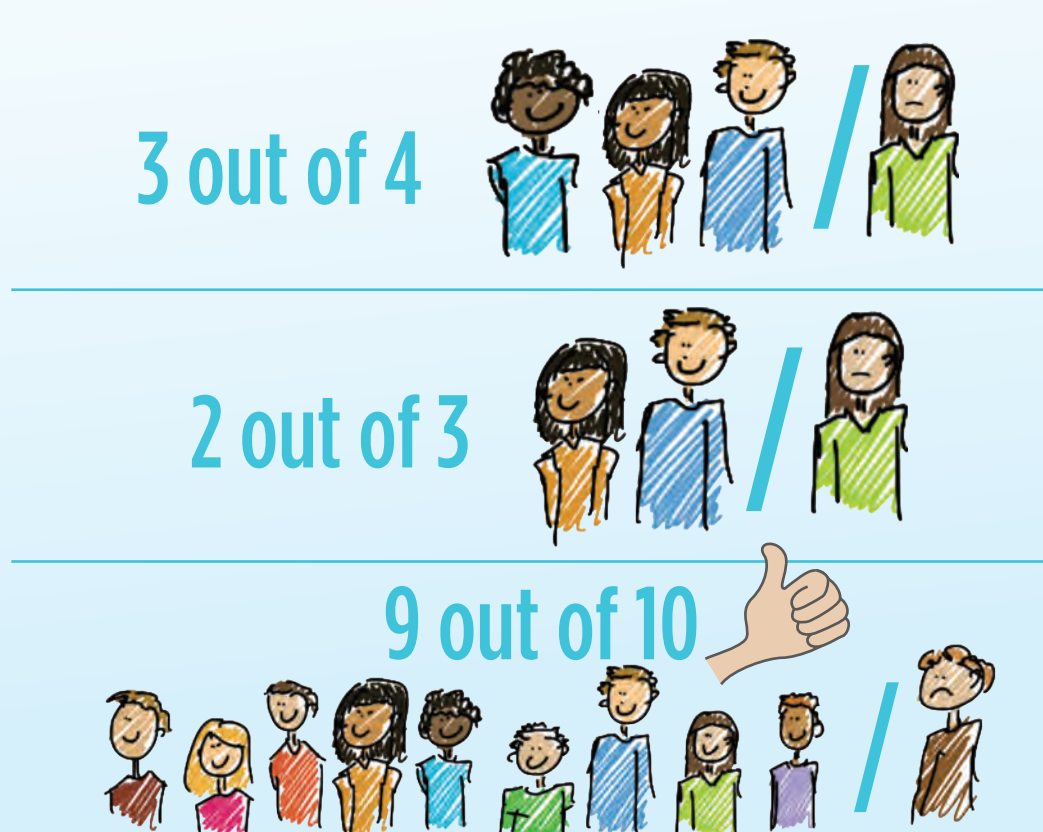
Use a **combination** of **containers** and **bags** for yardwaste

At least once set out for collection **more than six** containers and/or bags of yardwaste in the last year

Would **favor limits** being placed on yardwaste **volumes** similar to the limits placed on garbage



Recycling



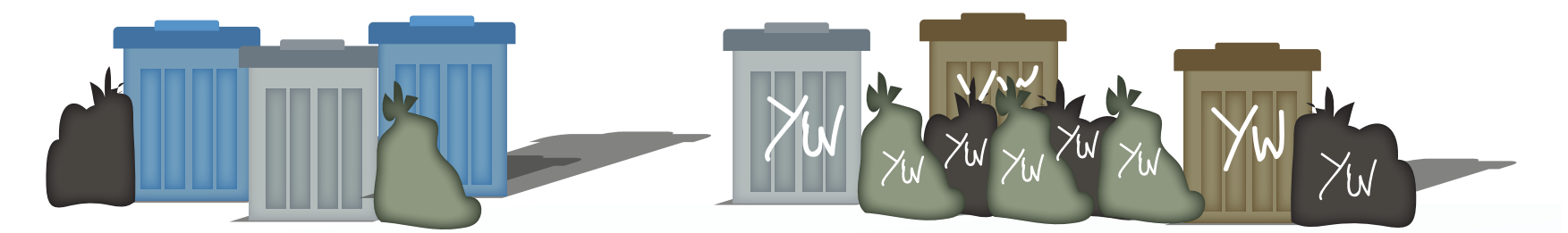
Satisfied with the current **18-gallon** recycling bin program

