



# ORANGE COUNTY WASTE COMPOSITION STUDY

June 2017



Prepared for:

Submitted by:



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# Section 1

## Introduction

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### 1.1 Study Objectives

### 1.2 Background

### 1.3 Acknowledgements

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<sup>1</sup> <https://www.census.gov/quickfacts/table/PST045216/37135>

<sup>2</sup> <http://uncnews.unc.edu/facts-about-carolina/facts-figures/>

<sup>3</sup> <http://d4.nccommerce.com/QCEW/LargestEmployers.aspx>



# **Section 2**

## **Methodology**

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**2.1 Generator Sectors and Sorting Events**

**2.2 Material Categories**

**2.3 Location, Equipment and Labor**

**2.4 Sampling and Sorting Procedures**

**2.5 Analytical Procedures**

# Section 3

## Results

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### 3.1 Introduction to Results

### 3.2 Aggregate MSW

### 3.3 Single-Family Residential MSW

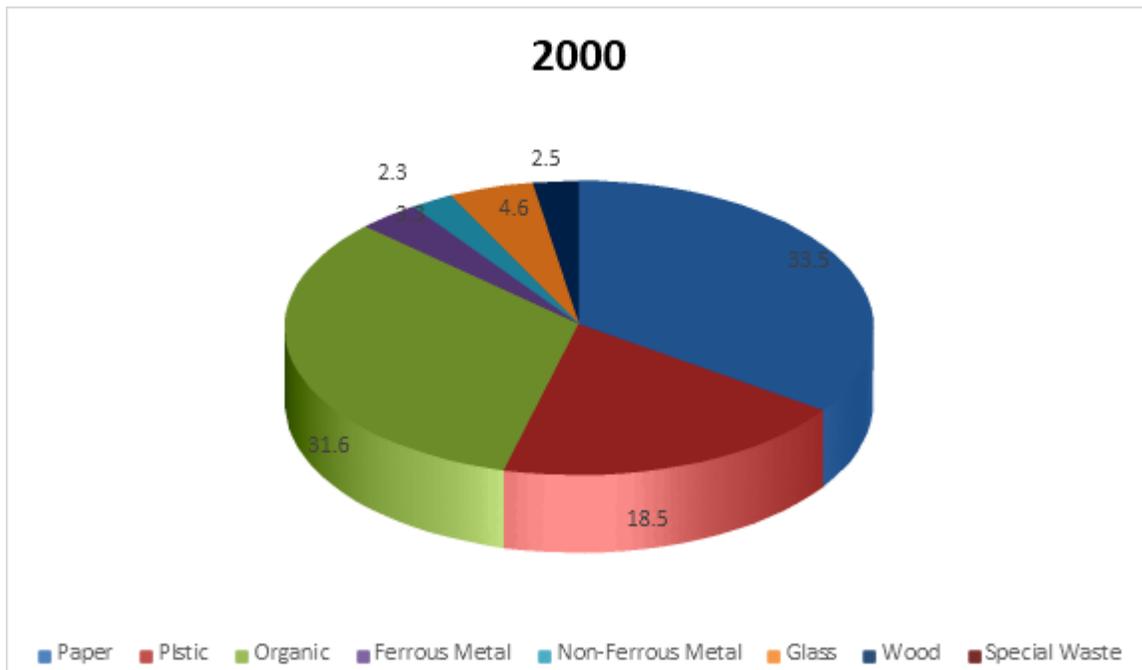
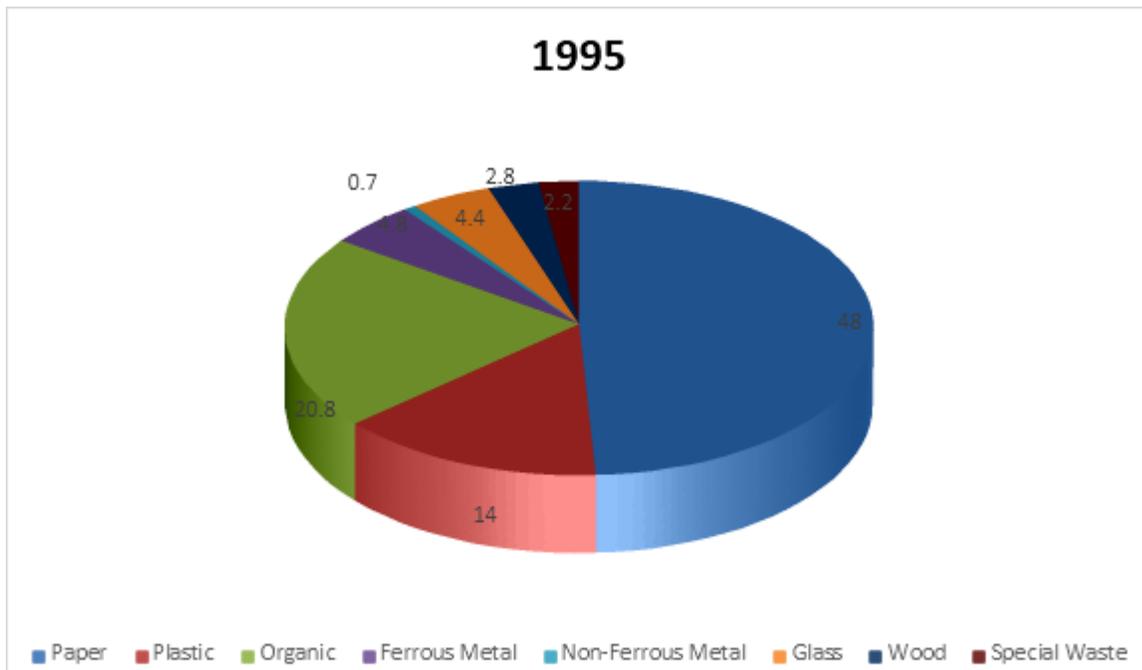
### 3.4 Commercial MSW

