



*The University of North Carolina at Chapel Hill*

# Office of Waste Reduction and Recycling

**2019-20 Fiscal Year  
Waste Recovery**



Prepared by OWRR Staff (BJ Tipton, Heather Campbell, Olivia Gambocarto)

Date: 12/6/2021

# Office of Waste Reduction and Recycling

## Fiscal Year 2019-2020 Trend Report

### Table of Contents

Page	Graph/Sheet
1	Table of Contents
2	UNC Saves
3	Landfill vs Recovery
4	Monthly Landfill & Recovery Trends
5	All Recovered Materials
6	Recovered Waste Categories
7	Fiber
8	Cardboard Tons and Revenue
9	Confidential Paper
10	Fiber Sheet
11	Containers
12	Containers Sheet
13	Mixed Recycling
14	Mixed Recycling Sheet
15	Organic
16-21	Compost Collection
22	Residential Compost
23	Organic Sheet
24	Other
25-27	Other Sheet
28	Recovery Rate History
29	Waste Disposal and Recovery Trends
30	Recovery Tonnage History
31	4Q COVID Analysis

Page	Graph/Sheet
32	MSW
33	Total Waste
34	Source Separated C&D
35	C&D Trend
36	Monthly C&D Trends
37	C&D vs MSW
38	Total C&D
39	C&D Recycling Total
40	C&D Waste Management
41	Pallets and Clean Wood
42-45	C&D Sheet
46	Total Campus Population
47	Employees and Students by Year
48	Per Capita Landfill and Recovery
49	Per Capita Weights
50	Per Capita Waste Reduction
51	Move-In
52-53	Move-Out
54-55	Football
56	FallFest
57	Surplus Property
58-59	EPA WARM Data

"C&D": Construction and Demolition

"MSW": Municipal Solid Waste

# UNC-Chapel Hill for Fiscal Year 19-20

(Note: This information draws from the EPA WARM file and the [links must be updated](#) before publishing data for the month or year.)

Using the EPA Waste Reduction Model (WARM version 15), the total change in energy use due to campus  
**-22,203.58 (million BTU)**

This is equivalent to conserving:

**242** Households' annual energy consumption  
**3,822** Barrels of oil  
**184,335** Gallons of oil

Using EPA WARM, the total change in GHG emissions due to campus recycling :  
**-2,403.49 (MTCO2E)**

This is equivalent to removing annual emissions from:

**510** Passenger vehicles  
**270,450** Gallons of gasoline  
**100,145** Cylinders of propane used for home barbecues

**0.00013%** Annual CO2 emissions from US transportation sector  
**0.00013%** Annual CO2 emissions from US electricity sector

**Total Tons Recovered = 3,632.9**

<https://www.epa.gov/warm/versions-waste-reduction-model-warm#15>

## PAPER recycling at UNC-Chapel Hill saves:

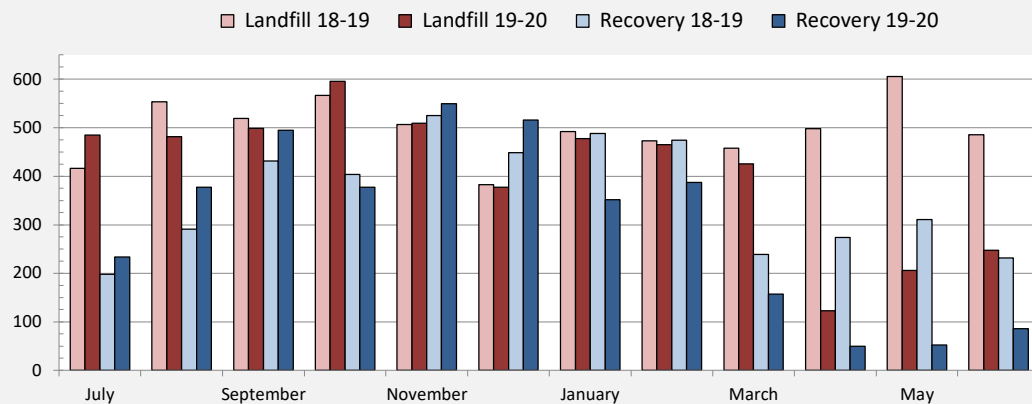
Trees: 16,434  
Gallons of water: 6,721,396  
Cubic yards of landfill space: 2,900  
Kilowatt hours of energy: 3,941,195

## Recycling 1 ton of paper saves:

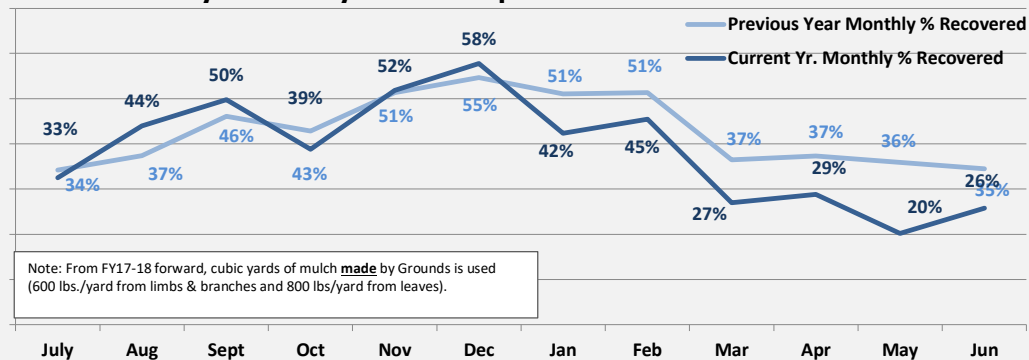
17 trees  
6,953 gallons of water  
3 cubic yards of landfill space (uncompacted)  
4,077 kilowatt hours of energy

**Total Tons Fiber Recycled = 966.7**

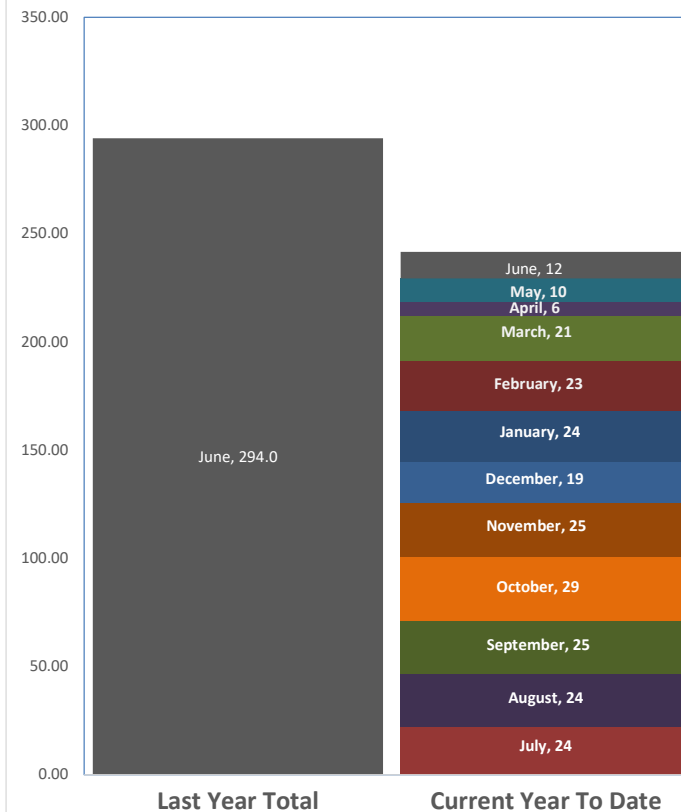
## Monthly Landfill and Recovery Trend Comparison of Tons



## Monthly Recovery Rate Comparison - Previous vs Current Year



## Pounds of Waste Landfilled Per Person (FTE): Last Year vs. Current YTD



June	MONTH (in tons)		
	2019-20	2018-19	% increase or decrease
Landfill	247	486	-49%
Recycling	85	225	-62%
Compost	1	31	-97%
Total Waste	333	742	-55%
% Recovered	25.8%	34.5%	-25.2%

June	YEAR-TO-DATE (in tons)		
	2019-20	2018-19	% increase or decrease
Landfill	4,891	5,957	-18%
Recycling	3,118	3,934	-21%
Compost	515	646	-20%
Total Waste	8,524	10,537	-19%
% Recovered	42.6%	43.5%	-2.0%

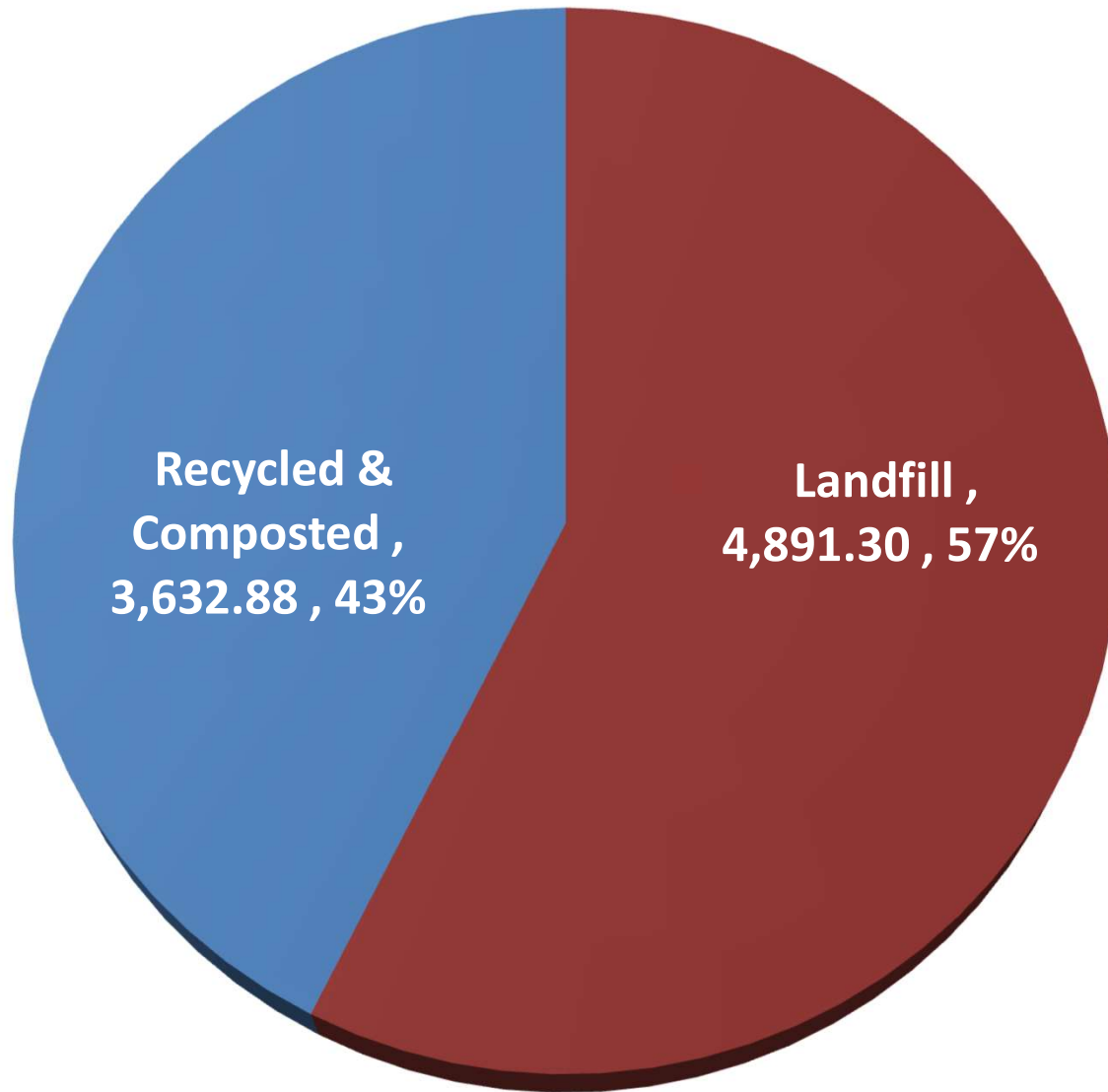
### FY19-20:

- Campus populations dropped to approximately xxx in April 2020 due to COVID.
- Student donations from move-out were added to OTHER in FY19-20.
- July 2019 MSW spike due to Housing project (bed ends): Summer 2019 (May: 23 rolloff hauls, 89.41 tons)
- Contracted confidential paper for FY19-20 is estimated using historical data.

### FY18-19:

- In FY18-19, Grounds processed large batches of mulch from November thru February. This contributes to spikes in recycling data for those months.

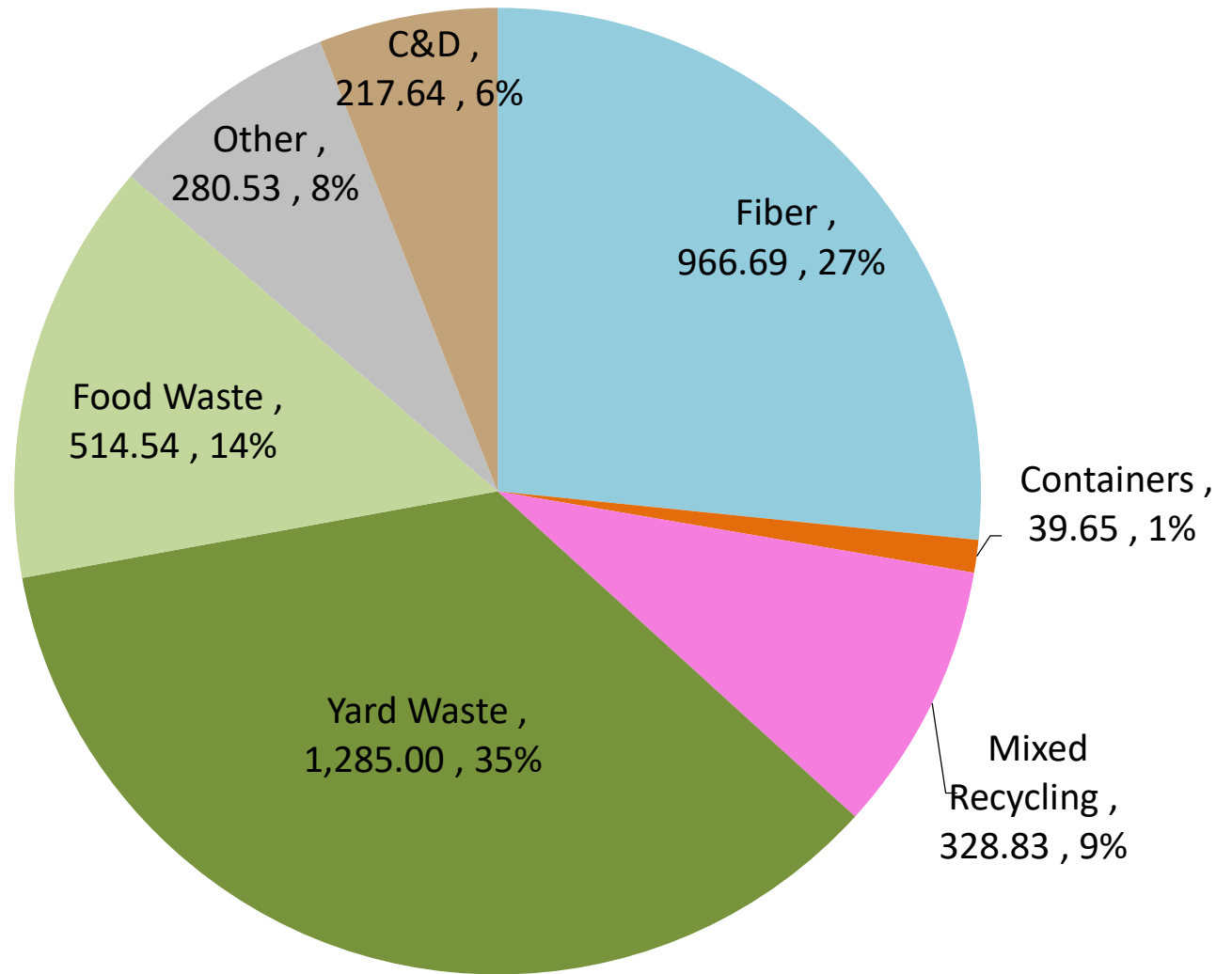
## Amount Landfilled & Recovered 2019-20 (tons)



## 2019-20 Recovered Waste

### Categories

Tons and Percent of  
All Recovered Materials



**C&D (Construction & Demolition):** scrap metal, pallets and clean wood waste, concrete and block, carpet, and ceiling tiles

**Containers** = commingled bottles and cans (aluminum cans, glass bottles [green/blue, clear, brown, plastic bottles, steel cans])

**Fiber** = corrugated cardboard, office paper, confidential paper, magazines and newspaper, hardback books and mixed paper

**Food Waste** = food waste collected and composted from dining halls and residence halls

**Yard Waste** = brush, limbs, trees and leaves collected by UNC Grounds Services and recycled into mulch

**Other** = auto batteries, auto oil & filters, freon, printer cartridges, fluorescent lights, bulk solvent, tires, mattresses, polystyrene, white goods

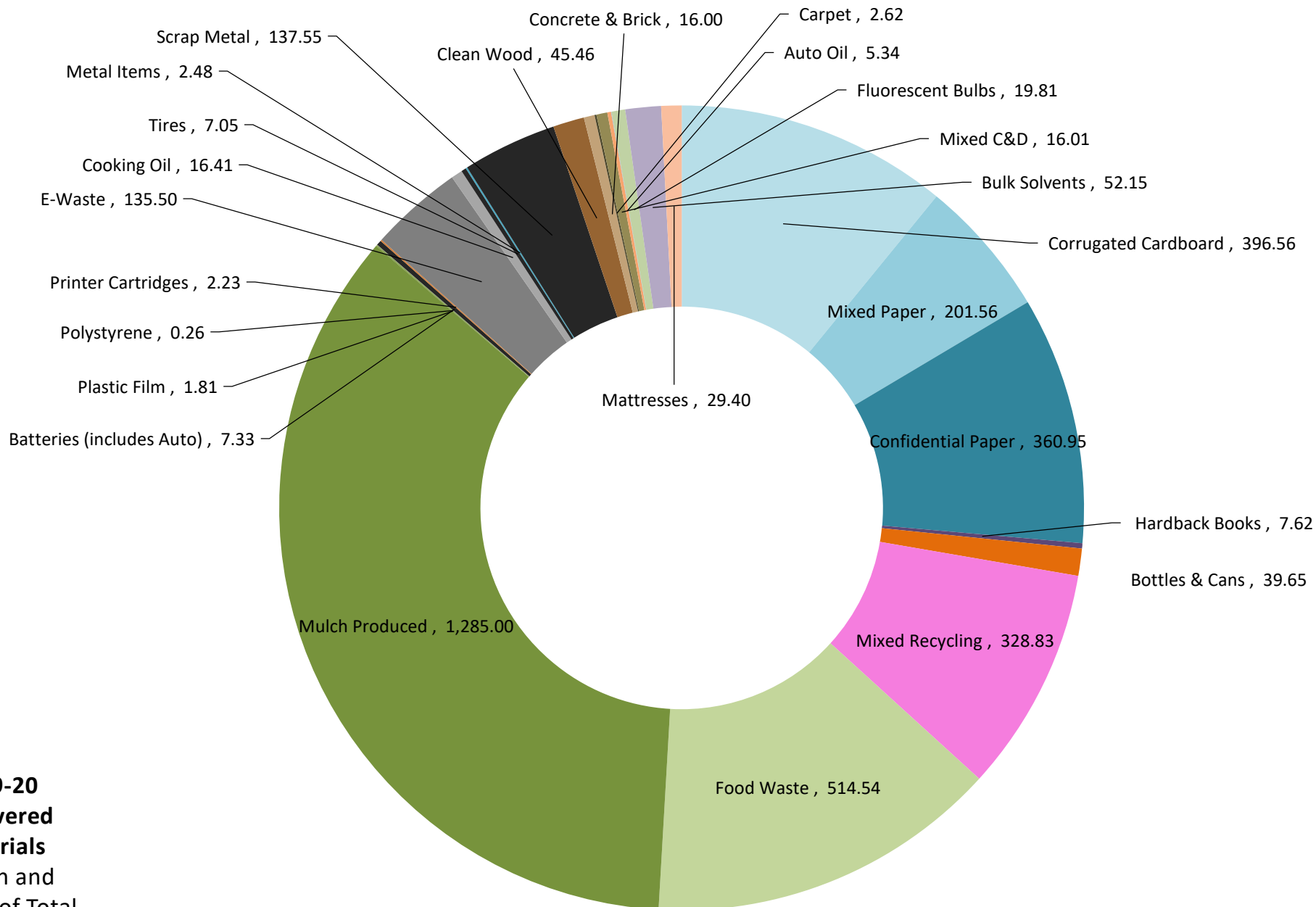
**Mixed Recycling** = one stream of recyclables (both containers and paper mixed together) as opposed to separate dual stream recyclables (paper and containers separated in separate bins)