Indicate that **one bin** would meet their **weekly volume** requirements

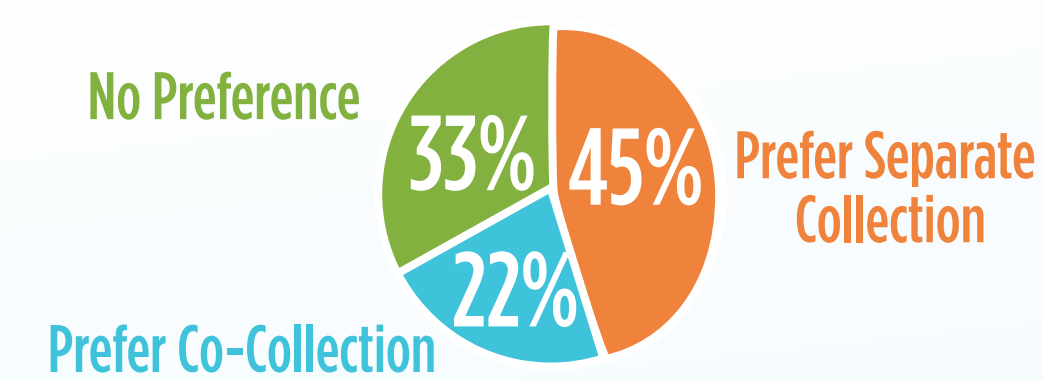
Indicate that **two bins** would meet their **weekly volume** requirements



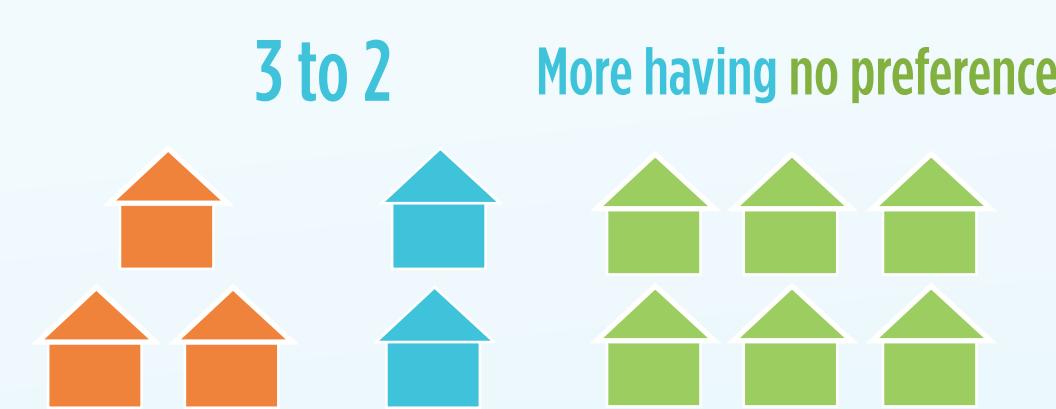
Co-Collection



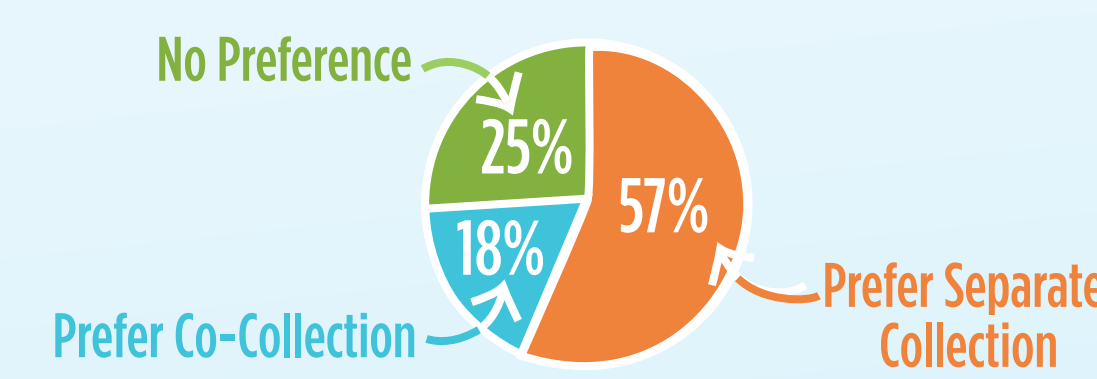
Regarding co-collection and comingling of yardwaste, as allowed in 2015 and 2016, it is readily apparent that this is a complex and somewhat controversial topic.