Table 3-8 compares the annual commercial MSW composition in the present WCS to previous WCS results. [specify the years: 1995–2017] [see that en dash? Coolness!]

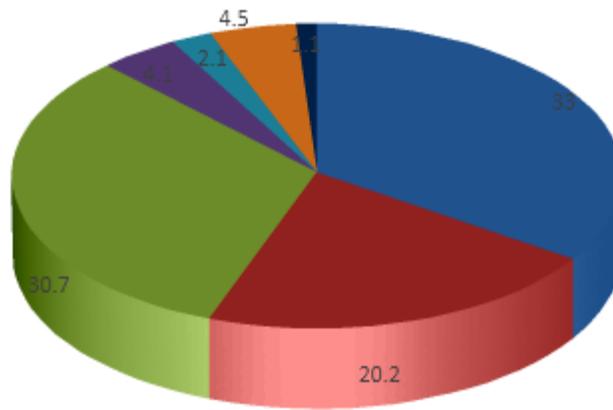
Key findings from the commercial data include:

- Total paper composition has decreased 19.4%.
- Total Plastic composition has increased 6.7%.
- Total Organics composition has increased 15.1%.
- Total Ferrous Metal composition has decreased 3.1%.
- Total Non-Ferrous Metal composition has increased 0.7%.
- Total Glass composition has decreased 1.3%.
- Total Wood composition has increased 1.2%.
- Total Special Waste composition has decreased 0.1%

Figure 3-4: Annual Composition of Commercial MSW

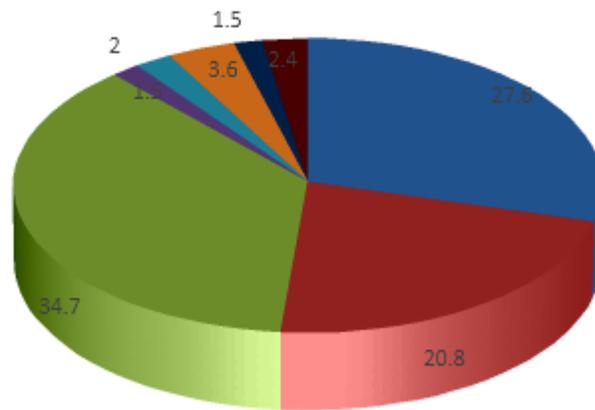


2005



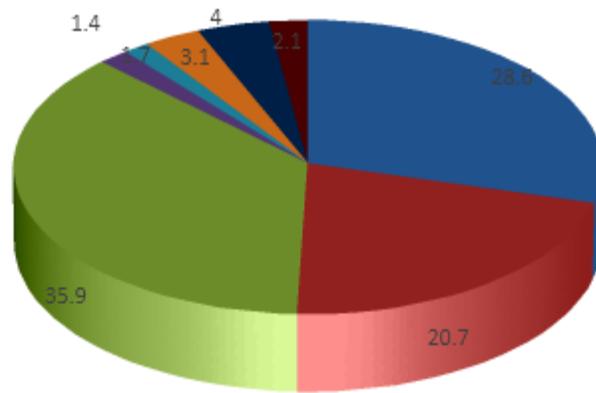
■ Paper ■ Plastic ■ Organic ■ Ferrous Metal ■ Non-Ferrous Metal ■ Glass ■ Wood ■ Special Waste

2010



■ Paper ■ Plastic ■ Organic ■ Ferrous Metal ■ Non-Ferrous Metal ■ Glass ■ Wood ■ Special Waste

## Present Study



■ Paper ■ Plastic ■ Organic ■ Ferrous Metal ■ Non-Ferrous Metal ■ Glass ■ Wood ■ Special Waste

