

# Yard Waste Gone Chicago Yard Waste Project Proposal

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Get your **yard waste**  
in the bags  
and we will pick them up for **FREE!**

**Pick-up schedule**

- Spring / Summer (April)
  - Bi-weekly
- Fall (September)
  - Weekly
- Winter (December)
  - On call

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## Project Summary

The Yard Waste Gone yard waste cleanup proposal seeks to create a streamlined and well marketed approach to solve the yard waste problem in Chicago. Yard waste is a serious issue in Chicago as a recent report by WBEZ Chicago found that even as requests for pickup are at a high, collection of yard waste is down from previous years. Clearly the current system is not working. Yard waste fills up landfills that could otherwise be used for garbage and it decomposes into methane which hurts the environment 86 times more than carbon dioxide. Alternatively, this yard waste could be used as rich fertilizer and have its methane burned to produce energy. We seek to implement a simple but streamlined solution. Our plan is to have a simple routine pickup schedule, with easy instructions, and have a well marketed campaign.

## Project Description

### Rationale and Significance

This work is necessary because every day we are dirtying our streets and neighborhoods while also wasting the production from yard waste. Yard waste decay in landfills produces methane which is 86 times more harmful than carbon dioxide. This not only wastes space in landfills but pollutes the environment. Additionally, yard waste could be used to create fertilizers and the methane can be collected and burned off to produce energy. Yard waste prevents neighborhoods from looking their best. The current system is inadequate at collecting yard waste, let alone that citizens have to go through the extra work of calling 311 to get it picked up.

### Plan of the Work

#### Scope

- Automatic routine pickup vs 311 opt-in approach
- Garbage truck like routine pickups
- Marketing
  - Social Media: Facebook \*Youtube, \*Twitter, and \*Instagram. Share photos tagging accounts for a chance at a prize.
  - Website: outline new schedule, procedure for collecting yard waste, and what is and is not yard waste
  - \*Paper bags with program information and instructions printed on them
  - \*Labels/stickers to be placed on garbage and recycling bins to outline program
  - \*CTA advertisements
  - Flyers to be distributed strategically
  - \*Use city's social media accounts to advertise
  - \*Announcement from Mayor
  - \*Contact large environmental organizations in Chicago to help spread the word
  - \*TV and web ads
  - \*Notifications in local news

(\*Visualizations not shown for class project)

## Methods

The main method of this project is using garbage truck like schedules and trucks to collect yard waste in paper bags. This is an idea that people are already familiar with we are just implementing it with yard waste. The collection process will transform from an active 311 call into an automatic weekly or bi-weekly pickup. Nobody wants to go through the work of calling 311 just to get some yard waste picked up, so why not make it automatic?

The other cornerstone of the project is using a combination of free and effective marketing approach. Using free social media, website, city social media, Mayor announcement, and organizational cooperation. In combination with effective local news notifications, TV and web ads, flyers, CTA advertisements, labels/stickers, and yard waste bags.

We plan to have a 5 phased approach to the marketing plan. With waves and lulls.

1. Hype up for program start in mid-spring
2. Small continuous marketing during summer
3. Hype up for weekly fall schedule
4. Strong continuous marketing during busy fall time
5. Semi-dormant winter marketing, only social media based

## Task Breakdown

Task Name	Duration	Start	Finish	Predecessors	Comments
<b>- Routine pickups</b>	351d	04/30/20	04/15/21		
Spring/summer (biweek)	139d	04/30/20	09/15/20		
Fall (weekly)	61d	09/16/20	11/15/20	3	
Winter (off)	151d	11/16/20	04/15/21	4	
<b>- Marketing</b>	470d	01/01/20	04/14/21		
Social Media	470d	01/01/20	04/14/21		
Website	470d	01/01/20	04/14/21		
Paper bags	379d	04/01/20	04/14/21		
Labels/stickers	470d	01/01/20	04/14/21		
CTA advertisements	76d	04/01/20	06/15/20		09/02/20 - 11/15/20
Flyers	76d	04/01/20	06/15/20		09/02/20 - 11/15/20
*Use city's social media accounts	76d	04/01/20	06/15/20		09/02/20 - 11/15/20
*Announcement from Mayor	1d	04/15/20	04/15/20		
*Large environmental organizations	76d	04/01/20	06/15/20		09/02/20 - 11/15/20
*TV and web ads	76d	04/01/20	06/15/20		09/02/20 - 11/15/20
*Notifications in local news	76d	04/01/20	06/15/20		09/02/20 - 11/15/20
<b>- Marketing Program</b>	365d	04/15/20	04/14/21		
Hype up for program start in mid-spring	62d	04/15/20	06/15/20		
Small continuous marketing during summer	78d	06/16/20	09/01/20	19	
Hype up for weekly fall schedule	15d	09/02/20	09/16/20	20	
Strong continuous marketing during busy fall time	60d	09/17/20	11/15/20	21	
Semi-dormant winter marketing, only social media based	150d	11/16/20	04/14/21	22	

## Problem Analysis

The potential risks and problems associated with the project include worker strikes or labor shortages, breakdown of trucks or facilities, or citizens not following instructions.

To deal with worker strikes or labor shortages we will implement a system similar to garbage truck companies. We will hire temporary workers and delay or reschedule pickup times. Likewise, to resolve breakdown of trucks or facilities we will implement a system similar to garbage truck companies. We can shift drop offs to working facilities and use redundant trucks in case of breakdown. If citizens do not follow instructions we will place flyers on their door or bins as a friendly reminder.

## Facilities and Equipment

To facilitate the project we need facilities and equipment.