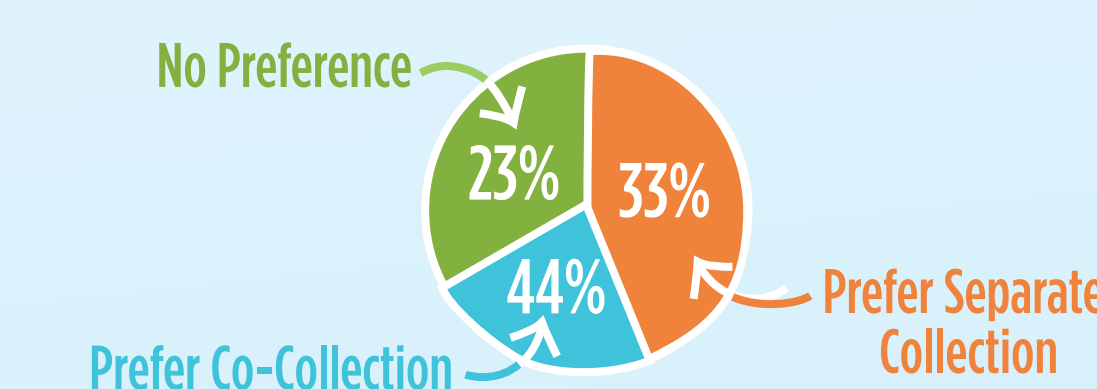
With **no** added education about the situation, **separating yardwaste wins** the vote over comingling by 2:1, for those who had a preference. (but nearly 1/3 had no preference)



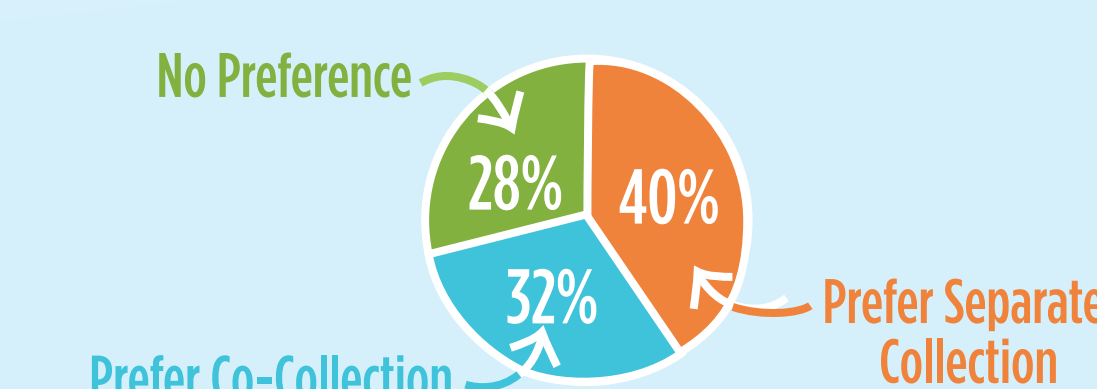
As **further information** and background is provided through the questioning series (e.g., **landfill gases captured, cost of separate truck route, Oma-Gro cost**) people still prefer separate collection **however** some are now **in favor** of **comingling**, but not dramatically. After all information has been provided, the **ratio** of **separating** to **comingling** dropped to about **3:2** but with **more** people expressing **no clear preference**



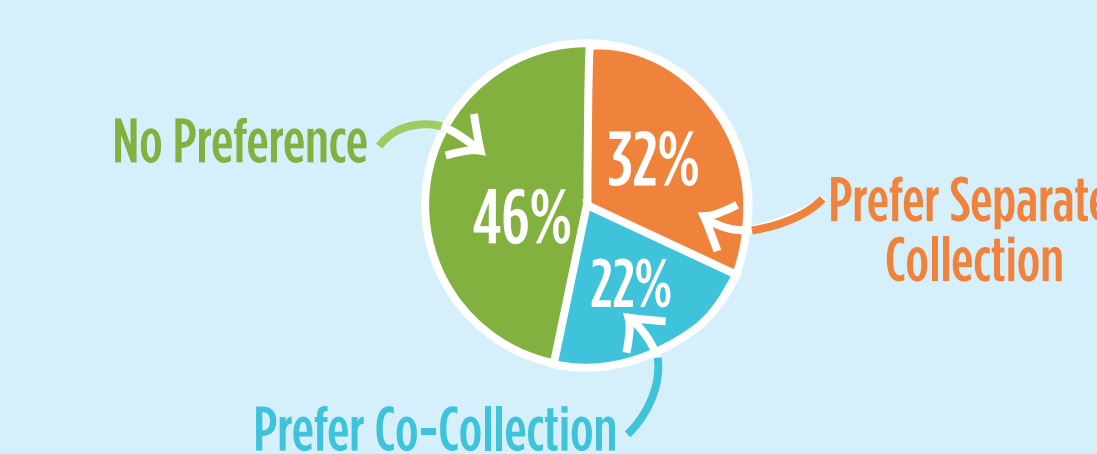
Once people learned **Yardwaste was going to Landfill**
25% No preference/refused
57% Separate
18% Comingling