12/7/2021

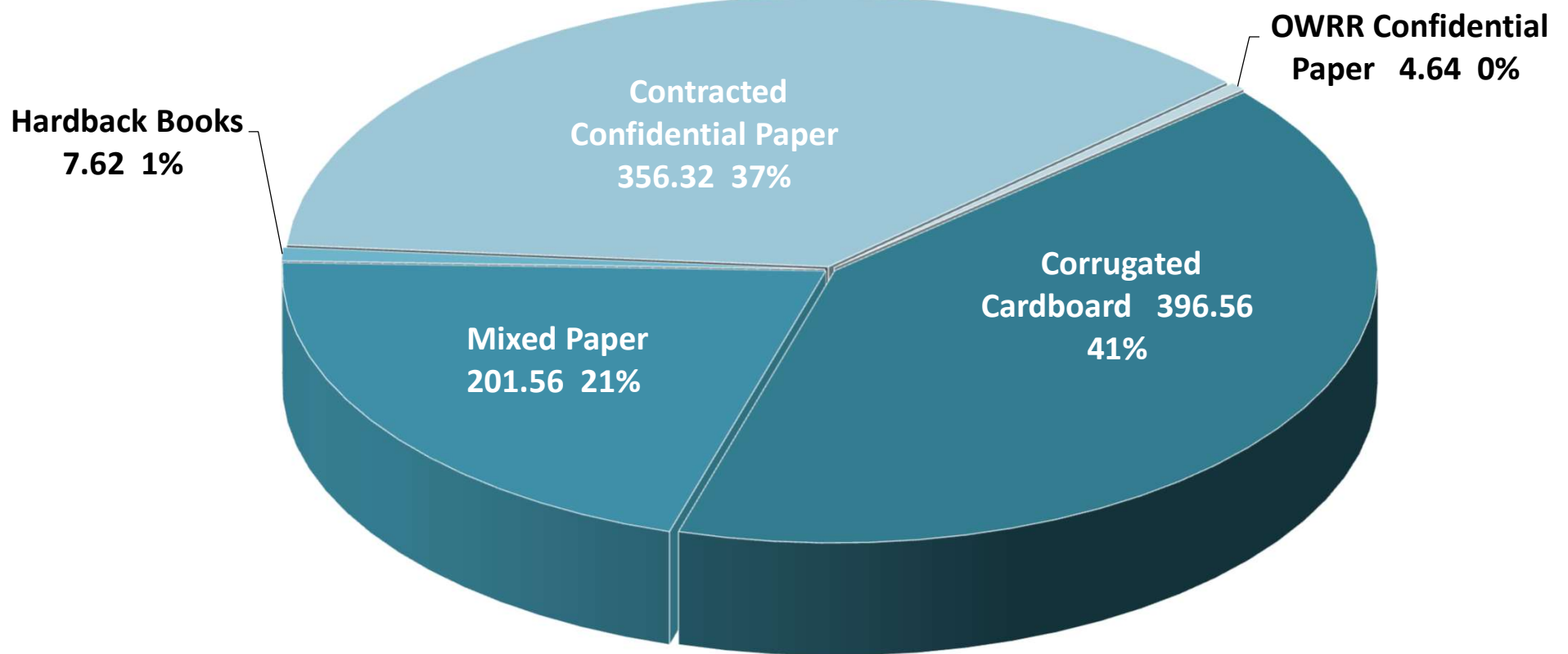
OWRR 19-20, Recovered Categories

Page 5

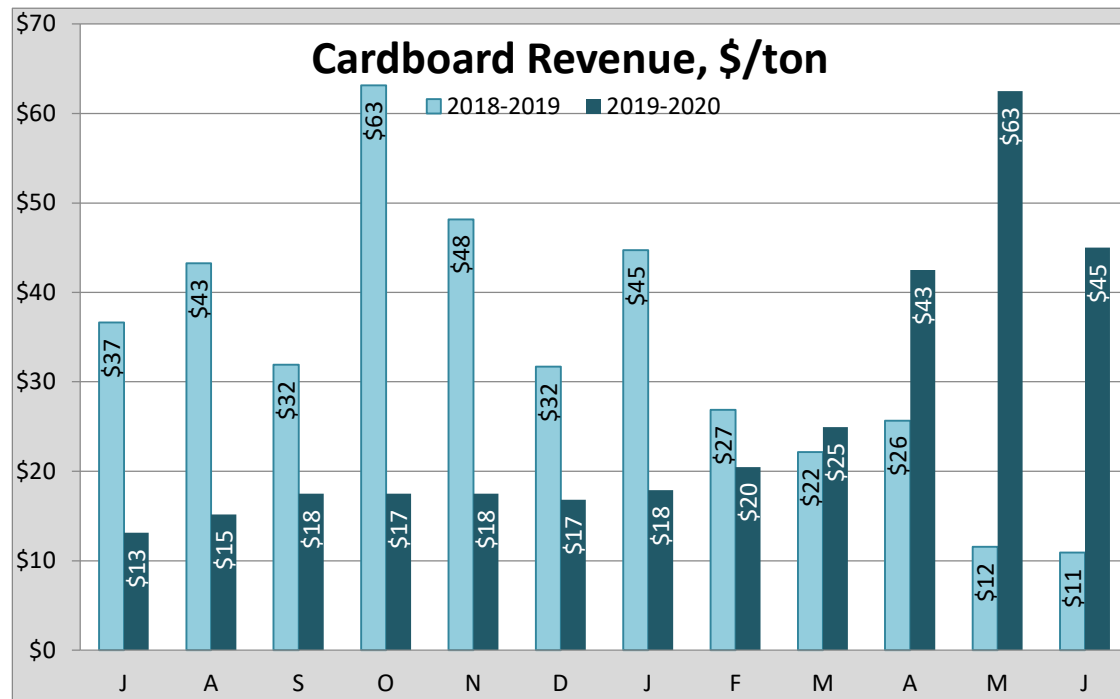
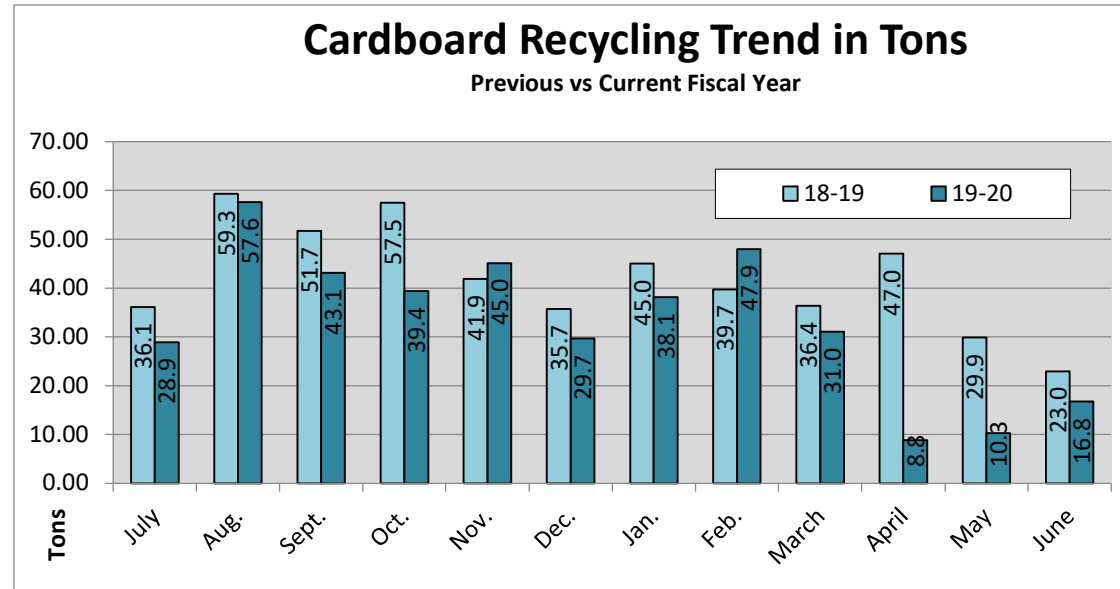
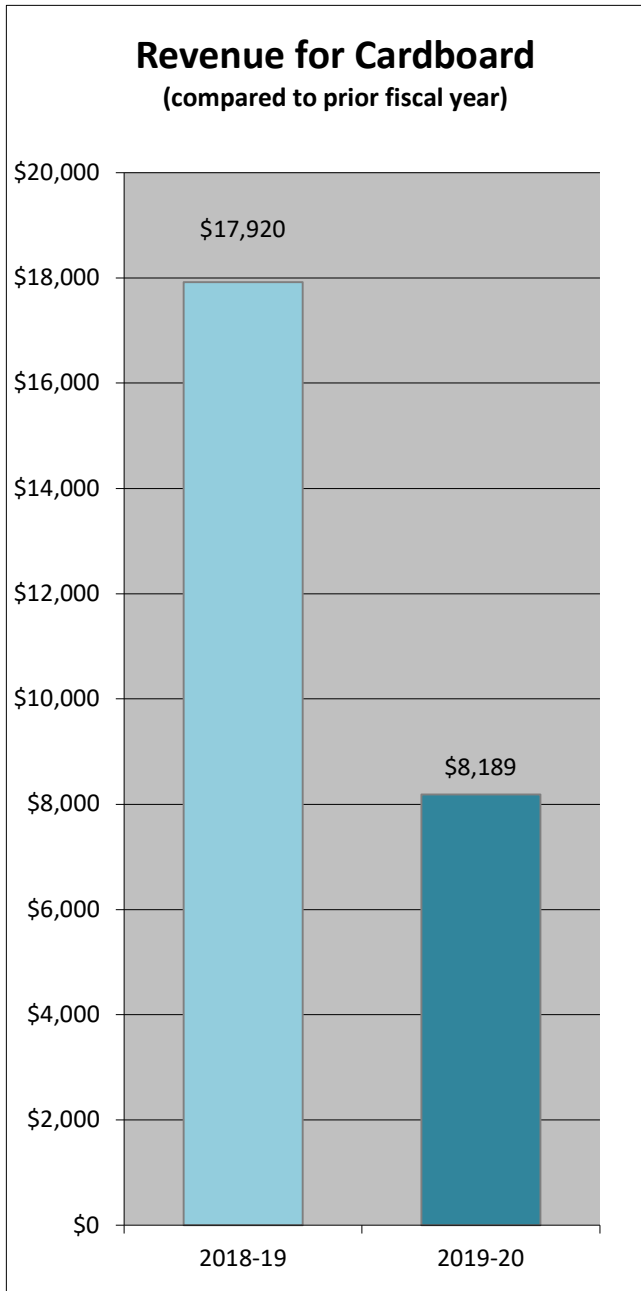
**2019-20  
Recovered  
Materials**  
by Ton and  
Percent of Total



# Fiber Tons, 2019-20

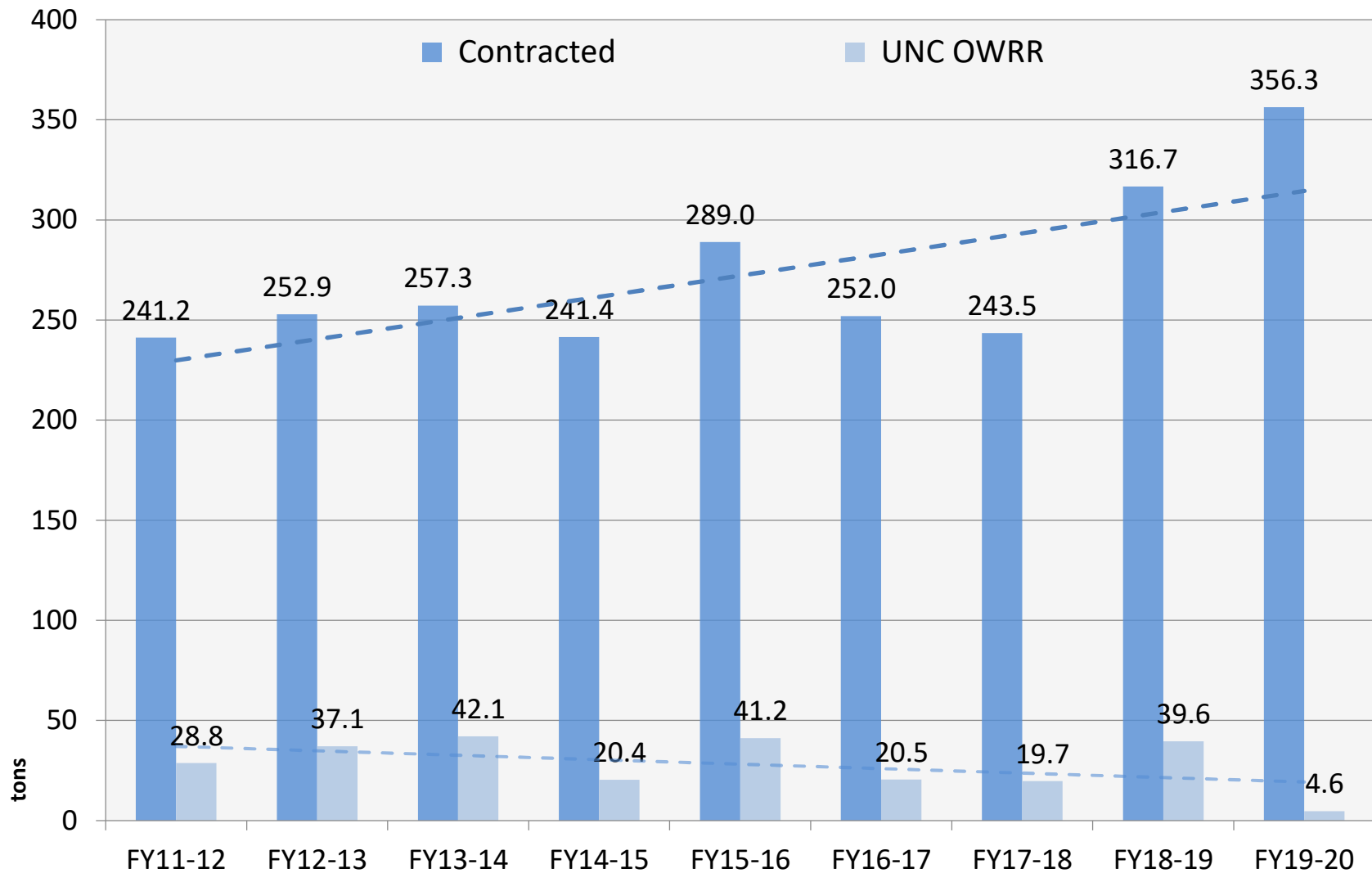






# Confidential Paper Trends

Contractor Collected vs. UNC OWRR Collected (in tons)



# FISCAL YEAR 2019-20 WASTE RECOVERY TREND REPORT

## FIBER

### CORRUGATED CARDBOARD

CORRUGATED CARDBOARD	Jul-19	Aug-19	Sep-19	Oct-19	Nov-19	Dec-19	Jan-20	Feb-20	Mar-20	Apr-20	May-20	Jun-20
Frontload Cardboard	13.24	29.00	13.96	14.85	18.10	15.04	22.52	26.44	22.70	7.49	9.75	10.96
Permanent Rolloff Cardboard	15.61	22.48	26.10	23.64	25.16	14.64	15.61	21.49	8.32	1.32	0.51	5.79
Football & Special Event Cardboard	0.00	6.09	3.05	0.92	1.78	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Monthly Tons	28.85	57.57	43.11	39.41	45.04	29.68	38.13	47.93	31.02	8.81	10.26	16.75
Y-T-D Tons	28.85	86.42	129.53	168.94	213.98	243.66	281.79	329.72	360.74	369.55	379.81	396.56
Last Year Monthly Tons	36.14	59.28	51.71	57.47	41.86	35.72	44.95	39.73	36.38	47.04	29.86	22.96
% Incr./Decr. Monthly	-20%	-3%	-17%	-31%	8%	-17%	-15%	21%	-15%	-81%	-66%	-27%

### MIXED PAPER

MIXED OFFICE PAPER	Jul-19	Aug-19	Sep-19	Oct-19	Nov-19	Dec-19	Jan-20	Feb-20	Mar-20	Apr-20	May-20	Jun-20
Shimar Recycling - Indoor	29.49	34.23	22.98	23.01	18.90	16.49	24.18	19.03	13.25	0.00	0.00	0.00
Monthly Tons	29.49	34.23	22.98	23.01	18.90	16.49	24.18	19.03	13.25	0.00	0.00	0.00
Y-T-D Tons	29.49	63.72	86.70	109.71	128.61	145.10	169.28	188.31	201.56	201.56	201.56	201.56
Last Year Monthly Tons	18.46	18.20	12.87	21.07	17.03	13.46	25.02	24.09	24.21	23.69	25.96	24.01
% Incr./Decr. Monthly	60%	88%	79%	9%	11%	23%	-3%	-21%	-45%	one ThisMonth	N/A	N/A

CONFIDENTIAL PAPER	Jul-19	Aug-19	Sep-19	Oct-19	Nov-19	Dec-19	Jan-20	Feb-20	Mar-20	Apr-20	May-20	Jun-20
CP-OWRR Collected	0.00	0.00	0.00	0.00	0.00	0.00	4.64	0.00	0.00	0.00	0.00	0.00
CP-SOM Contractor Collected												
CP-(Other) Contractor Collected	25.82	30.89	25.61	27.81	47.32	24.91	29.41	23.79	24.47	24.49	28.63	43.18
Monthly Tons	25.82	30.89	25.61	27.81	47.32	24.91	34.05	23.79	24.47	24.49	28.63	43.18
Y-T-D Tons	25.82	56.70	82.31	110.12	157.43	182.34	216.39	240.18	264.64	289.14	317.77	360.95
Last Year Monthly Tons	25.82	30.89	25.61	27.81	47.32	24.91	29.41	23.79	24.47	24.49	28.63	43.18
% Incr./Decr. Monthly	0%	0%	0%	0%	0%	0%	16%	0%	0%	0%	0%	0%

\*18-19 was first year to have comprehensive School of Medicine (SOM) totals AND totals from other UNC-CH locations

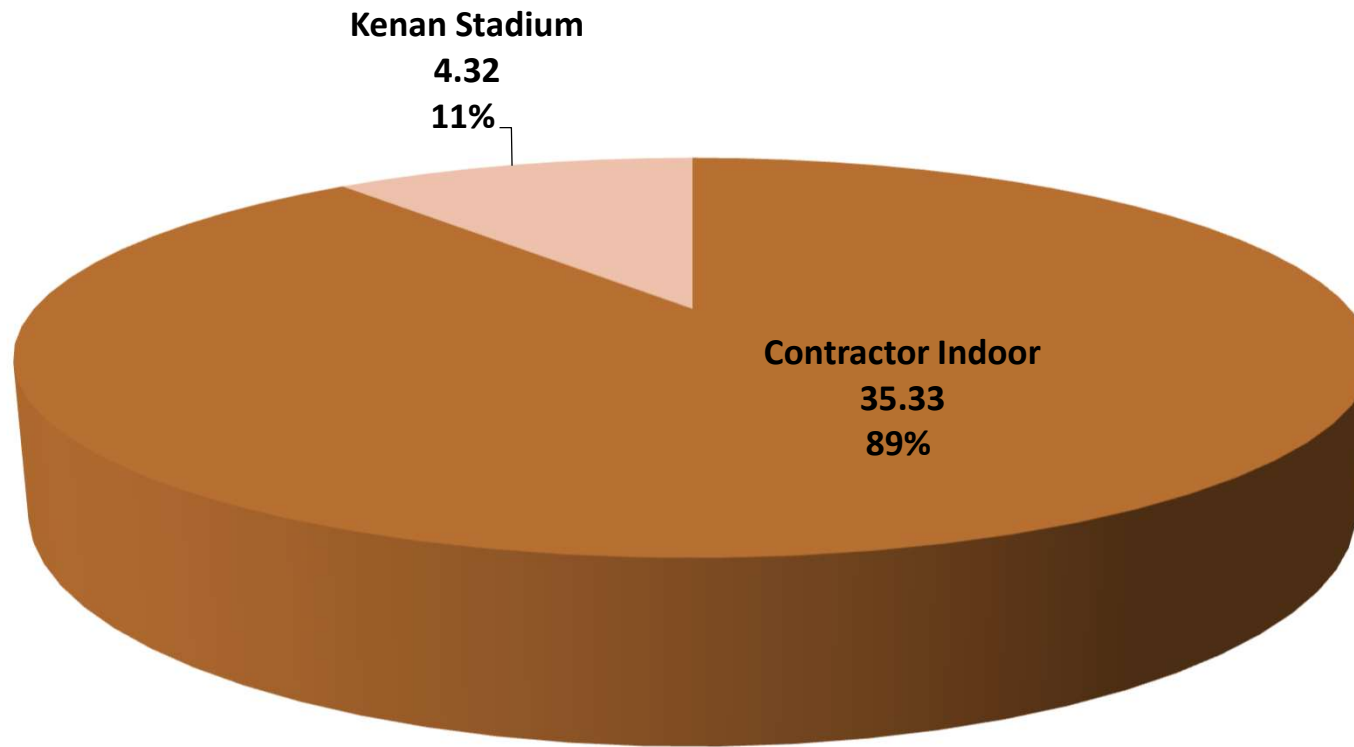
HARDBACK BOOKS	Jul-19	Aug-19	Sep-19	Oct-19	Nov-19	Dec-19	Jan-20	Feb-20	Mar-20	Apr-20	May-20	Jun-20
Monthly Tons	4.53	0.00	0.00	0.41	0.00	0.00	0.76	1.42	0.50	0.00	0.00	0.00
Y-T-D Tons	4.53	4.53	4.53	4.94	4.94	4.94	5.70	7.12	7.62	7.62	7.62	7.62
Last Year Monthly Tons	3.26	1.47	1.71	1.22	0.00	0.00	0.00	0.00	0.38	0.00	0.82	0.56
% Incr./Decr. Monthly	39%	N/A	N/A	-66%	0%	0%	N/A	N/A	32%	0%	N/A	N/A

MIXED PAPER TOTAL TONS	Jul-19	Aug-19	Sep-19	Oct-19	Nov-19	Dec-19	Jan-20	Feb-20	Mar-20	Apr-20	May-20	Jun-20
Monthly Tons	59.84	65.12	48.59	51.23	66.22	41.40	58.99	44.24	38.22	24.49	28.63	43.18
Y-T-D Tons	59.84	124.95	173.54	224.77	290.98	332.38	391.37	435.61	473.82	498.32	526.95	570.13
Last Year Monthly Tons	47.54	50.56	40.19	50.10	64.35	38.37	54.43	47.88	49.06	48.18	55.41	67.75
% Incr./Decr. Monthly	26%	29%	21%	2%	3%	8%	8%	-8%	-22%	-49%	-48%	-36%

### TOTAL FIBER TONS

TOTAL FIBER	Jul-19	Aug-19	Sep-19	Oct-19	Nov-19	Dec-19	Jan-20	Feb-20	Mar-20	Apr-20	May-20	Jun-20
Monthly Tons	88.69	122.69	91.70	90.64	111.26	71.08	97.12	92.17	69.24	33.30	38.89	59.93
Y-T-D Tons	88.69	211.37	303.07	393.71	504.96	576.04	673.16	765.33	834.56	867.87	906.76	966.69
Last Year Monthly Tons	102.14	128.04	104.77	128.64	123.24	87.55	124.40	111.70	109.65	118.91	111.23	114.72
% Incr./Decr. Monthly	-13%	-4%	-12%	-30%	-10%	-19%	-22%	-17%	-37%	-72%	-65%	-48%

## Containers\* 2019-20



\*Containers = commingled bottles and cans (aluminum cans, glass bottles [green/blue, clear, brown, plastic bottles, steel cans])

**Note:** "Indoor " and "Outdoor " refers to where materials are collected. Our Indoor program is inside all buildings on campus. Our Outdoor program is outside all residence halls, buildings with high volumes or catering kitchens, etc. Outdoor numbers include materials collected from the "walkway sites". Materials collected from home football games are recorded under the "Kenan Stadium" heading. Bottles and cans from buildings serviced by OWRR are taken to the outdoor sites. Thus these statistics aren't a true representation of amounts collected from each individual area.

