



City of Omaha

Yard Waste Study, Public Opinion Survey, and Peer Community Benchmarking Results

January 2017

Background

- Council Resolution No. 799, approved June 7, 2016, authorized the Yard Waste Study
- Amendment No. 1 to the original agreement, approved August 9, 2016, authorized the Public Opinion Survey and the Peer Community Benchmarking per Council request
- Yard Waste Study finalized November 2016
- Public Opinion Survey completed October/November 2016
- Peer Community Benchmarking finalized January 2017

Study Qualifier

- Yard Waste Study, Public Opinion Survey and Benchmarking address the unique situation that Omaha faces with respect to the operational and economic factors of its' Solid Waste collection and management systems.
- SCS understands that each community must weigh economic and environmental factors in making a decision on how to best manage a given waste stream.
- We make no recommendations; we have gathered data, performed modeling, and present objective results of our studies for the City's future consideration.
- SCS understands the importance and value of composting as a viable solid waste management alternative.
- The Yard Waste Study provides an objective evaluation of economic costs and GHG emissions related to composting and landfilling yard waste.

Yard Waste (YW) Study - Scope

- Site visits to the City's Oma-Gro compost facility, WMI-operated Pheasant Point Landfill, Omaha Public Power District (OPPD)-owned and WMI-operated Elk City Station, and private compost operations.
- 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 for yard waste management for detailed analysis.

YW Study – Scope (cont'd)

- Developed a pro forma model for the identified alternatives and performed scenario modeling.
- Performed landfill gas (LFG) recovery modeling and projections, and prepared greenhouse gas (GHG) emissions estimates for the identified alternatives.

YW Study – Scenarios

Scenario	Annual Cost	Monthly Cost per HH
1 – 0% Comingled and 100% Oma-Gro Compost	\$30.28 MM	\$18.00
2 – 100% Comingled and 0% Oma-Gro Compost	\$21.93 MM	\$13.08
3 – 0% Comingled and 100% 3 rd Party Homerun Transport & Composting	\$30.72 MM	\$18.21
4 – 0% Comingled and 100% 3 rd Party Transfer Station Transport & Composting	\$29.45 MM	\$17.46
5 – 85% Comingled and 15% Voluntary Citizen Drop-off and 3 rd Party At-risk Composting	\$21.85 MM	\$13.00

Note: Proforma modeled Scenario 1 is the current City contracted approach. 2015 actual costs for Omaha were \$20 MM and included a mix of Scenario 1 and Scenario 2 approaches.

YW Study – Key Economic and Environmental Findings

- For comparison purposes, we look at the recent Omaha approaches to collection and handling:
 - Scenario 1 – separate garbage, recycling, and yard waste collection with composting
 - Scenario 2 – current practice of co-collecting and comingling all yard waste with landfilling
 - From an economic perspective, the more cost-effective scenario considered is Scenario 2 (Scenario 5 was a similar cost).
 - Reduces the necessary collection routes through the collection area from 3 passes to 2 passes.

YW Study – Key Economic and Environmental Findings (cont'd)

- Comingling YW eliminates expense incurred for processing and producing compost (Oma-Gro).
- True cost to produce compost by either a City-performed operation (Oma-Gro) or a City-contracted operation ranges, as a multiple of the current product fee schedule revenues, from ~7 to ~6.5, respectively.
- True cost to produce compost, with the cost of collection and transport of diverted yard waste included, dramatically rises to a multiple of ~50.

YW Study – Key Economic and Environmental Findings (cont'd)

- Translates into a reduction in cost for the City's waste collections and handling budget of \$8,350,000 per year or ~\$60 per household per year.
- Waste Management Inc. currently estimates 122 years of landfill capacity (year 2137). Addition of yard waste would result in 117.4 years of capacity or a reduction of landfill capacity by 3.79% with capacity reached in year 2132.

YW Study – Key Economic and Environmental Findings (cont'd)

- GHG reductions from the use of compost are offset by increased emissions from the extra vehicle mileage incurred for the separate collection of yard waste.
- About half of the increased landfill methane emissions from landfilling yard waste instead of diverting it to compost are offset by increased electricity production from higher landfill methane recovery rates at the landfill.
- When carbon storage of landfilled yard waste is considered, net emissions from diverting yard waste to composting are significantly higher than placing it in the landfill.

Public Opinion Survey (POS)

- Originally contemplated sample size was 400 participants
- Sample size was increased to 550 with 150 from the Waste Management, Inc. / City of Omaha Pilot Study area
 - Provide baseline of pilot participants for comparison to post-pilot study
 - Provide for comparison of pilot study population to city-wide population
- Participants for the survey were randomly selected using both household landlines and cellular lines and an effort was made to achieve a sample which was proportionately representative of households on a geographic basis by zip code.

POS (cont'd)

- Telephone surveys commenced October 26, 2016 and were completed by trained and experienced WRA interviewers from their central interviewing facilities.
- Pilot Study area respondent interviews were completed November 6, 2016, prior to commencement of carted and automated collections.
- City-wide respondent interviews were completed November 22, 2016.