Once learned that landfill **Gas captured for electricity**
33% No preference/refused
44% Separate
23% Comingling



Once learned about **Cost of More Trucks** for collection
28% no preference/refused
40% Separate
32% Comingling



Once learned about **Revenue not covering cost of Oma-Gro**
46% No Preference/refused
32% Separate
22% Comingling

Carted and Automated



Felt that **one** 96-gallon container **would** be sufficient for their **garbage**



In **favor** of using one's **own container** or bags by a 2:1 ratio **over a second** 96-gallon cart



However, a **majority** seemed **okay** with **requiring** use of **only** 96-gallon cart(s) when informed of the **extra cost** involved with handling **non-standard containers**



Concerned that **one** container would **not be enough**, when considering **co-collection** of **yardwaste with garbage**

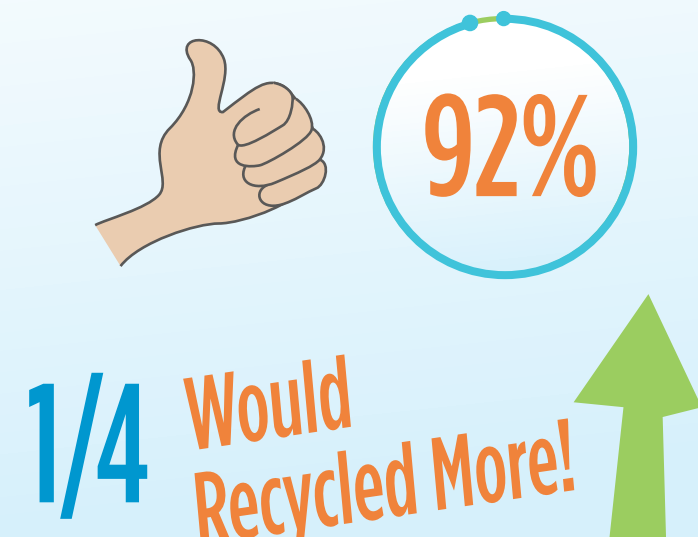


Some still have **concerns** about whether the volume of a **second** 96-gallon container **would** be sufficient for their needs



Nearly **4** in 10 are **at least** somewhat **concerned** as to where they will **store** the 96-gallon carts

Recycling



Indicate that **one 96-gallon** container would be sufficient for their recycling **every other week**

1 in 4 believes they **would recycle** more with 96-gal. cart





Peer Community Benchmarking

SCS conducted a **benchmark survey** of **local** and **regional** cities concerning their residential curbside **waste collection services** of household **garbage**, **recyclables**, **bulky waste**, and **yardwaste**.

Conclusion

Solid Waste collections services **vary widely** amongst regional cities of **similar population** to Omaha making it difficult to draw definitive comparisons. **However**, several generalities can be made.

The **average waste collection fee** across all cities that have municipal contracts is **\$16.50 per household** and **all include recyclable collection** in that fee.

Comparison of Cost Per Month Per Household for Garbage and Recycling Collection



* Rate effective January 1, 2018. Prior rate, as shown in Benchmark Report, was \$9.95.

** Represents variable service plan rates. Rates vary based on customers choice of collection frequency, size of cart and other variables.

Comparison of Carts Use

Nearly all regional cities use **carts** for the collection of **both garbage and recycling**.

Nearly All

Nearly all Regional Cities Use Carts for Garbage Collection

Nearly All

Nearly all Regional Cities Use Carts for Recycling Collection



NO Limit **Limit** **\$**

Omaha does **not currently limit** the **volume** of **recyclables** or **yardwaste** placed at the curb for pickup. Comparison cities who use a carted program **limit volumes and typically charge** the resident for additional capacity if needed.