# FISCAL YEAR 2019-20 WASTE RECOVERY TREND REPORT

## CONTAINERS (BOTTLES AND CANS)

CONTAINERS	Jul-19	Aug-19	Sep-19	Oct-19	Nov-19	Dec-19	Jan-20	Feb-20	Mar-20	Apr-20	May-20	Jun-20
Indoor Recycling	3.88	4.80	4.05	4.38	3.62	3.20	4.53	4.14	2.73	0.00	0.00	0.00
Football Recycling*	0.00	0.00	2.25	1.35	0.72	0.00	0.00	0.00	0.00	0.00	0.00	0.00

\*\*\*NOTE: Due to the COVID pandemic, all indoor recycling for April, May, and June was collected by OWRR staff and placed in the mixed recycling containers picked up by Sonoco.

## TOTAL CONTAINERS

TOTAL CONTAINERS	Jul-19	Aug-19	Sep-19	Oct-19	Nov-19	Dec-19	Jan-20	Feb-20	Mar-20	Apr-20	May-20	Jun-20
Monthly Tons	3.88	4.80	6.30	5.73	4.34	3.20	4.53	4.14	2.73	0.00	0.00	0.00
Y-T-D Tons	<b>3.88</b>	<b>8.68</b>	<b>14.98</b>	<b>20.71</b>	<b>25.05</b>	<b>28.25</b>	<b>32.78</b>	<b>36.92</b>	<b>39.65</b>	<b>39.65</b>	<b>39.65</b>	<b>39.65</b>
Last Year Monthly Tons	3.10	3.30	3.82	4.92	6.11	2.77	4.87	4.74	3.84	4.43	4.12	4.81
% Incr./Decr. Monthly	25%	45%	65%	16%	-29%	16%	-7%	-13%	-29%	N/A	N/A	N/A

\*Football statistics are from Kenan Stadium. Tailgate recyclables are included in the single stream statistics.



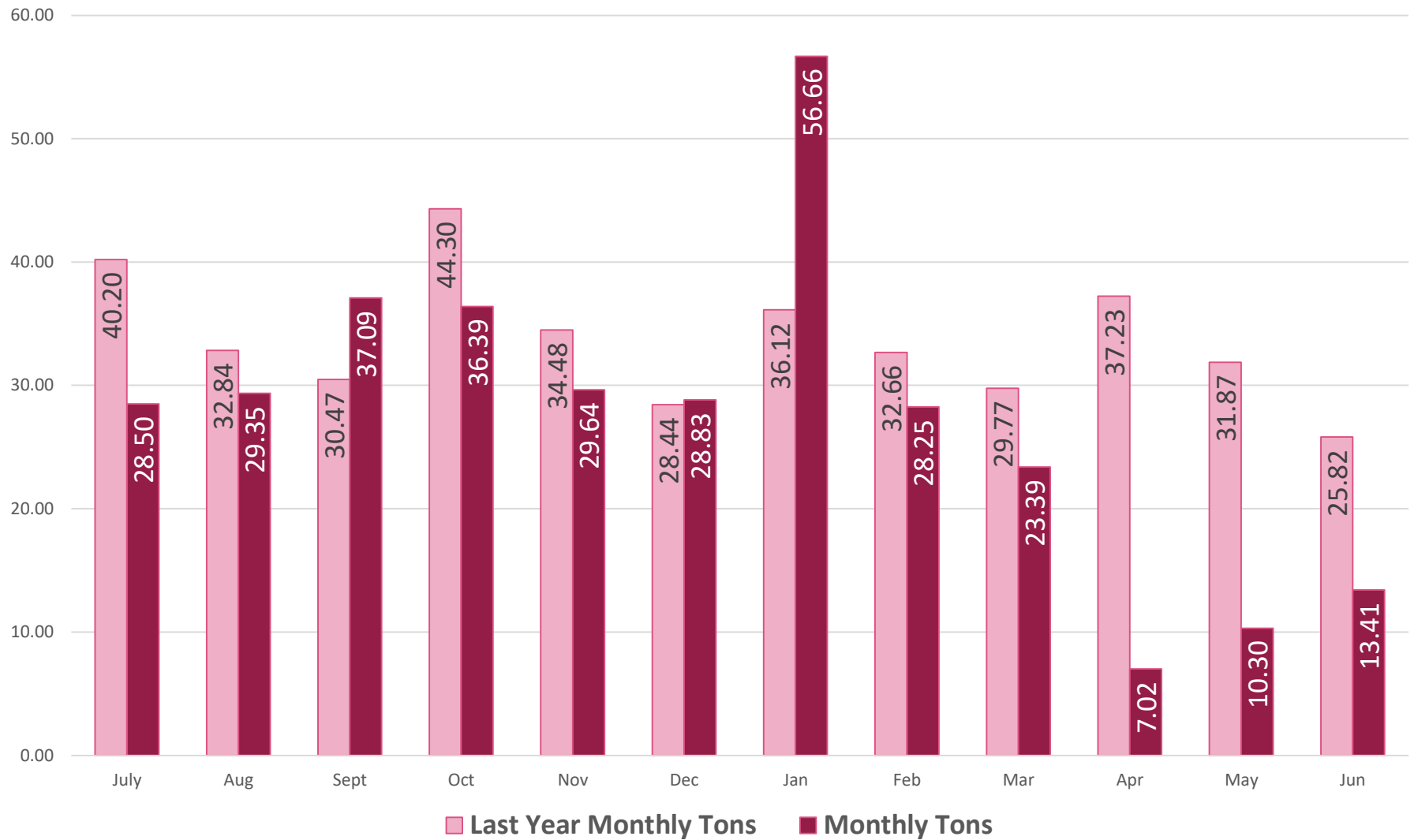
Office of Waste Reduction  
and Recycling  
(919) 962-1442  
[go.unc.edu/recycling](http://go.unc.edu/recycling)

# BOTTLES & CANS

Plastic and Glass Bottles ■ #2 and #5 Plastic Tubs  
Aluminum and Steel Cans

8

# Mixed Recycling Collected by Sonoco FY18-19 vs. FY19-20 in tons



## FISCAL YEAR 2019-20 WASTE RECOVERY TREND REPORT

### MIXED RECYCLING - CARTS

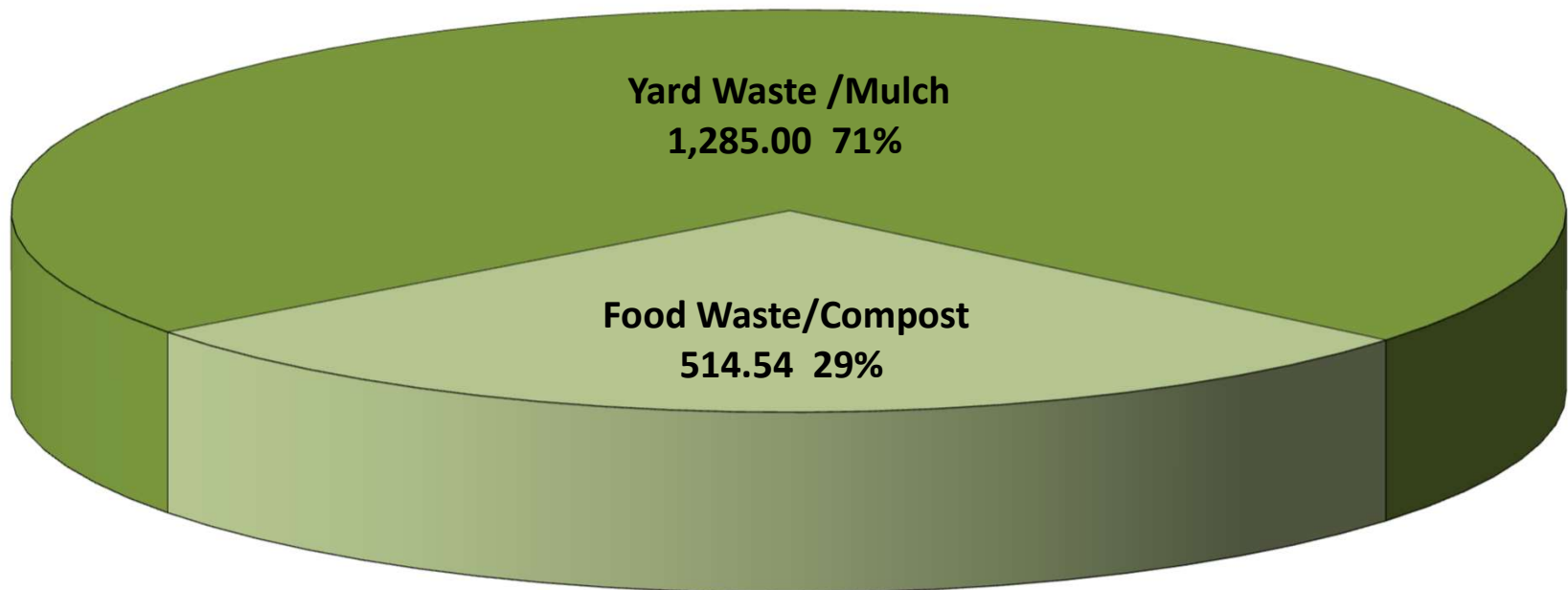
MIXED RECYCLING (Outdoor Carts)	Jul-19	Aug-19	Sep-19	Oct-19	Nov-19	Dec-19	Jan-20	Feb-20	Mar-20	Apr-20	May-20	Jun-20
Monthly Tons	28.50	29.35	37.09	36.39	29.64	28.83	56.66	28.25	23.39	7.02	10.30	13.41
<b>Y-T-D Tons</b>	<b>28.50</b>	<b>57.85</b>	<b>94.94</b>	<b>131.33</b>	<b>160.97</b>	<b>189.80</b>	<b>246.46</b>	<b>274.71</b>	<b>298.10</b>	<b>305.12</b>	<b>10.30</b>	<b>23.71</b>
Last Year Monthly Tons	40.20	32.84	30.47	44.30	34.48	28.44	36.12	32.66	29.77	37.23	31.87	25.82
% Incr./Decr. Monthly	-29%	-11%	22%	-18%	-14%	1%	57%	-14%	-21%	-81%	-68%	-48%

\*Note: January 2020 is unusually high. This data was verified, but cannot be explained.

\*\*Note: COVID pandemic affected recovery rates starting in March 2020.

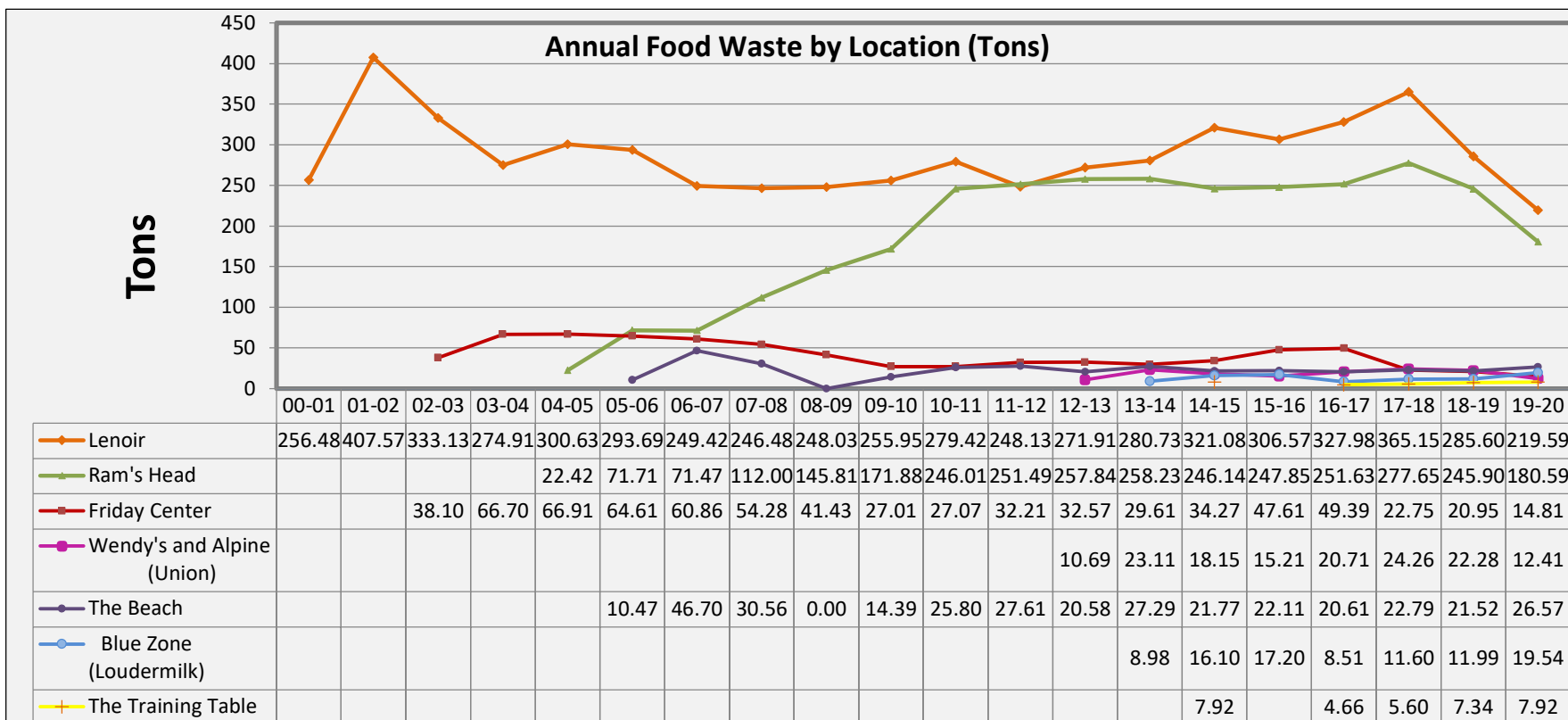
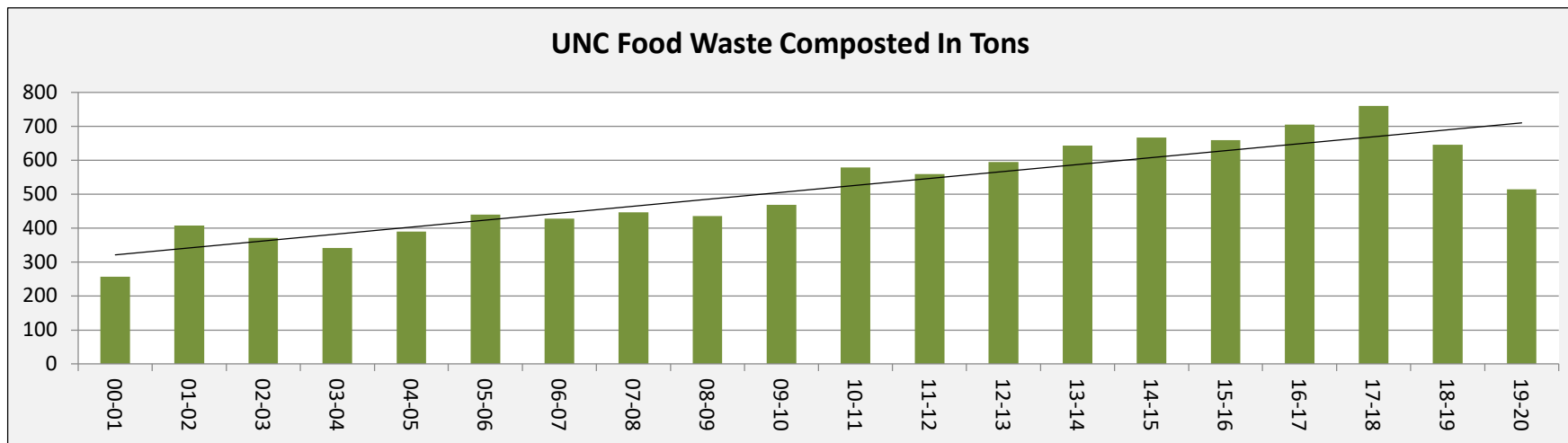