POS - Results

General Knowledge and Awareness

- Respondents are pretty familiar with garbage, recycling, and yard waste collection services currently provided by the City.
- Less than half of the respondents were familiar with or aware of the City's recycling drop-off sites, bulky item drop-off program, household hazardous waste facility, and yard waste compost facility.
- Most respondents were aware that limits existed on garbage volume however most did not know the exact limits. From a practical standpoint, this may be of little to no concern as very few respondents typically exceed the limits placed on garbage volumes.
- Respondents are generally satisfied with the collections services provided by the City and any widespread dissatisfaction with the current system was not evident.

POS – Results (cont'd)

Garbage Collections

- Most respondents use 32-gallon containers or a mix of containers and bags for their household garbage.
- Approximately half of respondents indicated that a single container meets their typical weekly volume of garbage generation.
- Adding a second container would meet the needs of more than 80% of respondents and a third container would suffice for about nine in every 10 households.

Note:

If one is seeking to establish a logical “minimum” or base service level that includes the vast majority of all households, then results here suggest that three 32 gallon containers (or equivalent) would meet the needs of the vast majority of households.

POS – Results (cont'd)

Recycling Collections

- Most respondents are satisfied with the 18-gallon recycling bin program with one out of four indicating they are dissatisfied.
- Those that are dissatisfied cite that the bins are too small, need a lid, or need to be more durable.
- Two bins would meet the weekly volume requirements for nine in 10 households with nearly two-thirds of the respondents requiring only one bin.

POS – Results (cont'd)

Yard Waste Collections

- Most respondents (92%) place yard waste out at least on occasion. Very few respondents use containers only for yard waste with nine in 10 respondents using a combination of containers and bags.
- Slightly more than half of the respondents indicated that they have at least once set out for collection more than 6 containers and/or bags of yard waste in the last year.
- A slightly larger percentage (~ six in 10) indicated that they would favor limits being placed on yard waste volumes similar to the limits placed on garbage.

POS – Results (cont'd)

Yard Waste Co-Collection, Comingling, and Landfilling

- Readily apparent that this is a complex and somewhat controversial topic.
- Starting out with no added education, separate collection wins the vote over co-collection and comingling by roughly a 2:1 ratio but with nearly a third of the households having no preference.
- As further information is added (e.g., landfill, gas utilization, cost of separate route, Oma-Gro costs) there is a bit of a swing in favor of co-mingling, but not dramatically so.
- After all information has been provided, the ratio of separate collection preference dropped to about 3:2 but with more having no clear preference.

POS – Results (cont'd)

Possible New Programs

Pay As You Throw (PAYT) - Respondents were provided a very basic introduction to the concept of PAYT which provides variable pricing based on the volume of services required.

- In general, reaction was mixed with an equal amount strongly in favor and strongly opposed to PAYT.
- Considering all responses (i.e. moderately favor or oppose), there does appear to be some basic support for this concept with favor versus oppose at about a 3:2 ratio.

POS – Results (cont'd)

Possible New Programs (cont'd)

Carted and Automated Collections - Respondents were provided a brief introduction to the concept of a carted and automated collections system similar to the Pilot Study currently underway.

- The vast majority felt that one 96-gallon container would be sufficient for their garbage (93%).
- Note this is consistent with a prior survey question where nine in 10 indicated three 32-gallon containers were sufficient for their needs.
- If more capacity was needed, specific to a possible future program, preferences were 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.

POS – Results (cont'd)

Possible New Programs (cont'd)

- While perceived to be sufficient by most for garbage, when considering co-collection of yard waste with garbage, nearly half the respondents have concerns that one container would not be enough.
- Considering a second 96-gallon container, some still have concerns about whether the volume will be sufficient for their needs and nearly four in 10 are at least somewhat concerned as to where they will store the 96-gallon carts.
- With regard to recycling, the vast majority felt that one 96-gallon container would be sufficient for their recycling every other week (92%).

Peer Community Benchmarking

- Benchmark survey included eight local and thirteen (13) regional cities concerning their residential curbside waste collection services of household garbage, recycling, yard waste, and other services (i.e. bulky wastes, household hazardous wastes).
- Data obtained via internet research, telephone calls, and written surveys.
- Variability exists, as expected, as each city has a unique waste collection program that suits their constituency and functions within the constraints of their respective funding.
- However, similarities do exist, and comparisons can be drawn.

Peer Community Benchmarking (cont'd)

Comparisons:

- Most cities utilize a cart and semi- or fully- automated collection program for garbage and recycling.
- Monthly collection fees range from a low of \$9.95 per household to a high of \$27.89 per household. (Omaha \$9.19)
- Average monthly fees for all cities, including local cities, is between \$15 and \$20 per household with a \$16.50 average for those cities with municipal contracts for collection.
- Nine of 13 regional cities provide separate yard waste collection, two do not accept yard waste at all, and two accept yard waste comingled with trash.
- Several different policies were noted for “overflow” garbage including sticker programs, variable pricing for added carts, and occasional overflow days (monthly, quarterly, semi-annually).