Comparison of “Overflow”

Several interesting **policies** for dealing with “**overflow**” **trash** were found including

- **Allowing residents** to place **extra** trash **out for no additional fee**
- Operating a **sticker program**, where stickers can be purchased and placed on **extra bags**
- **Allowing** an **overflow day once a month** where additional bags can be set out **free of charge**
- **Most** cities **do not allow unlimited** recycling and yard waste

Comparison of Collection Frequency



All

All cities collect **garbage** on at least a **weekly** basis



Most

Most cities collect **recycling** on at least a **weekly** basis



Collection frequency of **yardwaste** **varies**

4 Regional Cities **do not provide separate** collection of **yardwaste**

7 Regional Cities **do provide separate** collection of **yardwaste**

2 do not accept yardwaste

2 comingle yardwaste with **garbage**

Comparison of ...



All

All cities operate a **recyclable collection** with the **majority** being **single stream**



All

All cities also operate a **drop off facility** for **household hazardous waste**



All

Bulky waste collection programs were the **most varied** between all cities. **All cities** operate a **bulky waste program** and the **majority includes the cost** of pickup in the trash collection fee **Collection frequencies vary** from **once a week** along regular waste routes **to** requiring residents to **schedule an appointment** for collection making **comparison difficult**.



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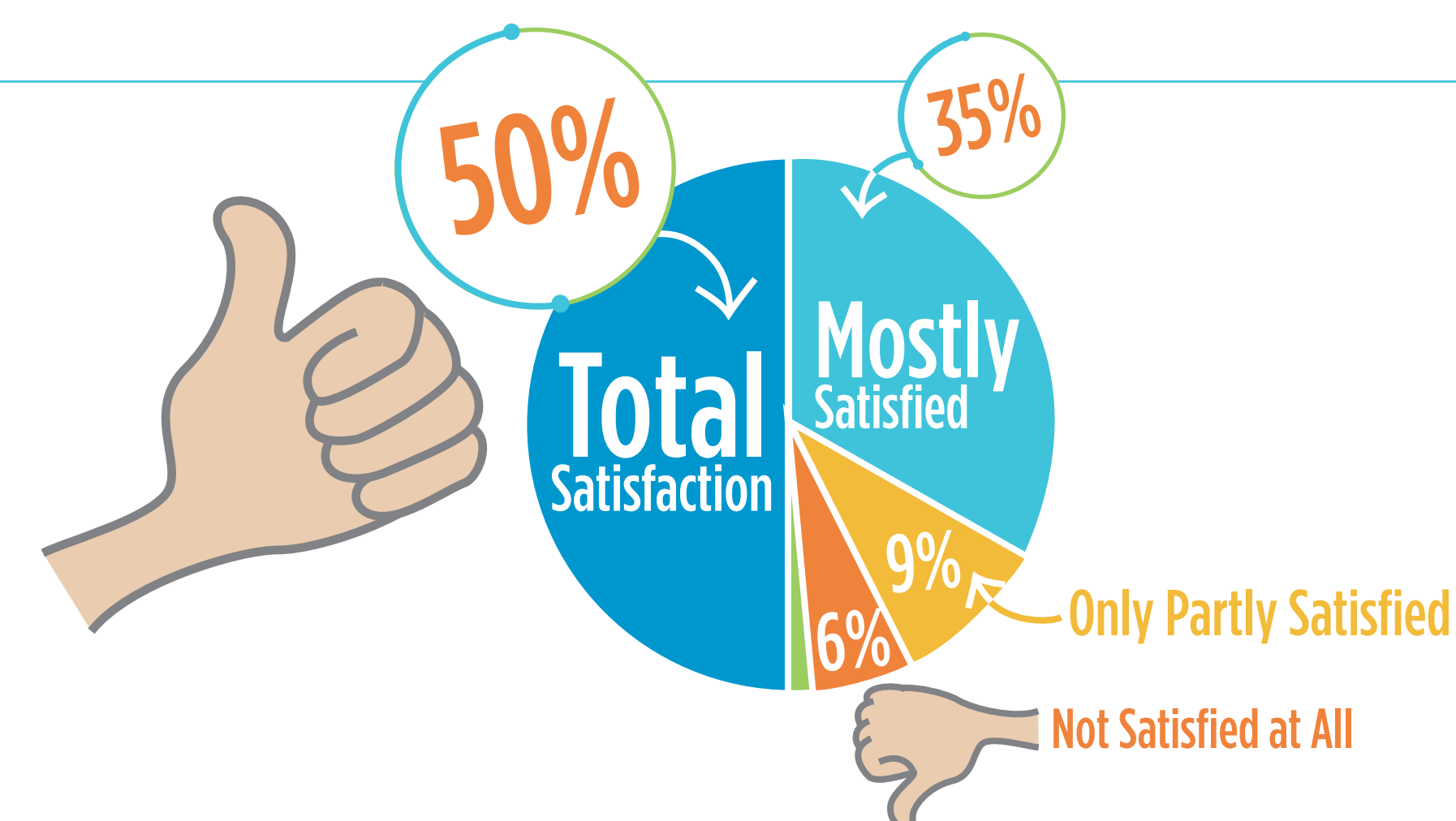
Post Pilot Program Public Opinion Survey