## Recovered Organic Material 2019-20

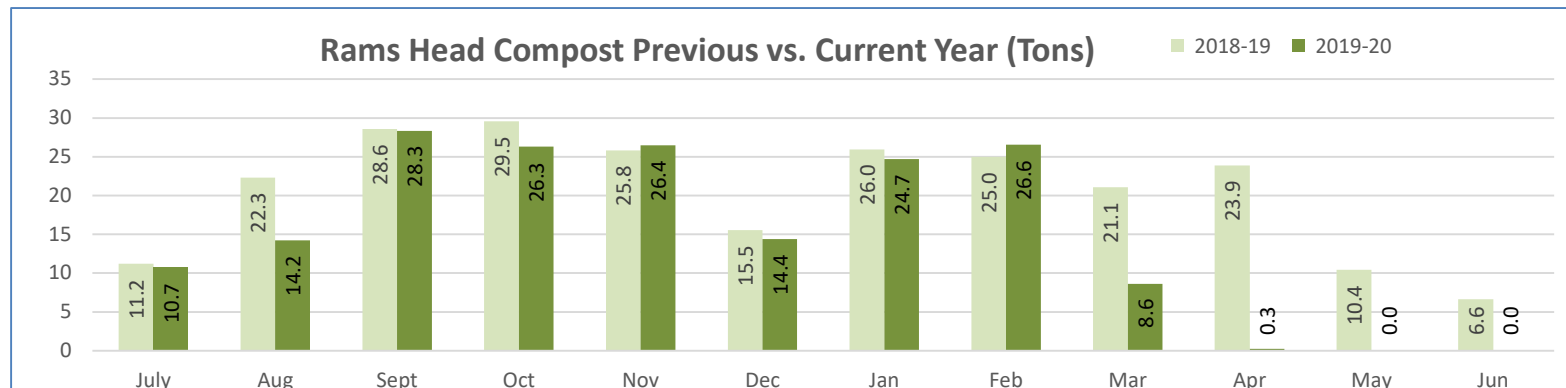
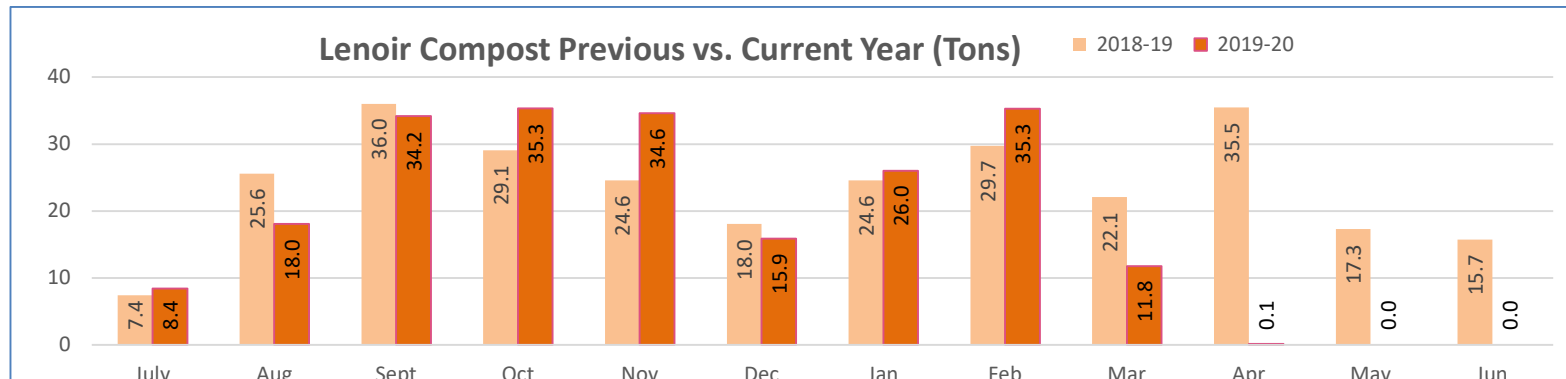
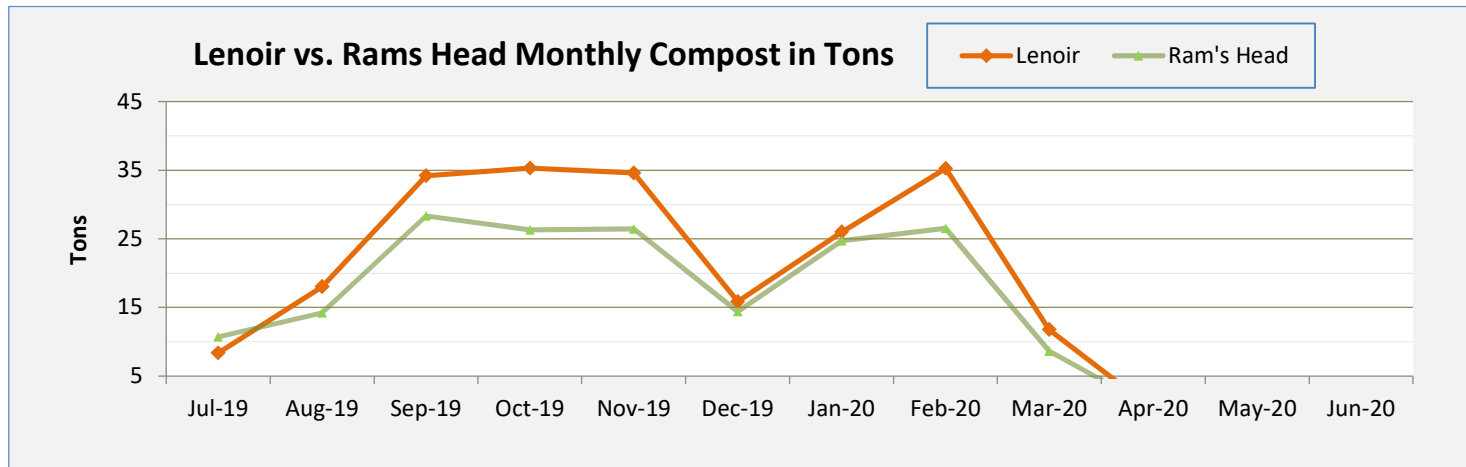


*NOTE: Prior to FY 17-18, yard waste totals were based on volume-to-weight conversions that were calculated based on estimated truck loads of leaves, limbs, and branches (with varying contents, truck sizes, and % full.)*





<b>2019-20 Food Waste (tons)</b>	<b>Jul-19</b> 27.70	<b>Aug-19</b> 41.73	<b>Sep-19</b> 80.71	<b>Oct-19</b> 80.99	<b>Nov-19</b> 74.92	<b>Dec-19</b> 41.08	<b>Jan-20</b> 61.67	<b>Feb-20</b> 71.79	<b>Mar-20</b> 30.94	<b>Apr-20</b> 1.50	<b>May-20</b> 0.44	<b>Jun-20</b> 1.07	<b>Year To Date:</b> <b>514.54</b>
<b>Blue Zone</b> (Loudermilk)	0.33	0.34	3.95	3.77	4.36	1.17	2.58	1.46	1.43	0.15	0.00	0.00	<b>19.54</b>
<b>Consolidated Pickups*</b>	1.47	1.28	2.48	1.91	0.76	1.75	0.00	0.68	1.07	0.00	0.00	0.00	<b>11.40</b>
<b>Friday Center</b>	1.36	1.57	2.25	4.67	1.79	0.93	0.91	0.06	1.27	0.00	0.00	0.00	<b>14.81</b>
<b>Hyde Hall</b>	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	<b>0.00</b>
<b>Greenhouse</b> (Genome Building)	2.21	1.13	2.08	2.20	2.31	0.93	1.39	1.72	3.33	0.29	0.44	0.89	<b>18.92</b>
<b>Lenoir</b>	8.39	18.03	34.19	35.32	34.62	15.86	25.99	35.27	11.78	0.14	0.00	0.00	<b>219.59</b>
<b>Ram's Head</b> (Chase Hall)	10.71	14.24	28.34	26.31	26.44	14.40	24.71	26.55	8.64	0.25	0.00	0.00	<b>180.59</b>
<b>The Beach Cafe</b> (Brinkhous- Bullitt)	2.55	3.05	3.67	3.34	2.34	1.97	3.59	3.11	2.60	0.35	0.00	0.00	<b>26.57</b>
<b>The Mean Time</b> (Campus Y)	0.10	0.11	0.35	0.57	0.70	0.27	0.20	0.29	0.21	0.00	0.00	0.00	<b>2.80</b>
<b>The Training Table</b> (Football)	0.14	1.17	1.64	1.14	1.37	0.80	0.56	0.46	0.29	0.17	0.00	0.18	7.92
<b>Wendy's and Alpine</b> (Union)	0.44	0.81	1.77	1.76	0.23	3.00	1.74	2.19	0.32	0.15	0.00	0.00	<b>12.41</b>
* This includes compost from Residence Halls and several special collection points (Bot Garden, EHS, SOG, TTK).													
Rizzo Center began in February 2008. It is not counted as University.													
Carolina Inn began in October 2009. It is not counted as University.													
Hospital began in 2008. It is not counted as University.													
*The Special Events site collects waste from several pilot locations on campus such as the Botanical Gardens, School of Government, Global Education Center, and individual events.													



COOKING GREASE IN BEACH  
CAFÉ ONLY APRIL, MAY, JUNE  
2020 - SEE "OTHER" SHEET

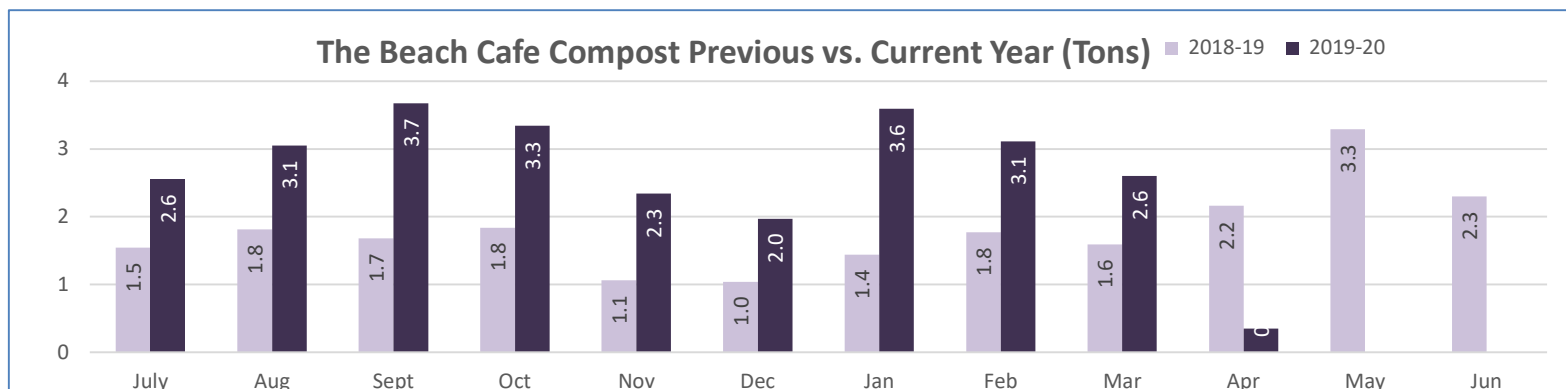
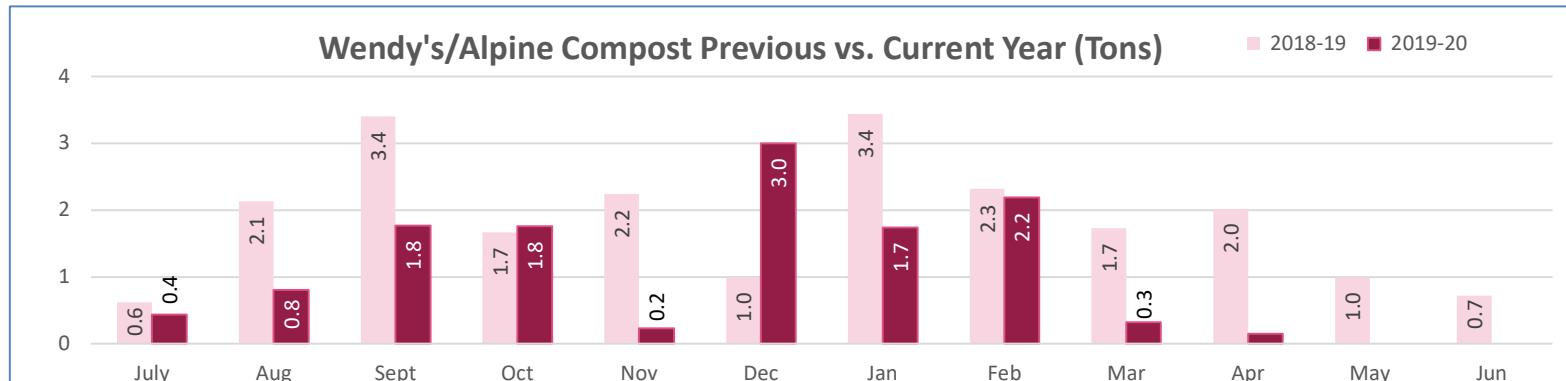
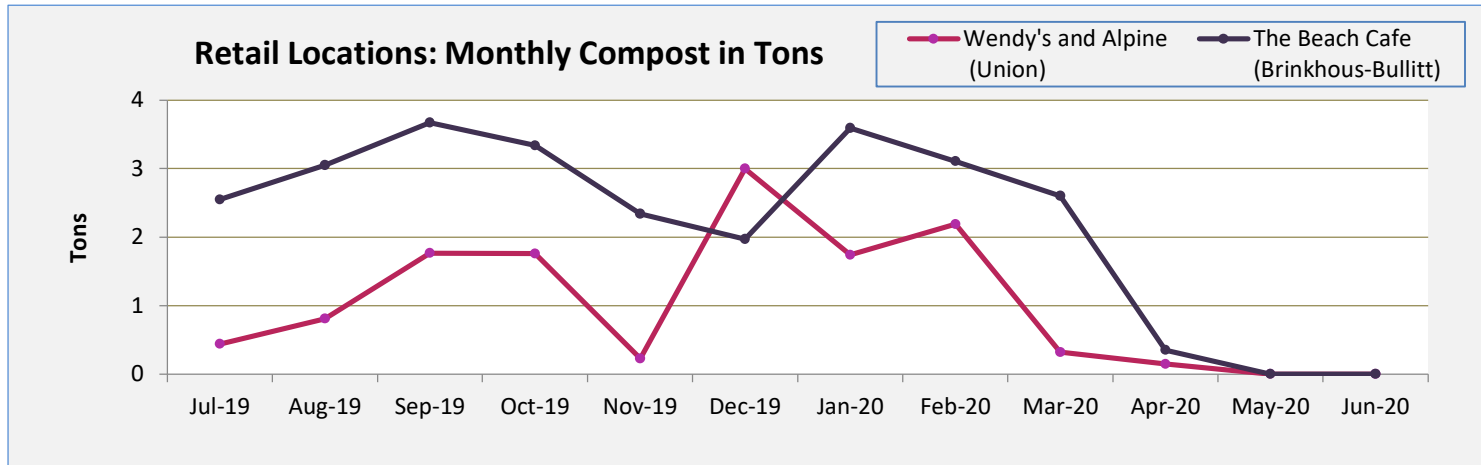
**2019-20 Trash, Cardboard, and Compost at Lenoir and Rams Head Dining Halls**

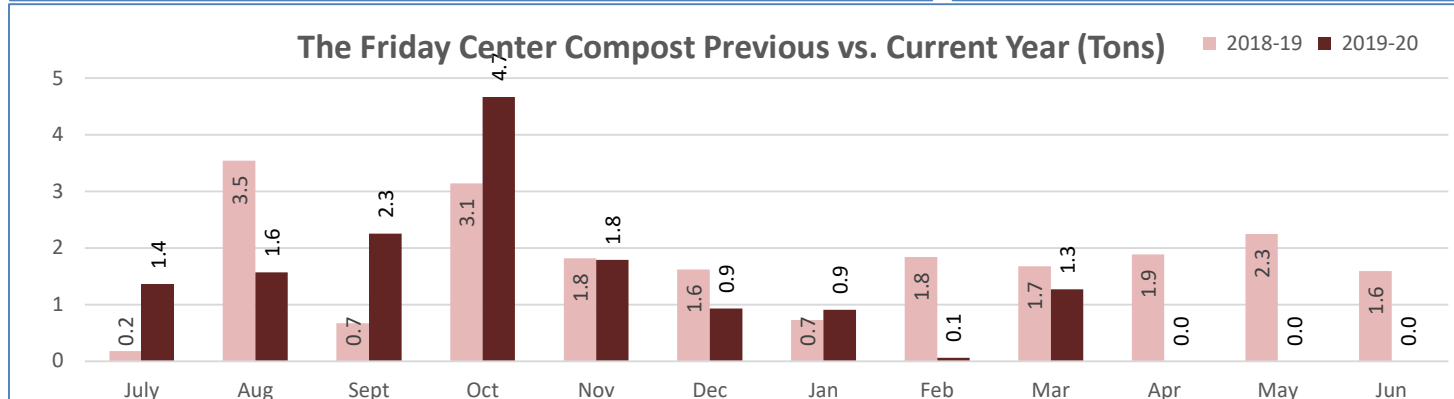
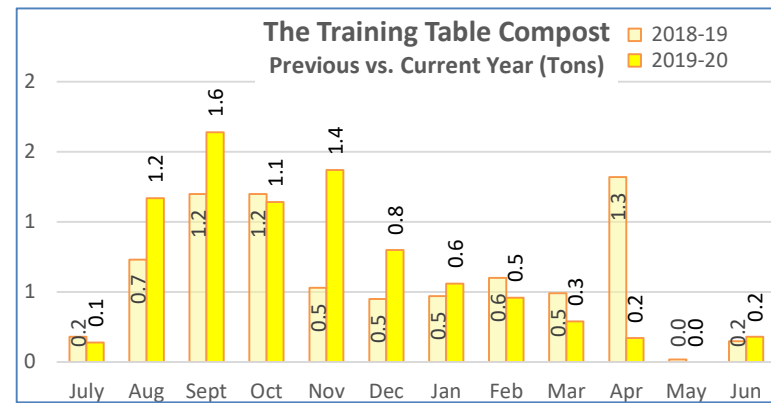
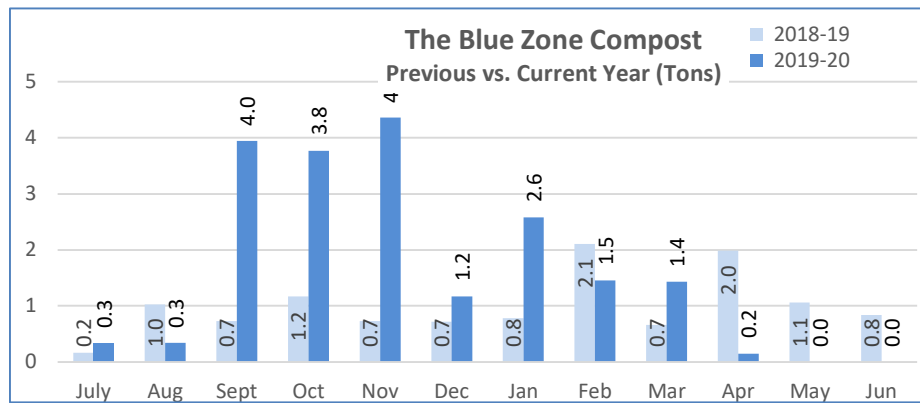
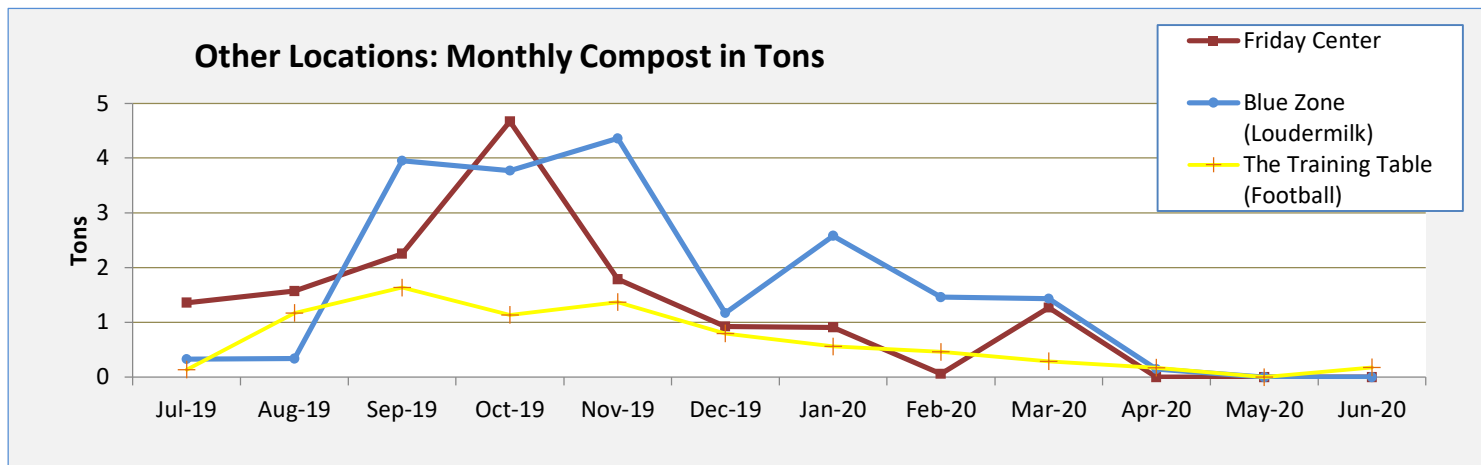
Lenoir Waste by Ton	Trash	Cardboard	Compost	Mixed Recycling	**Used Cooking Grease	Total Recycled Tons	Recovery Rate
Jul-19	7.03	2.21	8.39	0.23	0.86	11.69	62.4%
Aug-19	12.95	4.67	18.03	0.33	0.23	23.26	64.2%
Sep-19	15.53	7.61	34.19	0.28	1.18	43.26	73.6%
Oct-19	28.54	7.82	35.32	0.28	0.99	44.41	60.9%
Nov-19	19.94	7.76	34.62	0.20	0.99	43.57	68.6%
Dec-19	11.32	3.68	15.86	0.15	0.83	20.52	64.4%
Jan-20	15.38	5.73	25.99	0.44	0.38	32.54	67.9%
Feb-20	19.81	6.65	35.27	0.20	1.26	43.38	68.7%
Mar-20	11.03	1.76	11.78	0.07	0.39	14.00	55.9%
Apr-20	0.00	0.00	0.14	0.00	0.00	0.14	100.0%
May-20	0.00	0.00	0.00	0.00	0.00	0.00	0.0%
Jun-20	1.00	0.00	0.00	0.00	0.00	0.00	0.0%
	<b>142.53</b>	<b>47.89</b>	<b>219.59</b>	<b>2.18</b>	<b>6.25</b>	<b>275.91</b>	<b>65.9%</b>