**Table 3-8: Comparison of Commercial MSW to Previous WCS Results**

<b>Material Components</b>	<b>1995</b>	<b>2000</b>	<b>2005</b>	<b>2010</b>	<b>Present Study</b>
Newspaper	6.1%	4.7%	3.4%	3.0%	0.7%
Glossy Magazines	2.8%	2.5%	2.4%	0.8%	0.6%
Corrugated Cardboard	10.7%	3.5%	3.1%	2.6%	3.6%
Waxy Cardboard	N/A	1.8%	1.8%	0.4%	0.5%
Phone Books	N/A	<0.1%	<0.1%	<0.1%	0.1%
Paperboard	N/A	3.5%	2.2%	2.2%	2.4%
Other Books	N/A	1.9%	<0.1%	0.4%	0.2%
White Ledger	N/A	2.6%	4.2%	1.6%	1.4%
Mixed Recyclable Paper	3.3%	3.2%	2.8%	2.2%	3.3%
Low-Grade Paper	25.1%	9.5%	13.0%	14.5%	15.1%
Aseptic Containers	N/A	N/A	N/A	N/A	0.9%
<b>Total Paper</b>	<b>48.0%</b>	<b>33.5%</b>	<b>33.0%</b>	<b>27.6%</b>	<b>28.6%</b>
All Plastic Bottles	2.2%	3.4%	3.4%	3.2%	3.2%
Plastic Film	4.8%	7.8%	6.0%	9.5%	9.3%
All Cups & Tubs	0.8%	2.9%	1.9%	2.2%	1.6%
All Other Plastics	6.2%	4.4%	8.8%	5.8%	6.5%
<b>Total Plastics</b>	<b>14.0%</b>	<b>18.5%</b>	<b>20.2%</b>	<b>20.8%</b>	<b>20.7%</b>
Food Waste	12.2%	20.4%	23.7%	25.5%	24.9%
Textiles/Leather	2.7%	5.0%	3.5%	3.5%	4.3%
Diapers	1.4%	2.1%	1.1%	2.3%	3.1%
Other Organics & Rubber	4.5%	4.1%	2.4%	3.5%	3.6%
<b>Total Organics</b>	<b>20.8%</b>	<b>31.6%</b>	<b>30.7%</b>	<b>34.7%</b>	<b>35.9%</b>
Tin/Steel Cans	1.6%	1.2%	1.7%	0.8%	0.7%
Aerosol Cans	N/A	0.5%	0.3%	0.2%	0.2%
Other Ferrous	3.2%	1.6%	2.1%	0.6%	0.8%
<b>Total Ferrous Metal</b>	<b>4.8%</b>	<b>3.3%</b>	<b>4.1%</b>	<b>1.5%</b>	<b>1.7%</b>
Aluminum Cans	0.7%	1.2%	0.7%	0.8%	0.7%
Aluminum Foil	N/A	0.8%	1.0%	0.8%	0.4%
Other Non-Ferrous	N/A	0.2%	0.5%	0.4%	0.4%
<b>Total Non-Ferrous Metal</b>	<b>0.7%</b>	<b>2.3%</b>	<b>2.1%</b>	<b>2.0%</b>	<b>1.4%</b>
Glass Bottles and Jars	4.0%	3.8%	3.5%	3.4%	2.2%
Other Glass	0.4%	0.8%	1.0%	0.2%	0.9%
<b>Total Glass</b>	<b>4.4%</b>	<b>4.6%</b>	<b>4.5%</b>	<b>3.6%</b>	<b>3.1%</b>
Wood Pallets	N/A	0.5%	<0.1%	<0.1%	0.8%
Wood Lumber	1.6%	1.7%	1.1%	1.1%	1.0%
Painted/Treated Wood	1.2%	0.3%	<0.1%	0.3%	2.2%
Stumps/Branches	N/A	<0.1%	<0.1%	<0.1%	0.0%
<b>Total Wood</b>	<b>2.8%</b>	<b>2.5%</b>	<b>1.1%</b>	<b>1.5%</b>	<b>4.0%</b>
Brick/Concrete/Dirt	1.4%	1.5%	1.0%	2.2%	1.1%
Yard Waste	<b>0.8%</b>	<b>1.3%</b>	<b>0.4%</b>	<b>2.7%</b>	<b>0.9%</b>
Lead Acid Batteries	N/A	<0.1%	<0.1%	<0.1%	0.0%
Dry Cell Batteries	N/A	0.2%	<0.1%	<0.1%	0.1%
Oil Filters	N/A	<0.1%	<0.1%	<0.1%	0.0%
Other Hazardous Waste	1.5%	<0.1%	<0.1%	<0.1%	0.5%
Infectious Waste	0.7%	NA	1.8%	2.0%	1.0%
Reusable Waste	N/A	<0.1%	<0.1%	0.3%	0.5%
<b>Total Special Waste</b>	<b>2.2%</b>	<b>0.3%</b>	<b>2.0%</b>	<b>2.4%</b>	<b>2.1%</b>
Electronic Waste	N/A	<b>0.6%</b>	<b>1.1%</b>	<b>1.1%</b>	<b>0.4%</b>
<b>TOTALS</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>

Note: Columns may not appear to calculate correctly due to rounding. Plastic film includes Plastic Film and Retail Bags & Stretch Film. All Cups & Tubs includes Mixed Plastic Containers and Dairy Plastic Containers.

[disregard next page]

**Table D-2: Commercial Sample Results (% by weight) – Spring (April 2017) (cont.)**