SCS, along with our subcontractor **Wiese Research Associates**, **developed** a comprehensive **public opinion survey** for purposes of gauging the **attitudes** and **opinions** of residents who **participated** in the City's garbage and recycling cart **pilot program**. The Pilot Program ran November 2016 to April 2017 and tested a **modern, carted, and automated** collection system. Each home in the pilot program was **provided with a 96-gallon cart** for **combined garbage and yardwaste** collected weekly, and a **second 96-gallon cart** for **recyclables** collected every other week. Residents **could also request** an additional 96-gallon cart. Survey **questions** were **developed** and **refined** through City comment and beta testing, and the final **questions** were "scripted" for use in the **telephone survey** effort.

Overall Satisfaction With The New System Was Quite Positive.

One-half of the respondents indicated **"total" satisfaction** and **another roughly one-third** indicated being **"mostly" satisfied**. Conversely, only **6%** stated they were **"not at all"** satisfied and another **9%** **"only partly"** satisfied and less than **1%** **"not sure or can't say."**

One-Half
"Total"
Satisfaction



Prefer The New System To The Current City Program

If there was a final **"bottom line vote"** question in the survey, it would be: **Based on your experience** with the **pilot program**, **would you** strongly **favor** the City **moving to the new collection** system, moderately favor, be neutral, moderately oppose, or strongly oppose moving to the new system **compared to the former system?**



With **seven** out of **ten** (70%) replying **"strongly favor"** and **another 12%** **"moderately favoring"**, it is clear that an **overwhelming majority** of those experiencing the new system **prefer it** to the current system.

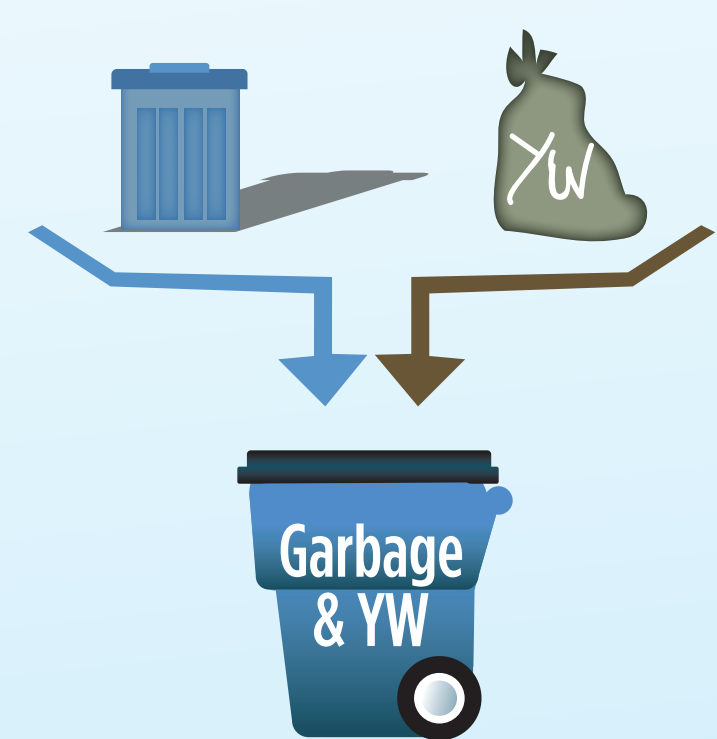
These **positive reactions** are **reinforced** by the fact that **over three-fourths** of all respondents rated the **new service** as **either much better** (56%) or **somewhat better** (21%) for their household **than the current system**.