**2019-20**

Rams Head Waste by Ton	Trash	Cardboard	Compost	Mixed Recycling	**Used Cooking Grease	Total Recycled Tons	Recovery Rate
Jul-19	7.07	1.79	10.71	0.17	0.00	12.67	64.2%
Aug-19	8.09	4.99	14.24	0.22	0.85	20.30	71.5%
Sep-19	14.98	5.98	28.34	0.28	0.77	35.37	70.2%
Oct-19	10.63	5.31	26.31	0.28	0.68	32.58	75.4%
Nov-19	11.39	6.4	26.44	0.20	0.49	33.53	74.6%
Dec-19	9.58	3.87	14.40	0.13	0.26	18.66	66.1%
Jan-20	7.65	4.99	24.71	0.42	0.49	30.61	80.0%
Feb-20	10.71	5.36	26.55	0.20	0.90	33.01	75.5%
Mar-20	6.17	2.57	8.64	0.14	0.41	11.76	65.6%
Apr-20	2.79	1.32	0.25	0.03	0.00	1.60	36.4%
May-20	1.00	0.30	0.00	0.05	0.00	0.35	25.9%
Jun-20	2.13	0.00	0.00	0.00	0.00	0.00	0.0%
	<b>92.19</b>	<b>42.88</b>	<b>180.59</b>	<b>2.12</b>	<b>4.85</b>	<b>230.44</b>	<b>71.4%</b>

**Food Waste Composted since 2000: 9,664 Tons  
19,327,484 Pounds**

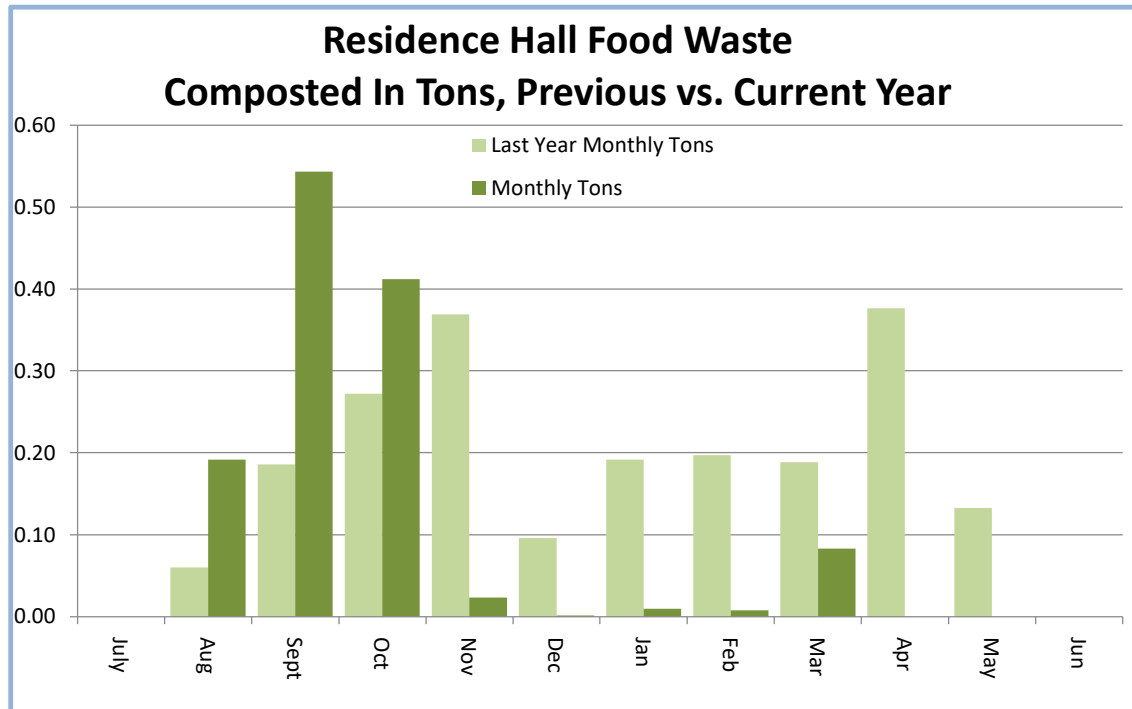




In July 2017, CDS catering operations were moved to Chase Hall/Rams Head. Rocky Top was the food service provider for the Friday Center from July 2017 through June 2018.

## FISCAL YEAR 2019-20 WASTE RECOVERY TREND REPORT

ORGANIC												
RESIDENTIAL COMPOST	Jul-19	Aug-19	Sep-19	Oct-19	Nov-19	Dec-19	Jan-20	Feb-20	Mar-20	Apr-20	May-20	Jun-20
Monthly Tons	0.00	0.19	0.54	0.41	0.02	0.00	0.01	0.01	0.08			0.00
<b>Y-T-D Tons</b>	<b>0.00</b>	<b>0.19</b>	<b>0.73</b>	<b>1.15</b>	<b>1.17</b>	<b>1.17</b>	<b>1.18</b>	<b>1.19</b>	<b>1.27</b>	<b>1.27</b>	<b>1.27</b>	<b>1.27</b>
Last Year Monthly Tons	0.00	0.06	0.19	0.27	0.37	0.10	0.19	0.20	0.19	0.38	0.13	0.00
% Incr./Decr. Monthly	0%	218%	193%	51%	-94%	-99%	-95%	-96%	-56%	N/A	N/A	0%



Note: The program is put on hold and carts are removed during summer school and camp season (late May through mid-August). Kickoff programs happen in August. In 2018, carts were pulled at the end of May, before exams were over. In 2019, carts were removed in May, after graduation.



## FISCAL YEAR 2019-20 WASTE RECOVERY TREND REPORT

### ORGANIC

#### FOOD WASTE (Dining, Residential & Special Events)

FOOD WASTE	Jul-19	Aug-19	Sep-19	Oct-19	Nov-19	Dec-19	Jan-20	Feb-20	Mar-20	Apr-20	May-20	Jun-20
Monthly Tons	27.70	41.73	80.71	80.99	74.92	41.08	61.67	71.79	30.94	1.50	0.44	1.07
<b>Y-T-D Tons</b>	<b>27.70</b>	<b>69.43</b>	<b>150.14</b>	<b>231.13</b>	<b>306.05</b>	<b>347.13</b>	<b>408.80</b>	<b>480.59</b>	<b>511.53</b>	<b>513.03</b>	<b>513.47</b>	<b>514.54</b>
Last Year Monthly Tons	23.05	59.29	74.11	71.50	58.51	39.85	59.23	65.81	52.96	72.57	38.41	30.87
% Incr./Decr. Monthly	20%	-30%	9%	13%	28%	3%	4%	9%	-42%	-98%	-99%	-0.97

#### MULCH PRODUCED FROM YARD WASTE AND TRIMMINGS

MULCH PRODUCED	Jul-19	Aug-19	Sep-19	Oct-19	Nov-19	Dec-19	Jan-20	Feb-20	Mar-20	Apr-20	May-20	Jun-20
Monthly Tons	0.00	120.00	240.00	120.00	275.00	330.00	80.00	120.00	0.00	0.00	0.00	0.00
<b>Y-T-D Tons</b>	<b>0.00</b>	<b>120.00</b>	<b>360.00</b>	<b>480.00</b>	<b>755.00</b>	<b>1,085.00</b>	<b>1,165.00</b>	<b>1,285.00</b>	<b>1,285.00</b>	<b>1,285.00</b>	<b>1,285.00</b>	<b>1,285.00</b>
Last Year Monthly Tons	0.00	30.00	180.00	130.00	270.00	265.00	240.00	230.00	0.00	0.00	90.00	0.00
% Incr./Decr. Monthly	0%	300%	33%	-8%	2%	25%	-67%	-48%	0%	0%	N/A	0.00

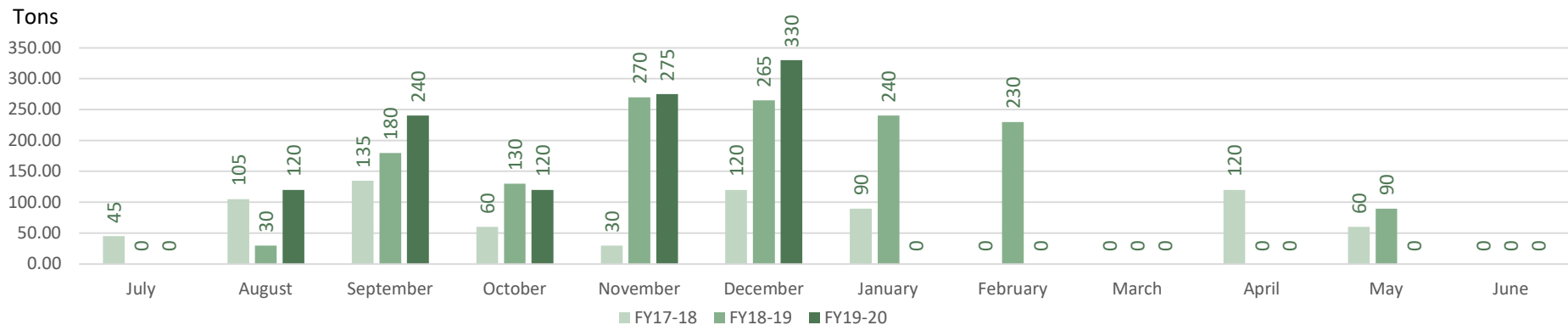
### TOTAL ORGANIC TONS

note: Pallets have been moved to the C&D page.

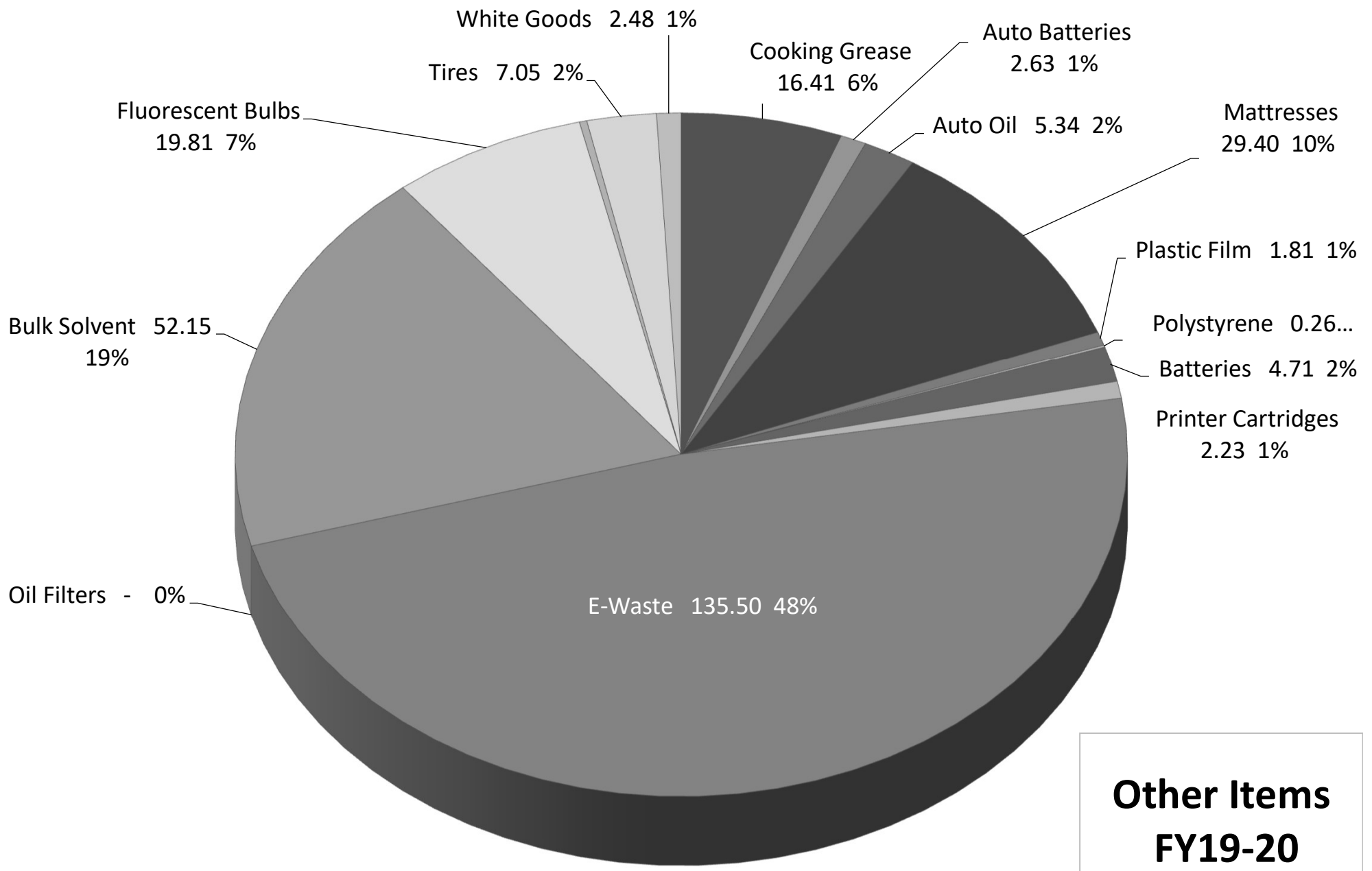
TOTAL ORGANIC	Jul-19	Aug-19	Sep-19	Oct-19	Nov-19	Dec-19	Jan-20	Feb-20	Mar-20	Apr-20	May-20	Jun-20
Monthly Tons	27.70	161.73	320.71	200.99	349.92	371.08	141.67	191.79	30.94	1.50	0.44	1.07
<b>Y-T-D Tons</b>	<b>27.70</b>	<b>189.43</b>	<b>510.14</b>	<b>711.13</b>	<b>1,061.05</b>	<b>1,432.13</b>	<b>1,573.80</b>	<b>1,765.59</b>	<b>1,796.53</b>	<b>1,798.03</b>	<b>1,798.47</b>	<b>1,799.54</b>
Last Year Monthly Tons	23.05	89.29	254.11	201.50	328.51	304.85	299.23	295.81	52.96	72.57	128.41	30.87
% Incr./Decr. Monthly	20%	81%	26%	0%	7%	22%	-53%	-35%	-42%	-98%	-100%	-0.97

### Monthly Yard Waste Tons: Three-year comparison

*Starting in FY17-18, a volume-to-weight conversion using cubic yards produced is used to measure yard waste recovered/diverted from landfill.*







# FISCAL YEAR 2019-20 WASTE RECOVERY TREND REPORT

## OTHER ITEMS

### SPECIAL WASTES

<b>AUTO BATTERIES</b>	Jul-19	Aug-19	Sep-19	Oct-19	Nov-19	Dec-19	Jan-20	Feb-20	Mar-20	Apr-20	May-20	Jun-20
Monthly Tons	0.25	0.23	0.29	0.20	0.25	0.09	0.16	0.25	0.20	0.05	0.32	0.34
<b>Y-T-D Tons</b>	<b>0.25</b>	<b>0.47</b>	<b>0.77</b>	<b>0.97</b>	<b>1.22</b>	<b>1.31</b>	<b>1.47</b>	<b>1.72</b>	<b>1.92</b>	<b>1.97</b>	<b>2.29</b>	<b>2.63</b>
Last Year Monthly Tons	0.05	0.25	0.20	0.20	0.16	0.16	0.18	0.14	0.14	0.16	0.18	0.09
% Incr./Decr. Monthly	450%	-9%	46%	1%	55%	-44%	-11%	85%	48%	-69%	78%	278%

<b>AUTO OIL</b>	Jul-19	Aug-19	Sep-19	Oct-19	Nov-19	Dec-19	Jan-20	Feb-20	Mar-20	Apr-20	May-20	Jun-20
Monthly Tons	0.00	1.18	0.00	0.70	0.00	1.62	0.82	0.56	0.00	0.46	0.00	0.00
<b>Y-T-D Tons</b>	<b>0.00</b>	<b>1.18</b>	<b>1.18</b>	<b>1.88</b>	<b>1.88</b>	<b>3.50</b>	<b>4.32</b>	<b>4.88</b>	<b>4.88</b>	<b>5.34</b>	<b>5.34</b>	<b>5.34</b>
Last Year Monthly Tons	0.55	0.00	1.15	0.52	0.52	0.00	0.82	0.00	0.86	0.52	0.00	1.21
% Incr./Decr. Monthly	N/A	N/A	N/A	35%	N/A	N/A	0%	N/A	N/A	-12%	0%	N/A

<b>AUTO OIL FILTERS</b>	Jul-19	Aug-19	Sep-19	Oct-19	Nov-19	Dec-19	Jan-20	Feb-20	Mar-20	Apr-20	May-20	Jun-20
Monthly Tons	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Y-T-D Tons</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
Last Year Monthly Tons	0.00	0.00	0.90	0.00	0.52	0.00	0.00	0.90	0.90	0.00	0.00	0.00
% Incr./Decr. Monthly	0%	0%	N/A	0%	N/A	0%	0%	N/A	N/A	0%	0%	0%

<b>AUTO COOLANT</b>	Jul-19	Aug-19	Sep-19	Oct-19	Nov-19	Dec-19	Jan-20	Feb-20	Mar-20	Apr-20	May-20	Jun-20
Monthly Tons	0.00	0.19	0.00	0.19	0.00	0.19	0.19	0.00	0.00	0.00	0.00	0.00
<b>Y-T-D Tons</b>	<b>0.00</b>	<b>0.19</b>	<b>0.19</b>	<b>0.38</b>	<b>0.38</b>	<b>0.57</b>	<b>0.76</b>	<b>0.76</b>	<b>0.76</b>	<b>0.76</b>	<b>0.76</b>	<b>0.76</b>
Last Year Monthly Tons	0.00	0.00	0.18	0.00	0.00	0.00	0.19	0.00	0.00	0.00	0.00	0.00
% Incr./Decr. Monthly	0%	last Year This	one ThisMont	last Year This	0%	last Year This	0%	0%	0%	0%	0%	0%

<b>BATTERIES</b>	Jul-19	Aug-19	Sep-19	Oct-19	Nov-19	Dec-19	Jan-20	Feb-20	Mar-20	Apr-20	May-20	Jun-20
Monthly Tons	1.85	0.00	0.00	0.21	0.42	0.14	0.00	2.07	0.02	0.00	0.00	0.00
<b>Y-T-D Tons</b>	<b>1.85</b>	<b>1.85</b>	<b>1.85</b>	<b>2.06</b>	<b>2.48</b>	<b>2.62</b>	<b>2.62</b>	<b>4.69</b>	<b>4.71</b>	<b>4.71</b>	<b>4.71</b>	<b>4.71</b>
Last Year Monthly Tons	0.00	1.56	0.00	0.45	0.08	0.00	0.05	3.82	0.02	0.25	0.56	0.15
% Incr./Decr. Monthly	N/A	N/A	0%	-53%	425%	N/A	N/A	-46%	-20%	N/A	N/A	N/A

<b>BULK SOLVENT</b>	Jul-19	Aug-19	Sep-19	Oct-19	Nov-19	Dec-19	Jan-20	Feb-20	Mar-20	Apr-20	May-20	Jun-20
Monthly Tons	0.00	0.00	0.00	0.00	11.43	11.43	11.43	11.43	0.00	6.43	0.00	0.00
<b>Y-T-D Tons</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>11.43</b>	<b>22.86</b>	<b>34.29</b>	<b>45.72</b>	<b>45.72</b>	<b>52.15</b>	<b>52.15</b>	<b>52.15</b>
Last Year Monthly Tons	0.00	0.00	11.43	0.00	0.00	11.43	0.00	11.43	11.43	0.00	11.43	0.00
% Incr./Decr. Monthly	0%	0%	N/A	0%	N/A	0%	N/A	0%	N/A	N/A	N/A	0%

<b>COOKING OIL (biodiesel)</b>	Jul-19	Aug-19	Sep-19	Oct-19	Nov-19	Dec-19	Jan-20	Feb-20	Mar-20	Apr-20	May-20	Jun-20
Monthly Tons	0.86	1.62	1.62	2.53	2.23	1.63	1.46	2.85	1.31	0.30	0.00	0.00
<b>Y-T-D Tons</b>	<b>0.86</b>	<b>2.48</b>	<b>4.10</b>	<b>6.63</b>	<b>8.86</b>	<b>10.49</b>	<b>11.95</b>	<b>14.80</b>	<b>16.11</b>	<b>16.41</b>	<b>16.41</b>	<b>16.41</b>
Last Year Monthly Tons	0.00	2.30	2.30	2.30	2.30	2.30	2.30	2.30	2.30	1.40	0.81	0.86
% Incr./Decr. Monthly	Last Year This	-30%	-30%	10%	-3%	-29%	-37%	24%	-43%	-79%	N/A	N/A

<b>DONATIONS (Move-out)</b>	Jul-19	Aug-19	Sep-19	Oct-19	Nov-19	Dec-19	Jan-20	Feb-20	Mar-20	Apr-20	May-20	Jun-20
Monthly Tons	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Y-T-D Tons</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
Last Year Monthly Tons	0.00	21.45	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
% Incr./Decr. Monthly	0%	N/A	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%