- 10 Trucks
- 40 People
  - 2 people per truck = 20 employees
  - 20 Facility and Administration employees
  - $\$20/\text{hr} * 40 \text{ people} * 8 \text{ hours} = \$6400 / \text{day}$  in operation
    - Only need to operate some weeks in the year
- Personnel clothing, vets, gloves, and tools
  - CP Insider 300 Series - Cut/Puncture resistant gloves (\$26.99)
  - HI-VISIBILITY SAFETY VEST (\$15.50)
  - Viking® D6323WPG Open Road® 150D Class E Pants (\$20.95)
  - Rubber Shoes (\$70)
  - Badges (\$5)
- Access to 3 composting facilities

## Personnel

### **Austyn Gerzevske - Project Manager**

Austyn worked on the project proposal, the website, and the detailed instructions. He is a 4th year coterminial student at Illinois Tech working on his Master's in Cyber Forensics and Security and Bachelor's in IT Management.

### **Vilasay "James" Rathahao - Graphic Designer**

James worked on the promotional material, the website, and the detailed instructions. He is a 4th year student at Illinois Tech working on his Bachelor's in Computer Science.

### **Pierre Shum - Social Media Manager**

Pierre worked on the Facebook page, the website, and the detailed instructions. He is a 4th year student at Illinois Tech working on his Bachelor's in Computer Science.

### **Stephan Tsang - Market Research Analyst**

Stephan worked on the cities comparison, the website, and the detailed instructions. He is a 4th year student at Illinois Tech working on his Bachelor's in IT Management with a minor in Communications.

## Budget

3 Facilities @ \$1500/mo		<\$54,000/Year>
Equipment for Facilities	One Time	<\$10,000>
10 Trucks @ \$150,000	One Time	<\$1,500,000>
40 employees @ \$20/hr*		<\$576,000/Year>
50 Personnel Equipment @ \$139.00	One Time	<\$6,950>
120 sets of (2500 Advertisement Fliers @ \$399.99)		<\$48,000/Year>
3000 sets of (100 Stickers Labels @ \$127.99)	One Time	<\$384,000>
300,000 sets of (25 Waste Bags @ \$3.00)		<\$900,000/Year>
Web Ad Campaign: \$50 to display ads 1,000 times		<\$10,000/Year>
TV Ad Campaign		<\$10,000/Year>
CTA Ad Campaign: \$1000 * [10 - 200 ads] over 4 weeks		<\$12,000/Year>
Static Website Hosting: \$10-15 / month		<\$180/Year>
<hr/>		
<b>Preliminary Total Cost</b>		<\$3,511,130>
Working Capital (To be returned if unused)		<\$526,669.50>
Profit from Bags: 300,000 sets of (25 Waste Bags @ \$26.00)		+ \$7,900,000
Profit from Methane Energy Production		NA at this Moment
Profit from ROI Compost Fertilizer Sales		NA at this Moment
<hr/>		
<b>Preliminary Total</b>		<\$3,862,200.50>
Environmental Organization Offset		NA at this Moment
Federal Program Offset		NA at this Moment
Fee Offset		+ \$16,500
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<b>Net Benefit</b>		\$3,845,700.50



## **Budget Assumptions**

1.2 Million Chicago households, est.  $\frac{1}{4}$  will need services because of large amount of apartments and houses without yard waste = 300,000 households

\* 40 Employees at \$20/hr = \$800/hr = \$6400 day = \$32,000/week

Only need to work biweekly in summer and weekly in fall = est. 20 weeks

= \$640,000

\*\* Fee Offset: 300,000 households with 0.1% incurring \$5 fee and 5% of those being repeat offenders at 10\$

\*\*\*\$5 / 1000 viewers - 30 second commercials. 2million chicagoans /1000 viewers \* 5 = \$10,000 for TV ads

## Conclusion

In conclusion, This work is necessary because every day we are dirtying our streets and neighborhoods while also wasting the production from yard waste. Yard waste decay in landfills produces methane which is 86 times more harmful than carbon dioxide. This not only wastes space in landfills but pollutes the environment. Additionally, yard waste could be used to create fertilizers and the methane can be collected and burned off to produce energy. Yard waste prevents neighborhoods from looking their best. The current system is inadequate at collecting yard waste, let alone that citizens have to go through the extra work of calling 311 to get it picked up. Thank you for taking the time to evaluate and consider our proposal.

## Appendixes

1. Facebook Account : [https://www.facebook.com/yardwastegone/?modal=admin\\_todo\\_tour](https://www.facebook.com/yardwastegone/?modal=admin_todo_tour)
2. Flier: See Additional Documentation
3. Market Research: See Additional Documentation
4. Website: <https://vrathahao.github.io/yardwastegone>
5. Detailed Instructions: See Additional Documentation
6. Additional Marketing Material: See Additional Documentation
7. Sources
  - a. "Recycle By City: Chicago"  
<https://www.recyclebycity.com/chicago/brief/yard-waste-service>
  - b. "Chicagoans Call for More Yard Waste Pickups..."  
<https://www.wbez.org/shows/curious-city/chicagoans-are-calling-for-more-yard-waste-pickups-so-whys-the-city-picking-up-less/c886cd66-0aa3-4e87-804f-cb11140de8a1>
  - c. "Yard Waste Bags" <https://www.amazon.com/slp/yard-waste-bags/8eayf5hw5mn8828>
  - d. "Gloves" <https://turtleskin.com/default/cp-insider-300-series.html>
  - e. "Vests" <https://www.redkap.com/hi-visibility-safety-vest/VYV6.html>