Only about **one in every eight** participants felt the test program was somewhat (8%) or a lot (5%) **worse**.



To Take a Closer Look At A Few Components

In **ratings** of satisfaction with **various components** of the program, there was **generally satisfaction** present. **However**, especially for **a few components**, only partial or no satisfaction was **voiced** often enough to raise **some concerns**. Those aspects that **deserve attention** are:



Placement Of Both
Yardwaste And
Garbage
In The Same Container



Capacity Being Either
Less Or More
Than Needed

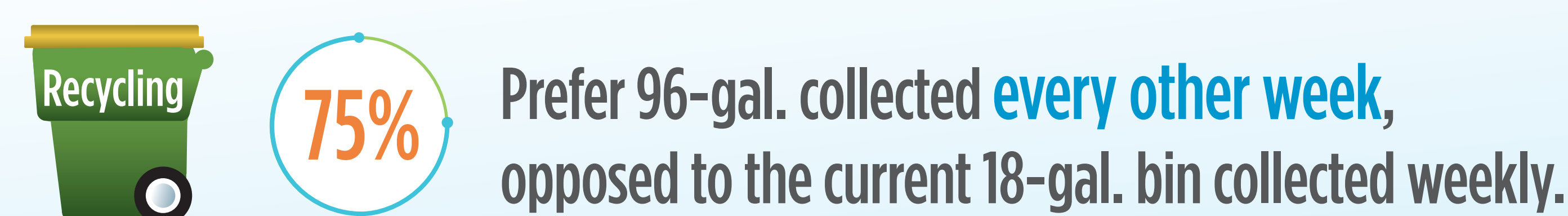


Issues About
Storing The Two
Large Containers

Size Preferences



For Recycling



6/10 **Recycled More!** Six out of Ten said that they **recycled more** during the Pilot Program **than** they did **under** the **City's existing program**. Resulting in **more diversion** of these materials **away from** the **landfill** and **reduced** tipping **fees paid** by the City for disposal.



City of Omaha Solid Waste Future

Pilot Collection System

The City partnered with **Waste Management**, the current collection contractor, to pilot a **modern, carted, and automated collection system**. The pilot started in **November 2016**, included **2,500 residential customers**, and **concluded in April 2017**. **Homeowners** in the pilot were provided two (2) 96- gal. carts, one for **garbage and yardwaste** picked up **weekly**, the other for **recyclables** picked up **every other week**. **The pilot** was an **overwhelming success** and **82% of respondents** who participated in the pilot **favor** the City moving to this **modernized collection system**.

Present



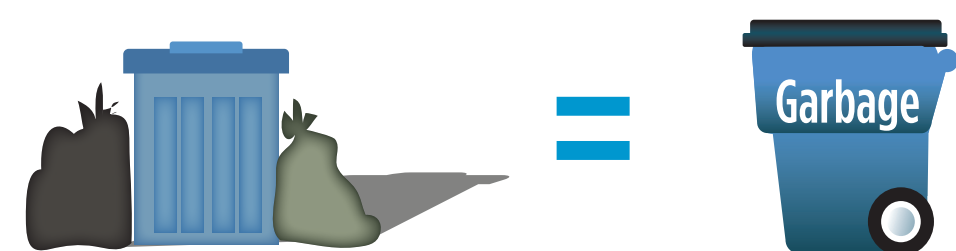
5 Bag/Can Limit for Garbage
Unlimited Recycling and Seasonal Yardwaste

Pilot Program



1 96-gal. Cart Provided by the City for Garbage and Yardwaste - collected weekly
1 96-gal. Cart Provided by the City for Recycling - collected bi-weekly

How Does This Compare?



3 32-gal. Bags/Cans = 1 96-gal. Cart
1 96-gal. Cart meets the needs of 9 out of 10 households for Garbage*



5 1/3 - 18-gal. Recycling Bins = 1 96-gal. Cart
2 Bins meets the needs of 9 out of 10 households for Recycling*