<b>E-WASTE</b>	Jul-19	Aug-19	Sep-19	Oct-19	Nov-19	Dec-19	Jan-20	Feb-20	Mar-20	Apr-20	May-20	Jun-20
Monthly Tons	21.20	9.80	16.10	18.50	17.70	3.90	19.90	17.20	11.20	0.00	0.00	0.00
<b>Y-T-D Tons</b>	<b>21.20</b>	<b>31.00</b>	<b>47.10</b>	<b>65.60</b>	<b>83.30</b>	<b>87.20</b>	<b>107.10</b>	<b>124.30</b>	<b>135.50</b>	<b>135.50</b>	<b>135.50</b>	<b>135.50</b>
Last Year Monthly Tons	14.51	14.67	7.85	15.56	10.54	0.79	11.74	10.93	13.68	18.46	15.93	17.59
% Incr./Decr. Monthly	46%	-33%	105%	19%	68%	394%	70%	57%	-18%	N/A	N/A	N/A

<b>FLUORESCENT BULBS</b>	Jul-19	Aug-19	Sep-19	Oct-19	Nov-19	Dec-19	Jan-20	Feb-20	Mar-20	Apr-20	May-20	Jun-20
Monthly Tons	1.12	0.00	2.91	1.10	0.51	1.38	1.54	8.00	2.37	0.88	0.00	0.00
<b>Y-T-D Tons</b>	<b>1.12</b>	<b>1.12</b>	<b>4.03</b>	<b>5.13</b>	<b>5.64</b>	<b>7.02</b>	<b>8.56</b>	<b>16.56</b>	<b>18.93</b>	<b>19.81</b>	<b>19.81</b>	<b>19.81</b>
Last Year Monthly Tons	2.20	1.54	0.00	2.54	1.10	1.98	1.98	0.00	0.50	0.88	0.28	0.44
% Incr./Decr. Monthly	-49%	N/A	N/A	-57%	-54%	-30%	-22%	N/A	374%	0%	N/A	N/A

<b>MATTRESSES</b>	Jul-19	Aug-19	Sep-19	Oct-19	Nov-19	Dec-19	Jan-20	Feb-20	Mar-20	Apr-20	May-20	Jun-20
Monthly Tons	29.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Y-T-D Tons</b>	<b>29.40</b>	<b>29.40</b>	<b>29.40</b>	<b>29.40</b>	<b>29.40</b>	<b>29.40</b>	<b>29.40</b>	<b>29.40</b>	<b>29.40</b>	<b>29.40</b>	<b>29.40</b>	<b>29.40</b>
Last Year Monthly Tons	0.00	0.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	29.00
% Incr./Decr. Monthly	N/A	N/A	0%	0%	0%	0%	0%	0%	0%	0%	0%	N/A

<b>METAL ITEMS</b>	Jul-19	Aug-19	Sep-19	Oct-19	Nov-19	Dec-19	Jan-20	Feb-20	Mar-20	Apr-20	May-20	Jun-20
Monthly Tons	0.24	0.13	0.40	0.34	0.30	0.24	0.31	0.23	0.15	0.00	0.00	0.14
<b>Y-T-D Tons</b>	<b>0.24</b>	<b>0.37</b>	<b>0.77</b>	<b>1.11</b>	<b>1.41</b>	<b>1.65</b>	<b>1.96</b>	<b>2.19</b>	<b>2.34</b>	<b>2.34</b>	<b>2.34</b>	<b>2.48</b>
Last Year Monthly Tons	0.24	0.31	0.00	0.26	0.00	0.12	0.18	0.28	0.29	0.27	0.27	0.25
% Incr./Decr. Monthly	0%	-58%	N/A	31%	N/A	100%	72%	-18%	-48%	N/A	N/A	-44%

<b>PLASTIC FILM</b>	Jul-19	Aug-19	Sep-19	Oct-19	Nov-19	Dec-19	Jan-20	Feb-20	Mar-20	Apr-20	May-20	Jun-20
Monthly Tons	0.00	0.48	0.49	0.00	0.00	0.33	0.00	0.34	0.00	0.00	0.17	0.00
<b>Y-T-D Tons</b>	<b>0.00</b>	<b>0.48</b>	<b>0.97</b>	<b>0.97</b>	<b>0.97</b>	<b>1.30</b>	<b>1.30</b>	<b>1.64</b>	<b>1.64</b>	<b>1.64</b>	<b>1.81</b>	<b>1.81</b>
Last Year Monthly Tons	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.32	0.00	0.76	0.00	0.57
% Incr./Decr. Monthly	0%	N/A	N/A	0%	0%	N/A	0%	6%	0%	N/A	N/A	N/A

<b>POLYSTYRENE (loose)</b>	Jul-19	Aug-19	Sep-19	Oct-19	Nov-19	Dec-19	Jan-20	Feb-20	Mar-20	Apr-20	May-20	Jun-20
Monthly Tons	0.00	0.26	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Y-T-D Tons</b>	<b>0.00</b>	<b>0.26</b>	<b>0.26</b>	<b>0.26</b>	<b>0.26</b>	<b>0.26</b>	<b>0.26</b>	<b>0.26</b>	<b>0.26</b>	<b>0.26</b>	<b>0.26</b>	<b>0.26</b>
Last Year Monthly Tons	0.00	0.29	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
% Incr./Decr. Monthly	0%	-10%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%

<b>PRINTER CARTRIDGES</b>	Jul-19	Aug-19	Sep-19	Oct-19	Nov-19	Dec-19	Jan-20	Feb-20	Mar-20	Apr-20	May-20	Jun-20
Monthly Tons	0.20	0.18	0.18	0.32	0.21	0.00	0.91	0.23	0.00	0.00	0.00	0.00
<b>Y-T-D Tons</b>	<b>0.20</b>	<b>0.38</b>	<b>0.56</b>	<b>0.88</b>	<b>1.09</b>	<b>1.09</b>	<b>2.00</b>	<b>2.23</b>	<b>2.23</b>	<b>2.23</b>	<b>2.23</b>	<b>2.23</b>
Last Year Monthly Tons	0.00	0.00	0.00	0.00	0.19	0.07	0.13	0.83	1.09	0.80	0.64	0.20
% Incr./Decr. Monthly	N/A	N/A	N/A	N/A	9%	N/A	601%	-72%	N/A	N/A	N/A	N/A

**PRINTER CARTRIDGES NOT REPORTED MAR - JUNE - COVID**

<b>TIRES</b>	Jul-19	Aug-19	Sep-19	Oct-19	Nov-19	Dec-19	Jan-20	Feb-20	Mar-20	Apr-20	May-20	Jun-20
Monthly Tons	2.35	0.00	0.00	0.00	0.00	1.72	0.00	1.03	0.00	0.00	0.00	1.95
<b>Y-T-D Tons</b>	<b>2.35</b>	<b>2.35</b>	<b>2.35</b>	<b>2.35</b>	<b>2.35</b>	<b>4.07</b>	<b>4.07</b>	<b>5.10</b>	<b>5.10</b>	<b>5.10</b>	<b>5.10</b>	<b>7.05</b>
Last Year Monthly Tons	0.00	1.44	0.00	0.00	1.48	0.00	1.78	0.00	0.00	0.00	0.00	0.00
% Incr./Decr. Monthly	N/A	N/A	0%	0%	N/A	N/A	N/A	N/A	0%	0%	0%	N/A

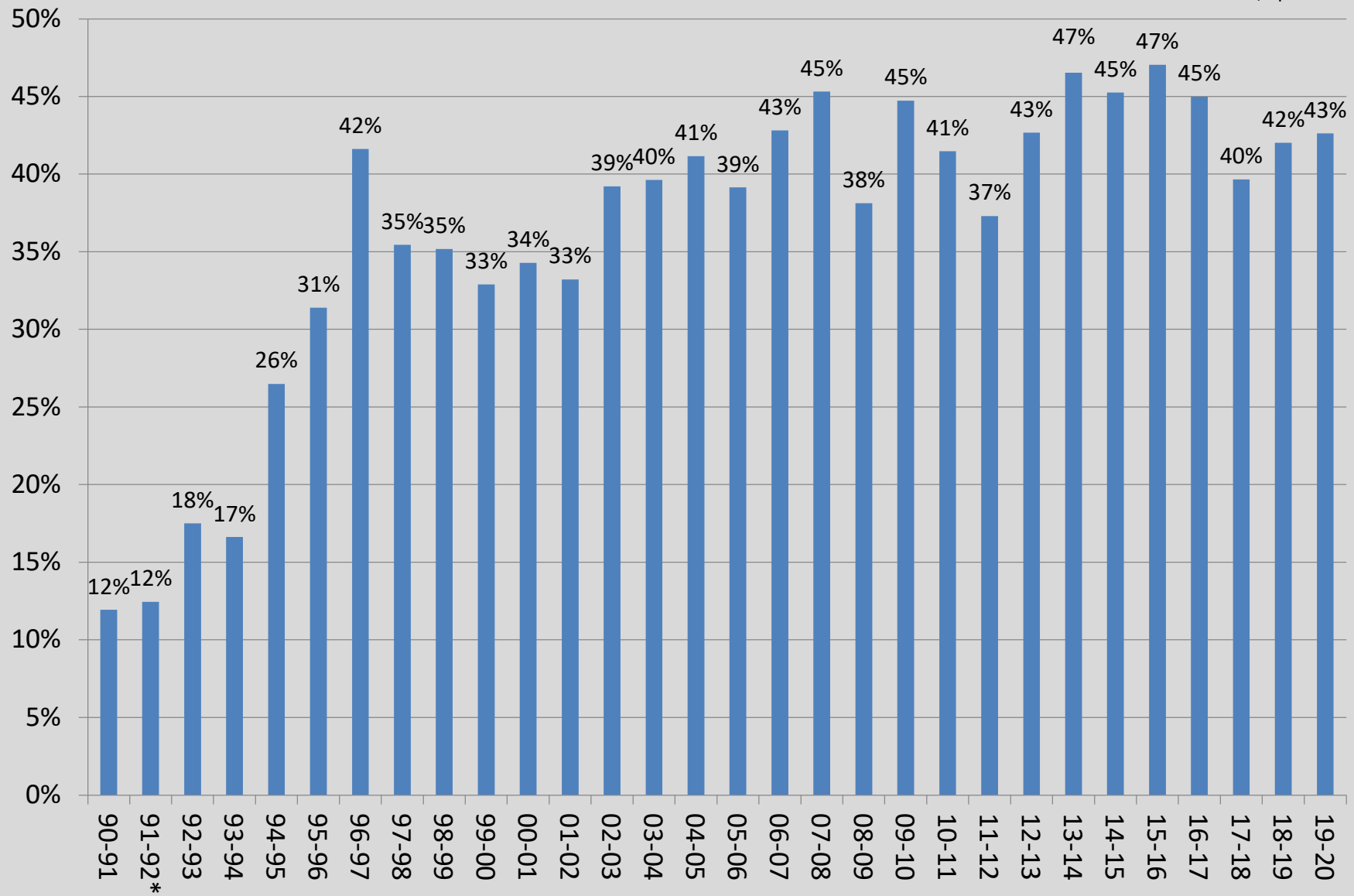
**OTHER TOTALS**

(note: scrap metal, surplus and concrete/brick have been moved to the C&D page)

<b>OTHER TOTAL</b>	Jul-19	Aug-19	Sep-19	Oct-19	Nov-19	Dec-19	Jan-20	Feb-20	Mar-20	Apr-20	May-20	Jun-20
Monthly Tons	57.47	14.07	21.99	24.09	33.05	22.67	36.72	44.19	15.25	8.12	0.49	2.43
<b>Y-T-D Tons</b>	<b>57.47</b>	<b>71.53</b>	<b>93.53</b>	<b>117.62</b>	<b>150.66</b>	<b>173.33</b>	<b>210.05</b>	<b>254.25</b>	<b>269.49</b>	<b>277.61</b>	<b>278.10</b>	<b>280.53</b>
Last Year Monthly Tons	17.55	43.97	24.01	21.83	16.89	16.85	19.35	30.95	31.21	23.50	30.10	50.36
% Incr./Decr. Monthly	228%	-68%	-8%	10%	96%	35%	90%	43%	-51%	-65%	-98%	-95%

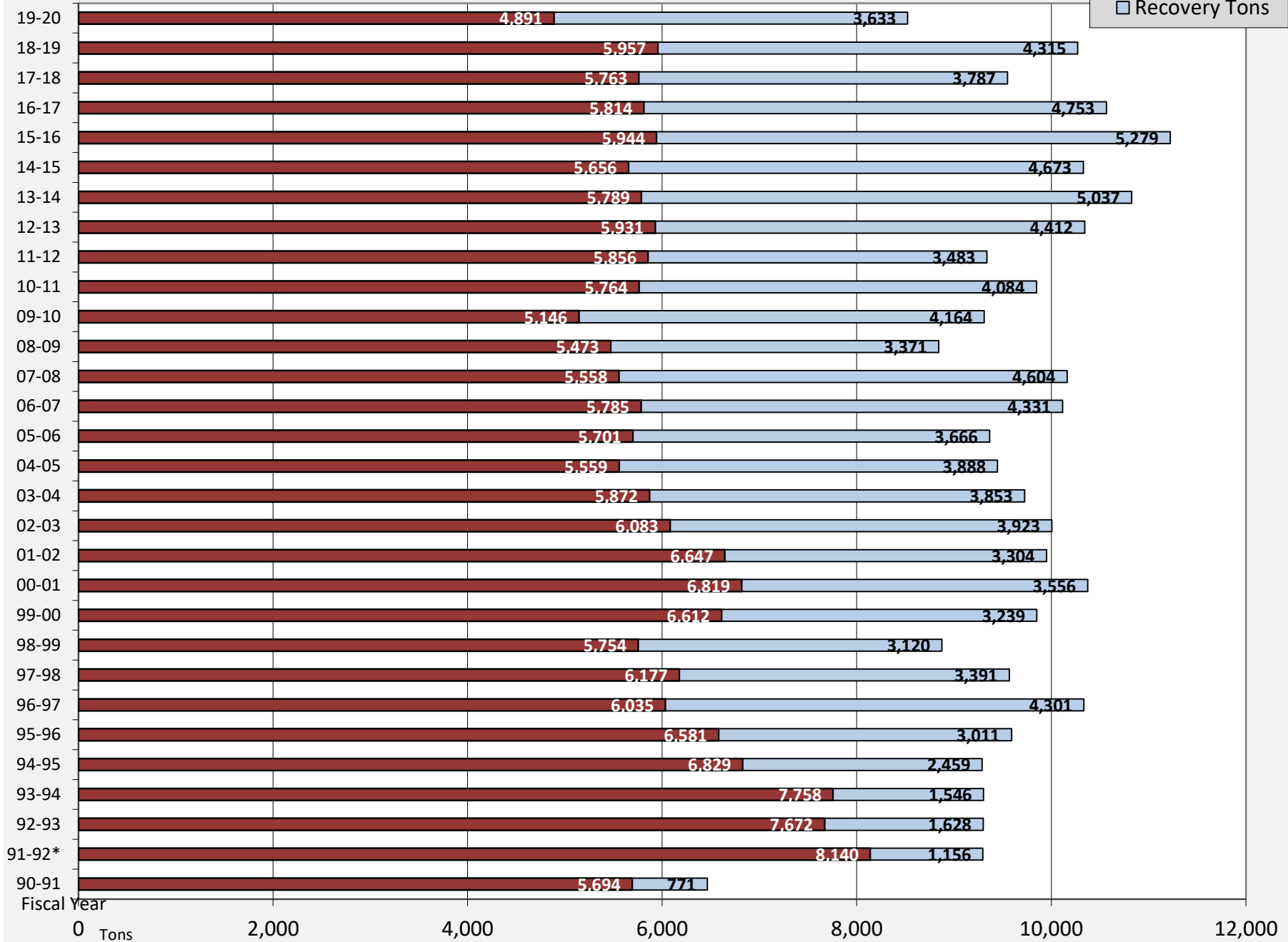
# Recovery Rate History

Note: COVID  
pandemic started  
March/April 2020.



# UNC-Chapel Hill Waste Landfill & Recovery Trends

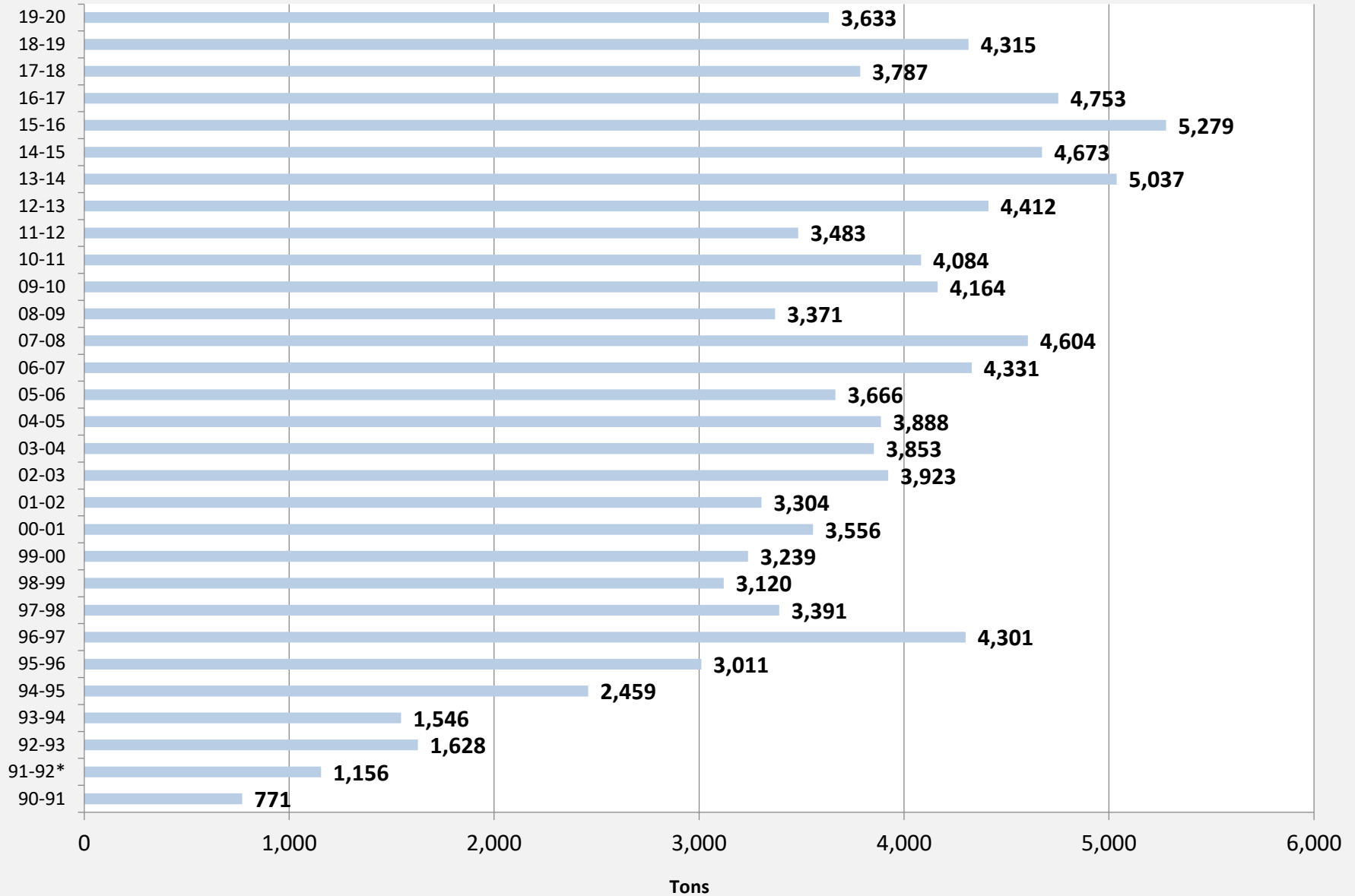
■ Trash Tons  
■ Recovery Tons



12/7/2021

# Historical View of Recovery Tons

Note: The drop in the amount recovered in FY17-18 is due to a change in the method used to calculate yard waste.



## Stats for April-May 2020 -- During early COVID closure

	Official stats		During COVID closure
Employees	17,658	5,338	Employees coming to campus
Students (FTE)	27,959		
Students (Headcount)	29,877	2,800	Students living on campus
<b>Campus Population</b>	<b>40,492</b>	<b>8,138</b>	Total on campus population

(as compared to 4Q 2019)						
TOTALS						
	Apr-20	May-20	Jun-20			
Total Landfilled (msw and c&d)	123.01	205.99	247.26	<b>576.26</b>	-64%	<b>2020</b>
	<b>498.32</b>	<b>605.53</b>	<b>485.77</b>	<b>1,589.62</b>		2019
	-75%	-66%	-49%			
Total Recycling	53.64	52.81	71.48	<b>177.93</b>	-77%	<b>2020</b>
	<b>231.09</b>	<b>309.15</b>	<b>232.76</b>	<b>773.01</b>		2019
	-77%	-83%	-69%			
Total Compost	1.50	0.44	1.07	<b>3.01</b>	-98%	<b>2020</b>
	<b>72.57</b>	<b>38.41</b>	<b>30.87</b>	<b>141.85</b>		2019
	-98%	-99%	-97%			
Total Waste Generated	178.15	259.23	319.81	<b>757.19</b>	-70%	<b>2020</b>
	<b>801.99</b>	<b>953.09</b>	<b>749.40</b>	<b>2,504.48</b>		2019
	-78%	-73%	-57%			
Total C&D Landfilled	0.00	10.02	5.04	<b>15.06</b>	-45%	<b>2020</b>
	<b>6.81</b>	<b>9.42</b>	<b>11.27</b>	<b>27.50</b>		2019
Total C&D Recycled	0.00	2.07	9.20	<b>11.27</b>	-89%	<b>2020</b>
	<b>40.41</b>	<b>33.72</b>	<b>29.33</b>	<b>103.46</b>		2019

4Q 2020 (as compared to 4Q 2019)						
	April	May	June	4Q total		
<b>Traditional Recyclables: Bottles, cans, jars, paper</b>						
Sonoco - mixed	<b>7.02</b>	<b>10.3</b>	<b>13.41</b>	<b>30.73</b>	-83%	<b>2020</b>
Sonoco - mixed	37.23	31.87	25.82	181.94		2019
shimar - mixed paper	23.69	25.96	24.01			2019
Shimar - containers	4.43	4.12	4.81			2019
cardboard	<b>8.81</b>	<b>10.26</b>	<b>16.75</b>	<b>35.82</b>	-64%	<b>2020</b>
	47.04	29.86	22.96	99.86		2019
Food waste	<b>1.5</b>	<b>0.44</b>	<b>1.07</b>	<b>3.01</b>	-98%	<b>2020</b>
	72.57	38.41	30.87	141.85		2019
E-waste	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	-100%	<b>2020</b>
	18.46	15.93	17.59	51.98		2019
Frontload trash	<b>50.72</b>	<b>88.89</b>	<b>110.25</b>	<b>249.86</b>	-65%	<b>2020</b>
	263.87	258.27	187.54	709.68		2019
Rolloff and compactors	<b>40.66</b>	<b>82</b>	<b>104.07</b>	<b>226.73</b>	-68%	<b>2020</b>
	180.42	291.80	241.91	714.13		2019
Animal Bedding	<b>31.63</b>	<b>25.08</b>	<b>27.9</b>	<b>84.61</b>	-39%	<b>2020</b>
	47.22	46.04	45.05	138.31		2019
Total MSW	<b>123.01</b>	<b>195.97</b>	<b>242.22</b>	<b>561.20</b>	-64%	<b>2020</b>
	491.51	596.11	474.50	1,562.12		2019



**FISCAL YEAR 2019-20 WASTE RECOVERY TREND REPORT**

<b>MUNICIPAL SOLID WASTE (MSW)</b>												
<b>MSW FRONT LOAD</b>	Jul-19	Aug-19	Sep-19	Oct-19	Nov-19	Dec-19	Jan-20	Feb-20	Mar-20	Apr-20	May-20	Jun-20
Monthly Tons	220.12	244.83	253.64	276.73	240.25	188.83	244.71	250.84	195.43	50.72	88.89	110.25
<b>Y-T-D Tons</b>	<b>220.12</b>	<b>464.95</b>	<b>718.59</b>	<b>995.32</b>	<b>1,235.57</b>	<b>1,424.40</b>	<b>1,669.11</b>	<b>1,919.95</b>	<b>2,115.38</b>	<b>2,166.10</b>	<b>2,254.99</b>	<b>2365.24</b>
Last Year Monthly Tons	199.81	288.84	252.76	301.38	272.96	209.42	232.64	242.68	238.38	263.87	258.27	187.54
% Incr./Decr. Monthly	10%	-15%	0%	-8%	-12%	-10%	5%	3%	-18%	-81%	-66%	-41%
<b>MSW ROLLOFF</b>	Jul-19	Aug-19	Sep-19	Oct-19	Nov-19	Dec-19	Jan-20	Feb-20	Mar-20	Apr-20	May-20	Jun-20
GFL Hauled - Perm.	148.56	145.01	149.22	226.86	168.71	138.12	160.13	149.45	140.30	30.21	51.32	91.89
GFL Hauled - Temp (FB, Events, Projects, MI/MO)	59.32	20.73	29.80	34.20	24.01	4.14	12.03	7.51	20.84	10.45	21.52	9.45
OWRR Hauled	1.70	5.97	0.63	1.39	0.00	0.00	0.62	0.62	7.63	0.00	9.16	2.73
Monthly Tons	209.58	171.71	179.65	262.45	192.72	142.26	172.78	157.58	168.77	40.66	82.00	104.07
<b>Y-T-D Tons</b>	<b>209.58</b>	<b>381.29</b>	<b>560.94</b>	<b>823.39</b>	<b>1,016.11</b>	<b>1,158.37</b>	<b>1,331.15</b>	<b>1,488.73</b>	<b>1,657.50</b>	<b>1,698.16</b>	<b>1,780.16</b>	<b>1,884.23</b>
Last Year Monthly Tons	132.97	196.4	199.57	214.02	175.43	124.07	177.67	177.52	151.96	180.42	291.8	241.91
% Incr./Decr. Monthly	58%	-13%	-10%	23%	10%	15%	-3%	-11%	11%	-77%	-72%	-57%
<div> <div>Housing project= increase in temp rolloffs</div> <div>Cogen, surplus, lenoir&gt;=20 tons each</div> </div>												
<b>MSW REAR LOAD</b>	Jul-19	Aug-19	Sep-19	Oct-19	Nov-19	Dec-19	Jan-20	Feb-20	Mar-20	Apr-20	May-20	Jun-20
Monthly Tons (FB, M/MO)	0.00	0.00	14.01	4.42	8.24	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Y-T-D Tons</b>	<b>0.00</b>	<b>0.00</b>	<b>14.01</b>	<b>18.43</b>	<b>26.67</b>	<b>26.67</b>	<b>26.67</b>	<b>26.67</b>	<b>26.67</b>	<b>26.67</b>	<b>26.67</b>	<b>26.67</b>
Last Year Monthly Tons	0	0	4.01	0	11.57	0	0	0	0	0	0	0
% Incr./Decr. Monthly	0%	0%	249%	N/A	-29%	0%	0%	0%	0%	0%	0%	0%
(3 games)												
<b>ANIMAL BEDDING</b>	Jul-19	Aug-19	Sep-19	Oct-19	Nov-19	Dec-19	Jan-20	Feb-20	Mar-20	Apr-20	May-20	Jun-20
Genetic Medicine	19.84	25.26	19.42	15.84	22.73	15.03	17.19	20.25	19.69	13.25	15.77	15.80
Bingham Facility	3.61	4.11	3.41	3.40	4.00	2.32	2.59	2.09	1.20	3.05	3.52	2.70
MEJ Facility	0.00	0.00	0.00	0.00	2.00	4.00	5.01	4.15	4.57	5.00	4.00	4.00
Rearload Carts	25.89	26.00	23.75	28.00	25.00	22.43	23.05	23.00	26.00	10.33	1.79	5.40
Monthly Tons	49.34	55.37	46.58	47.24	53.73	43.78	47.84	49.49	51.46	31.63	25.08	27.90
<b>Y-T-D Tons</b>	<b>49.34</b>	<b>104.71</b>	<b>151.29</b>	<b>198.53</b>	<b>252.26</b>	<b>296.04</b>	<b>343.88</b>	<b>393.37</b>	<b>444.83</b>	<b>476.46</b>	<b>501.54</b>	<b>529.44</b>
Last Year Monthly Tons	42.14	46.49	51.09	46.06	40.66	38.63	48.74	46.83	52.51	47.22	46.04	45.05
% Incr./Decr. Monthly	17%	19%	-9%	3%	32%	13%	-2%	6%	-2%	-33%	-46%	-38%
<b>MSW TOTAL</b>	Jul-19	Aug-19	Sep-19	Oct-19	Nov-19	Dec-19	Jan-20	Feb-20	Mar-20	Apr-20	May-20	Jun-20
Monthly Tons	479.04	471.91	493.88	590.84	494.94	374.87	465.33	457.91	415.66	123.01	195.97	242.22
<b>Y-T-D Tons</b>	<b>479.04</b>	<b>950.95</b>	<b>1,444.83</b>	<b>2,035.67</b>	<b>2,530.61</b>	<b>2,905.48</b>	<b>3,370.81</b>	<b>3,828.72</b>	<b>4,244.38</b>	<b>4,367.39</b>	<b>4,563.36</b>	<b>4,805.58</b>
Last Year Monthly Tons	374.92	531.73	507.43	561.46	500.62	372.12	459.05	467.03	442.85	491.51	596.11	475
% Incr./Decr. Monthly	28%	-11%	-3%	5%	-1%	1%	1%	-2%	-6%	-75%	-67%	-49%

TOTAL SOLID WASTE LANDFILLED (MSW and C&D)												
TOTAL SW LANDFILLED -- MSW and C&D	Jul-19	Aug-19	Sep-19	Oct-19	Nov-19	Dec-19	Jan-20	Feb-20	Mar-20	Apr-20	May-20	Jun-20
Monthly Tons	484.48	481.24	498.90	595.57	509.20	376.96	477.87	465.17	425.65	123.01	205.99	247.26
Last Year Monthly Tons	416.26	553.26	519.34	566.67	506.64	382.82	491.53	472.82	457.62	498.32	605.53	485.77
% Incr./Decr. MONTH	16%	-13%	-4%	5%	1%	-2%	-3%	-2%	-7%	-75%	-66%	-49%
Y-T-D Tons	484.48	965.72	1,464.62	2,060.19	2,569.39	2,946.35	3,424.22	3,889.39	4,315.04	4,438.05	4,644.04	4,891.30
Last Y-T-D Tons	416.26	969.52	1,488.86	2,055.53	2,562.17	2,944.98	3,436.51	3,909.33	4,366.94	4,865.26	5,470.79	5,956.56
% Incr./Decr. YTD	16%	0%	-2%	0%	0%	0%	0%	-1%	-1%	-9%	-15%	-18%

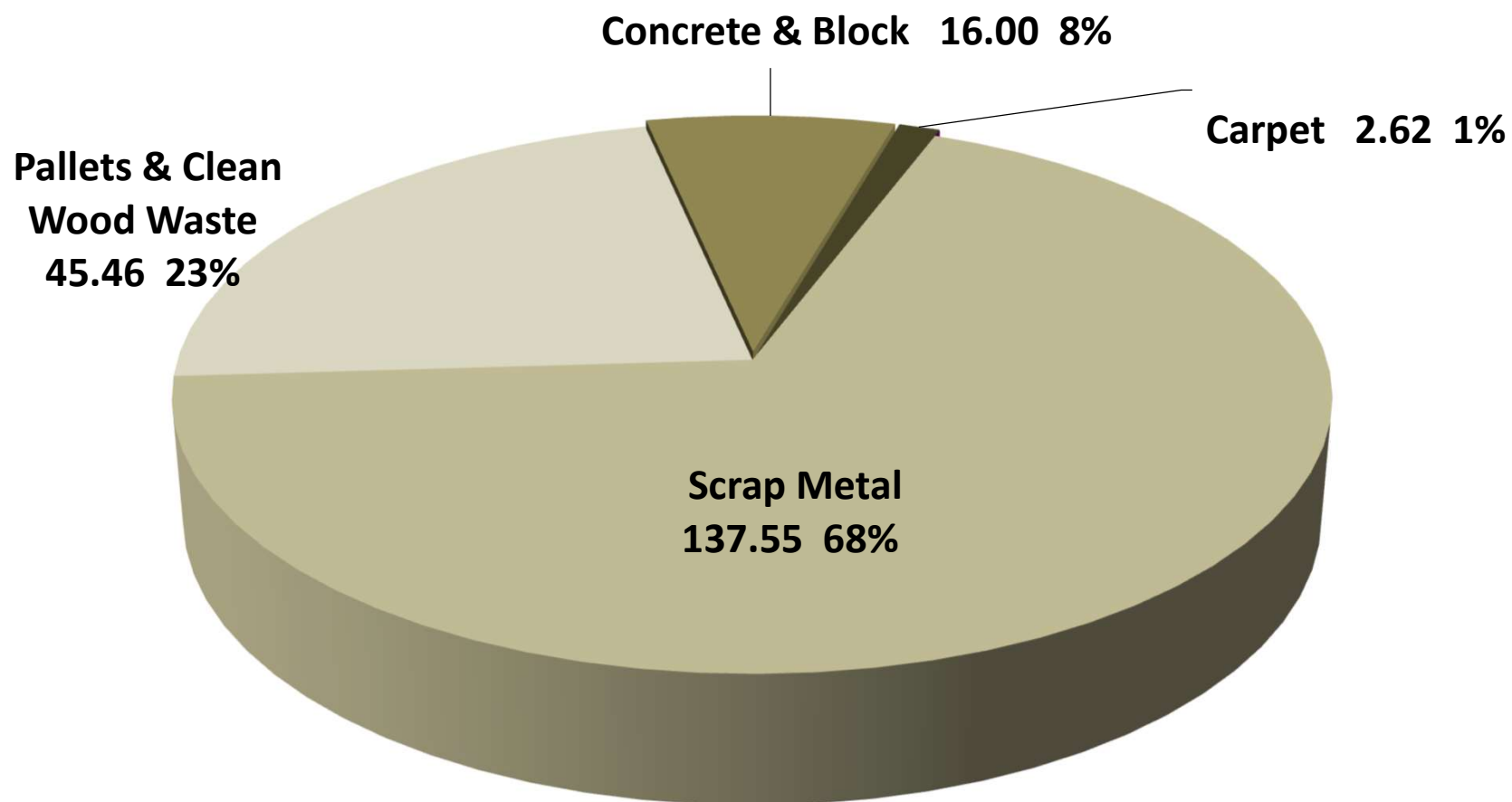
TOTAL WASTE RECYCLED (ALL SOURCES, EXCEPT CCB)												
TOTAL SW RECYCLED	Jul-19	Aug-19	Sep-19	Oct-19	Nov-19	Dec-19	Jan-20	Feb-20	Mar-20	Apr-20	May-20	Jun-20
Monthly Tons	205.88	335.91	414.37	296.49	474.32	475.11	289.47	315.35	126.28	48.44	51.75	84.97
Last Year Monthly Tons	193.55	271.05	369.69	353.45	477.02	422.30	453.62	432.90	210.13	224.48	301.04	225.04
% Incr./Decr. MONTH	6%	24%	12%	-16%	-1%	13%	-36%	-27%	-40%	-78%	-83%	-62%
Y-T-D Tons	205.88	541.79	956.16	1,252.65	1,726.98	2,202.09	2,491.55	2,806.90	2,933.18	2,981.62	3,033.37	3,118.34
Last Y-T-D Tons	193.55	464.60	834.29	1,187.74	1,664.76	2,087.05	2,540.67	2,973.57	3,183.70	3,408.18	3,709.22	3,934.27
% Incr./Decr. YTD	6%	17%	15%	5%	4%	6%	-2%	-6%	-8%	-13%	-18%	-21%

TOTAL WASTE GENERATED = LANDFILLED + RECYCLED (not including CCB)												
TOTAL SW COMPOSTED	Jul-19	Aug-19	Sep-19	Oct-19	Nov-19	Dec-19	Jan-20	Feb-20	Mar-20	Apr-20	May-20	Jun-20
Monthly Tons	27.70	41.73	80.71	80.99	74.92	41.08	61.67	71.79	30.94	1.50	0.44	1.07
Last Year Monthly Tons	23.05	59.29	74.11	71.50	58.51	39.85	59.23	65.81	52.96	72.57	38.41	30.87
% Incr./Decr. MONTH	20%	-30%	9%	13%	28%	3%	4%	9%	-42%	-98%	-99%	-97%
Y-T-D Tons	27.70	69.43	150.14	231.13	306.05	347.13	408.80	480.59	511.53	513.03	513.47	514.54
Last Y-T-D Tons	23.05	82.34	156.45	227.94	286.46	326.31	385.54	451.35	504.32	576.89	615.30	646.17
% Incr./Decr. YTD	20%	-16%	-4%	1%	7%	6%	6%	6%	1%	-11%	-17%	-20%

TOTAL WASTE GENERATED = LANDFILLED + RECYCLED (not including CCB)												
TOTAL WASTE GENERATED	Jul-19	Aug-19	Sep-19	Oct-19	Nov-19	Dec-19	Jan-20	Feb-20	Mar-20	Apr-20	May-20	Jun-20
Monthly Tons	718.06	858.88	993.98	973.05	1058.44	893.15	829.01	852.31	582.87	172.95	258.17	333.30
Last Year Monthly Tons	632.86	883.60	963.13	991.61	1042.17	844.96	1004.38	971.53	720.71	795.38	944.98	741.68
% Incr./Decr. MONTH	13%	-3%	3%	-2%	2%	6%	-17%	-12%	-19%	-78%	-73%	-55%
Y-T-D Tons	718.06	1,576.94	2,570.92	3,543.97	4,602.41	5,495.56	6,324.57	7,176.88	7,759.75	7,932.70	8,190.88	8,524.18
Last Y-T-D Tons	632.86	1,516.46	2,479.60	3,471.21	4,513.38	5,358.34	6,362.73	7,334.25	8,054.96	8,850.33	9,795.31	10,537.00
% Incr./Decr. YTD	13%	4%	4%	2%	2%	3%	-1%	-2%	-4%	-10%	-16%	-19%

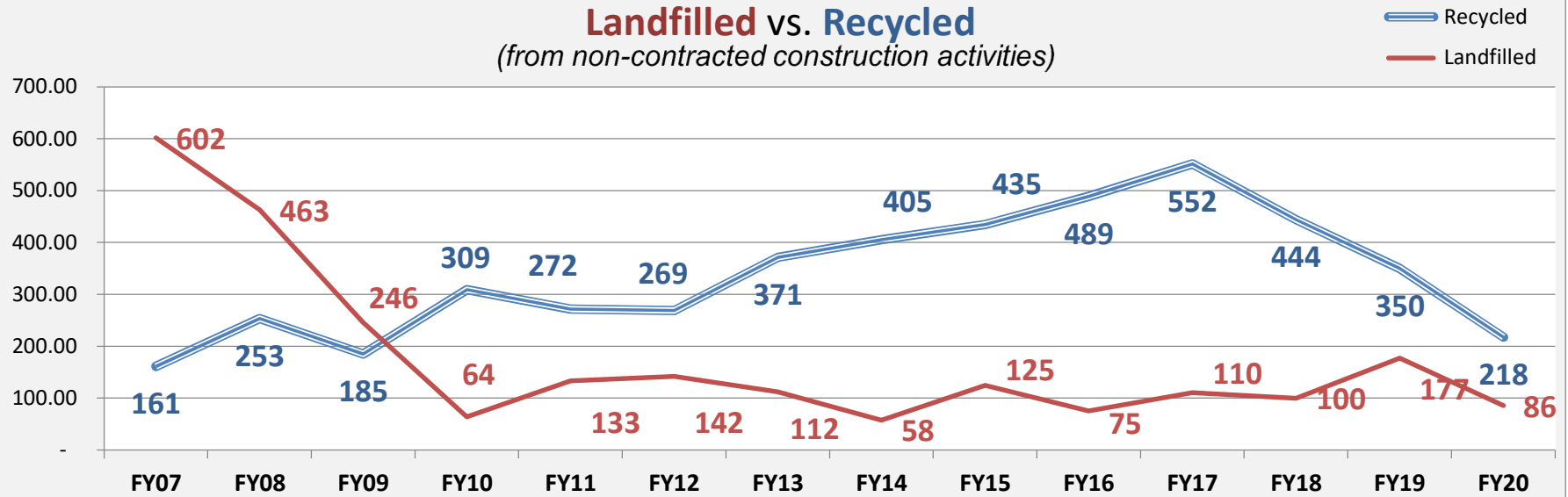
% RECOVERED = (Recycled+Composted)/Total Waste Generated (not including CCB)												
MONTHLY % RECOVERED	Jul-19	Aug-19	Sep-19	Oct-19	Nov-19	Dec-19	Jan-20	Feb-20	Mar-20	Apr-20	May-20	Jun-20
Monthly Tons	233.58	377.64	495.08	377.48	549.24	516.19	351.14	387.14	157.22	49.94	52.19	86.04
Last Year Monthly Tons	216.60	330.34	443.79	424.94	535.54	462.15	512.85	498.71	263.09	297.06	339.45	255.91
Current Yr. Monthly % Recovered	33%	44%	50%	39%	52%	58%	42%	45%	27%	29%	20%	26%
Previous Year Monthly % Recovered	34%	37%	46%	43%	51%	55%	51%	51%	37%	37%	36%	35%
% Incr./Decr. MONTH	-5%	18%	8%	-9%	1%	6%	-17%	-12%	-26%	-23%	-44%	-25%
Current YTD % Recovered	33%	39%	43%	42%	44%	46%	46%	46%	44%	44%	43%	43%
Last YTD % Recovered	34%	36%	40%	41%	43%	45%	46%	47%	46%	45%	44%	43%
% Incr./Decr. YTD	-5%	7%	8%	3%	2%	3%	0%	-2%	-3%	-2%	-2%	-2%