*Based on Public Opinion Survey

Omaha's Next Collection Contract

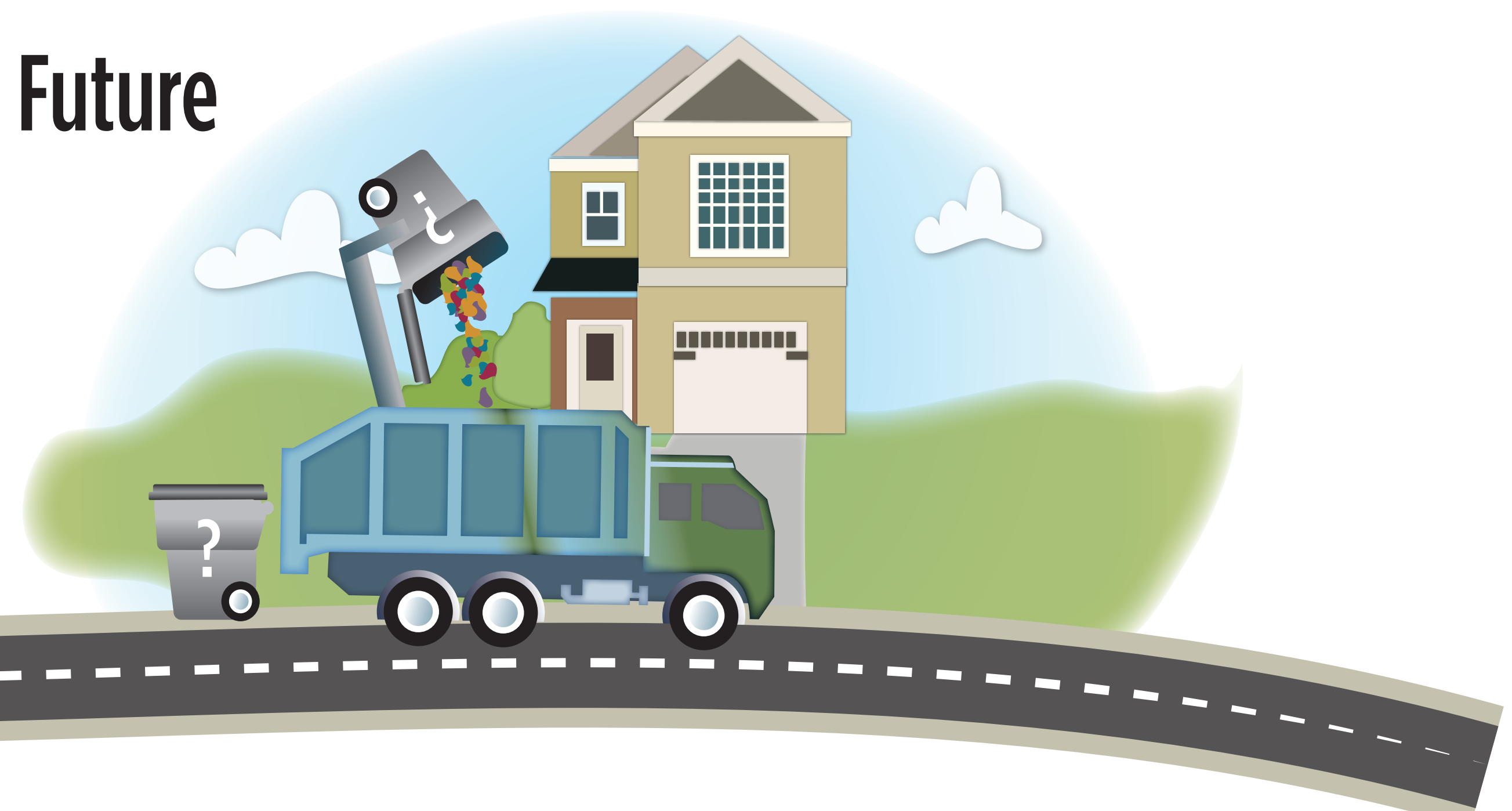
Countdown to a new, **MODERNIZED**, solid waste collection contract begins now.

Mayor Jean Stothert supports a modern collection system, using **covered, wheeled carts** and **alternative fueled trucks** equipped **with automated arms**. As she stated in early 2016 and again in January 2017, prior to re-election, her **"intent is to provide better services to the citizens of Omaha"**

Present



Future



As the City Prepares a Request for Bid...

to select a future contractor to implement the new, **MODERNIZED**, solid waste collection system, how important are the following to you?

- **Requirement** for mandatory targets for use of **alternative fuel vehicles**.
- **Requirement** for contractor to **provide smaller sized container** to households with limited waste generation activity.
- For **households that generate more** garbage than the City-provided 96-gallon capacity, a **requirement** that the contractor **provide** a mechanism for households to **purchase additional capacity** direct from contractor.
- **Additional?**

Please Complete A Survey



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