**2019-20**  
**Source Separated Construction and Demolition Recycling**  
*(from non-contracted construction activities)*



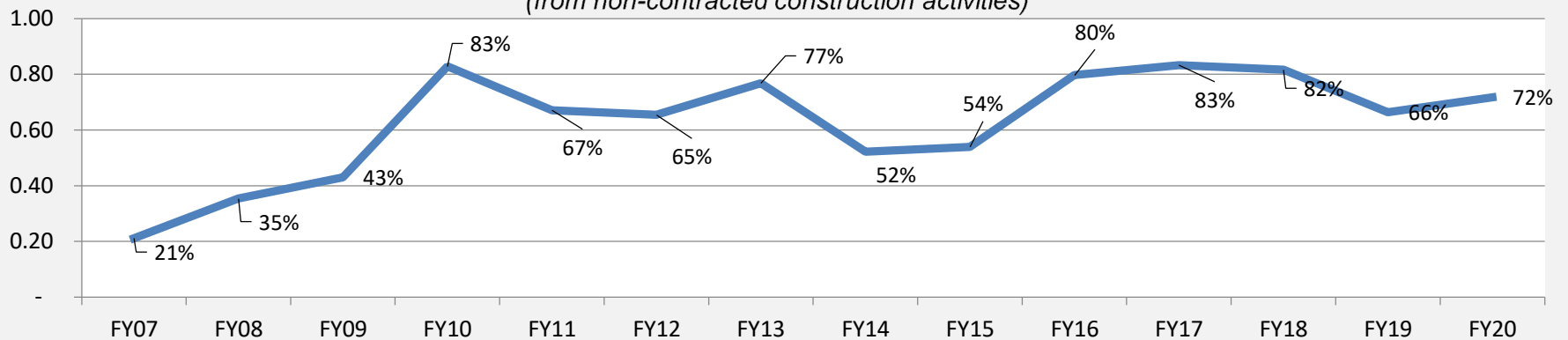
## Construction and Demolition Total Annual Waste in Tons

**Landfilled vs. Recycled**  
(from non-contracted construction activities)



## Construction and Demolition Recycling Rate

(from non-contracted construction activities)



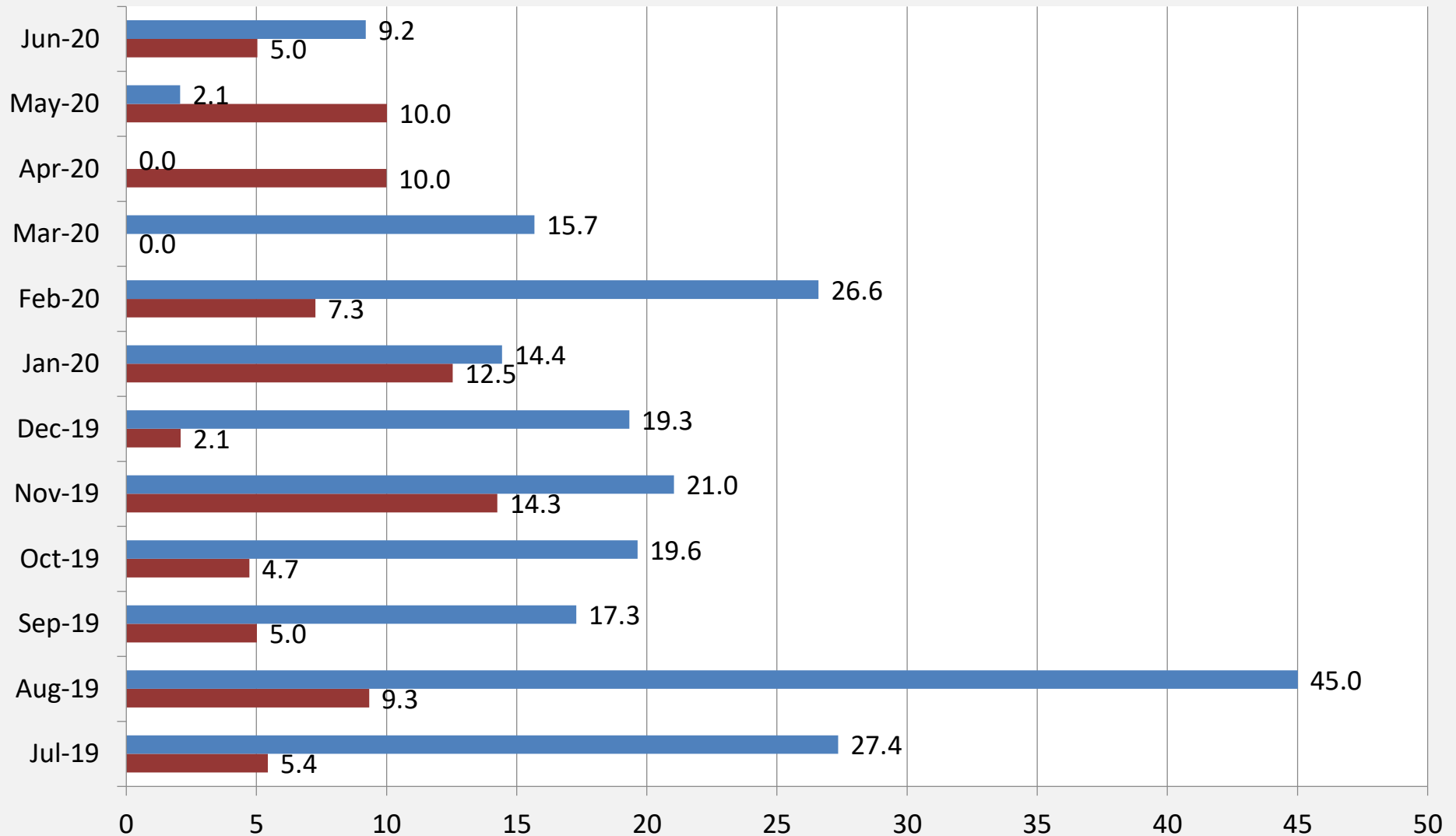
# Monthly Construction and Demolition Waste Trends

## Amount Landfilled and Recycled in Tons

(University Only, No Contractor Projects)

■ FY19-20: C&D Recycled

■ FY19-20 C&D Landfill

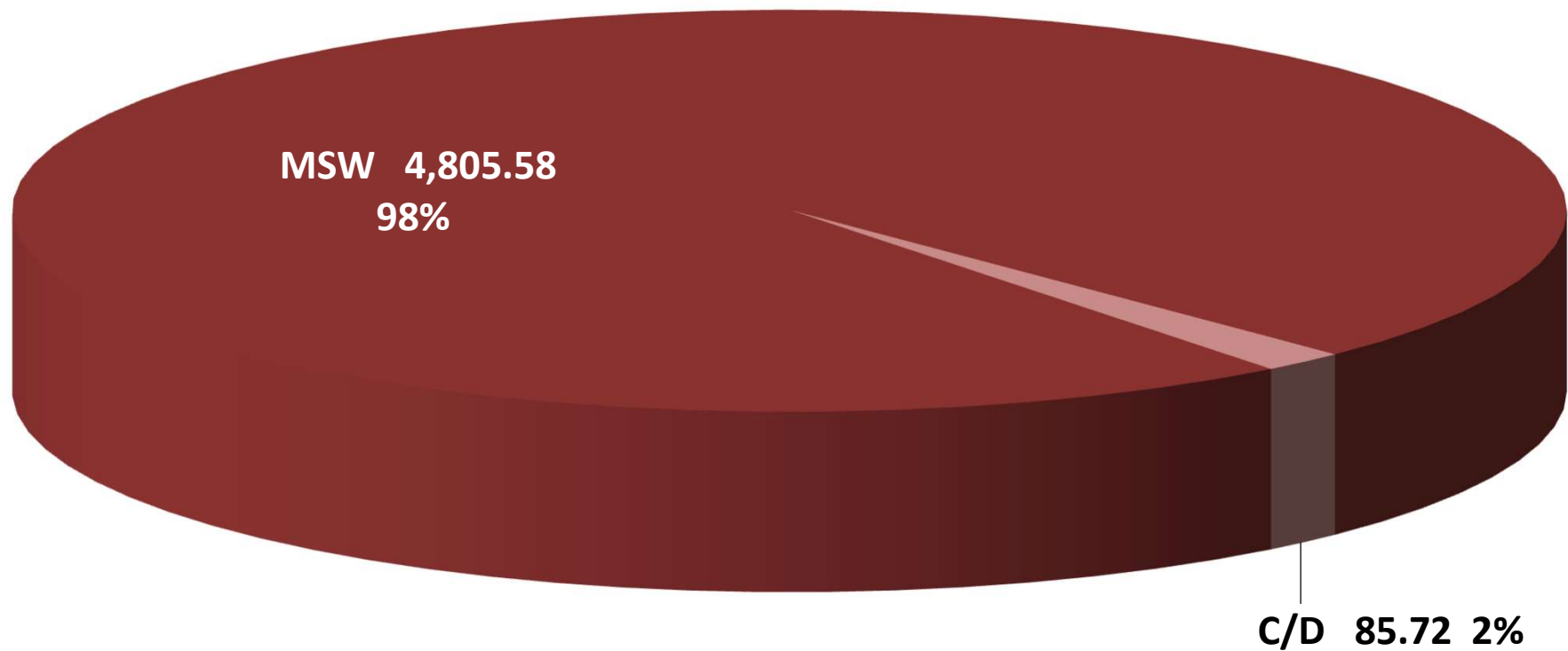


12/7/2021

OWRR 19-20, Monthly C&D Trends

## C/D Waste Landfilled, tons 2019-20

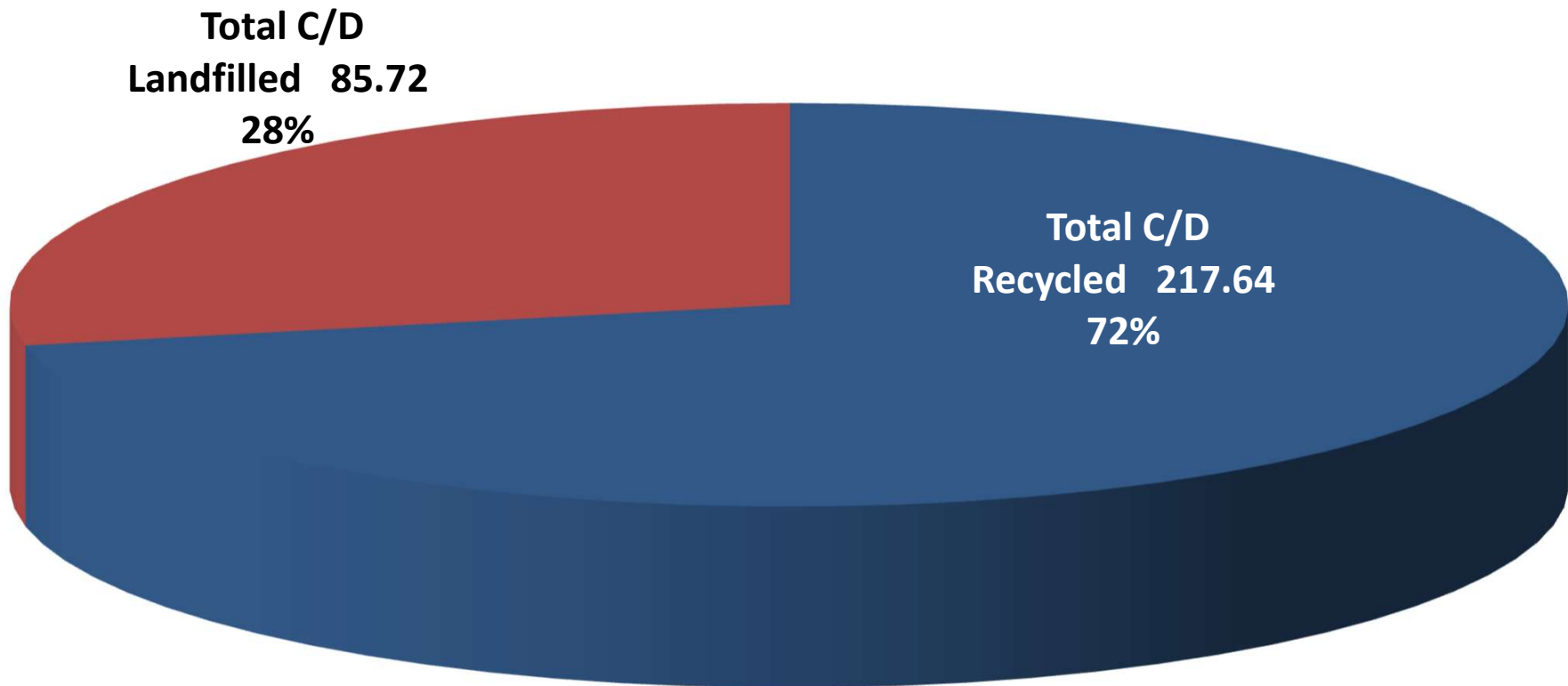
Note: The Construction and Demolition Landfill figure includes the amount disposed by Material Recovery Facilities (MRFs) based on the overall disposal percentages reported by the facilities used.



*(from non-contracted construction activities)*

# 2019-20 Construction and Demolition Waste Tons

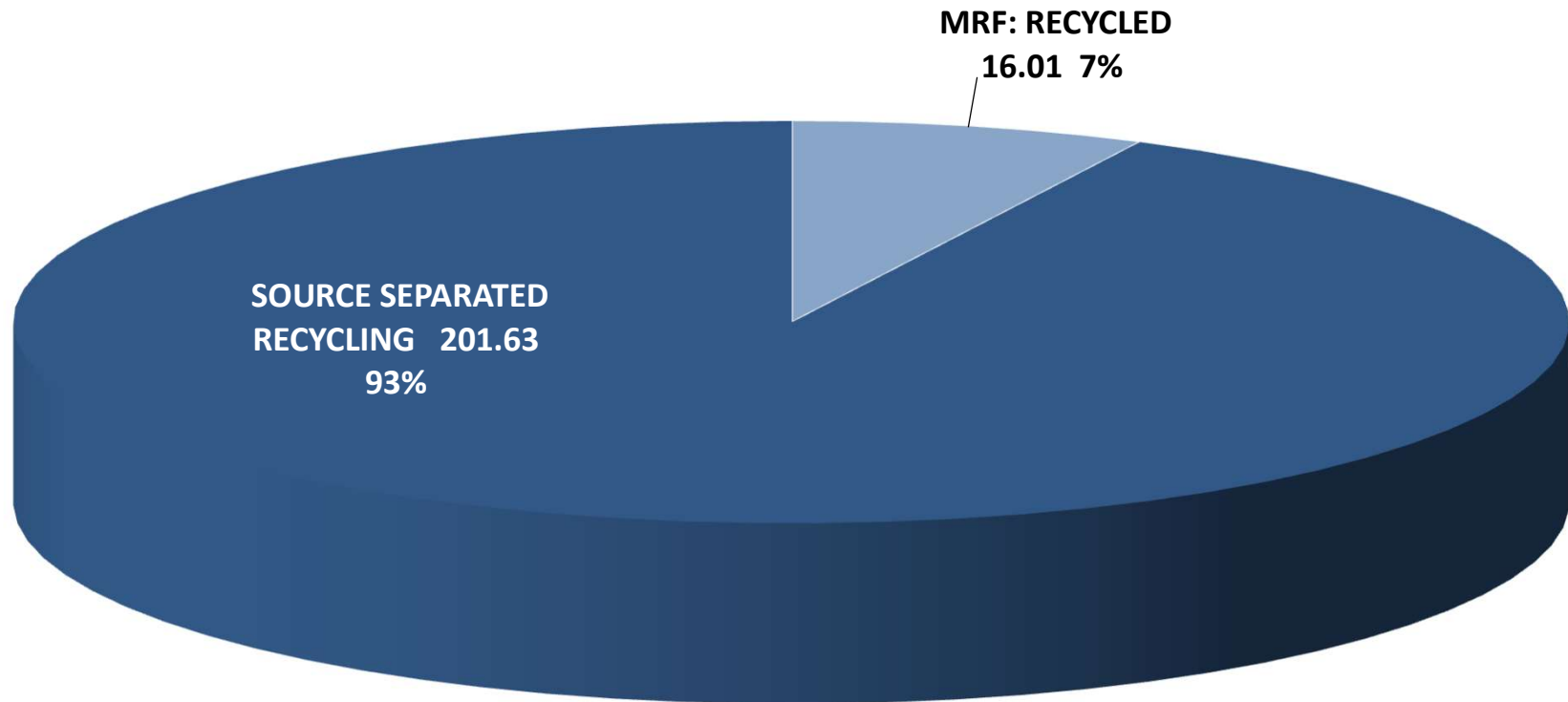
## Campus Operations, Maintenance, Repair and In-House Construction Activities



*(from non-contracted construction activities)*

## 2019-20

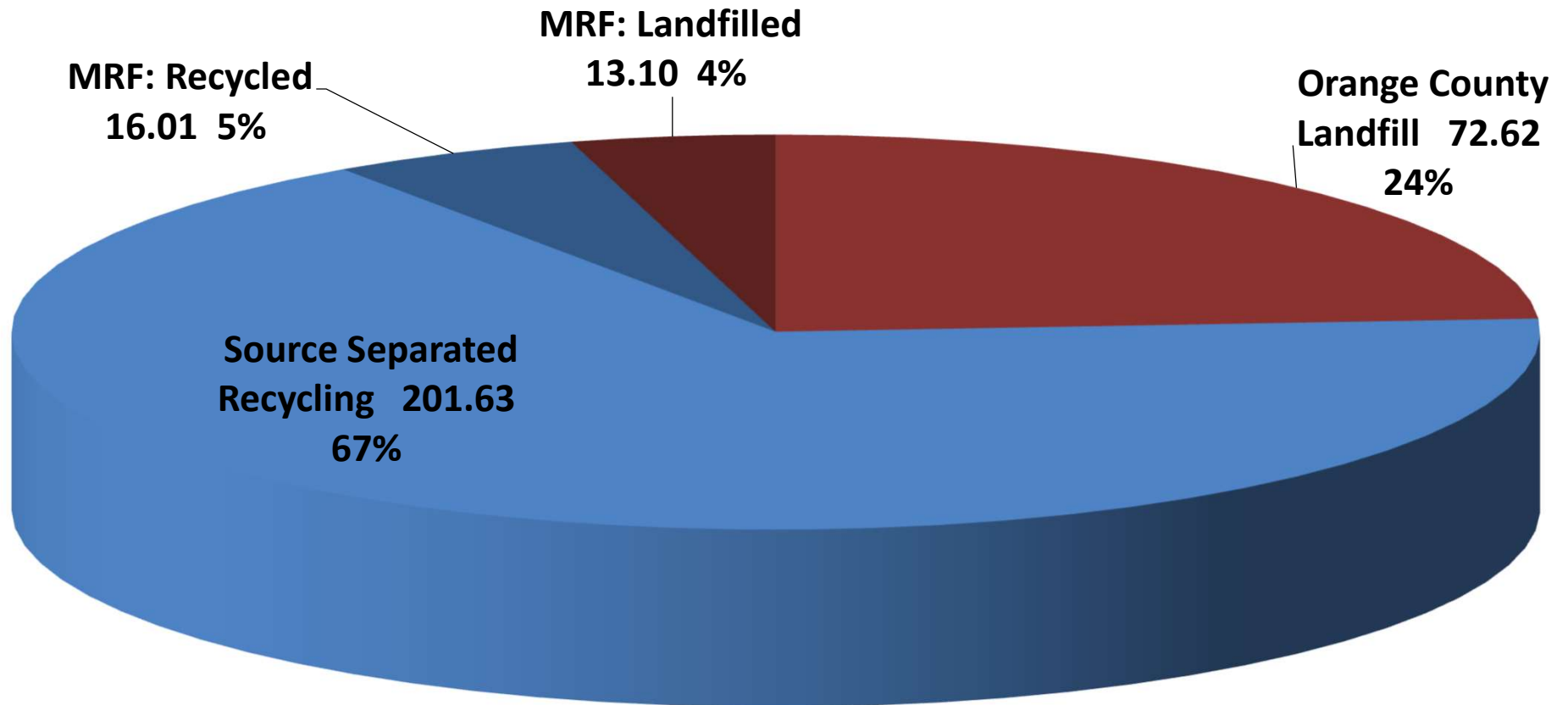
### Total Construction and Demolition Recycling



**MRF** stands for Material Recovery Facility which is a facility that separates mixed loads into materials that can be recycled and those for which no market exists (thus they are landfilled). This represents the amount recycled from the total amount taken to the MRF. See the previous graph for total amount of mixed load construction and demolition waste that University shops and departments sent to MRFs.



## Construction and Demolition Waste Management Source Separation, Mixed Load Processing (MRF), & Landfill

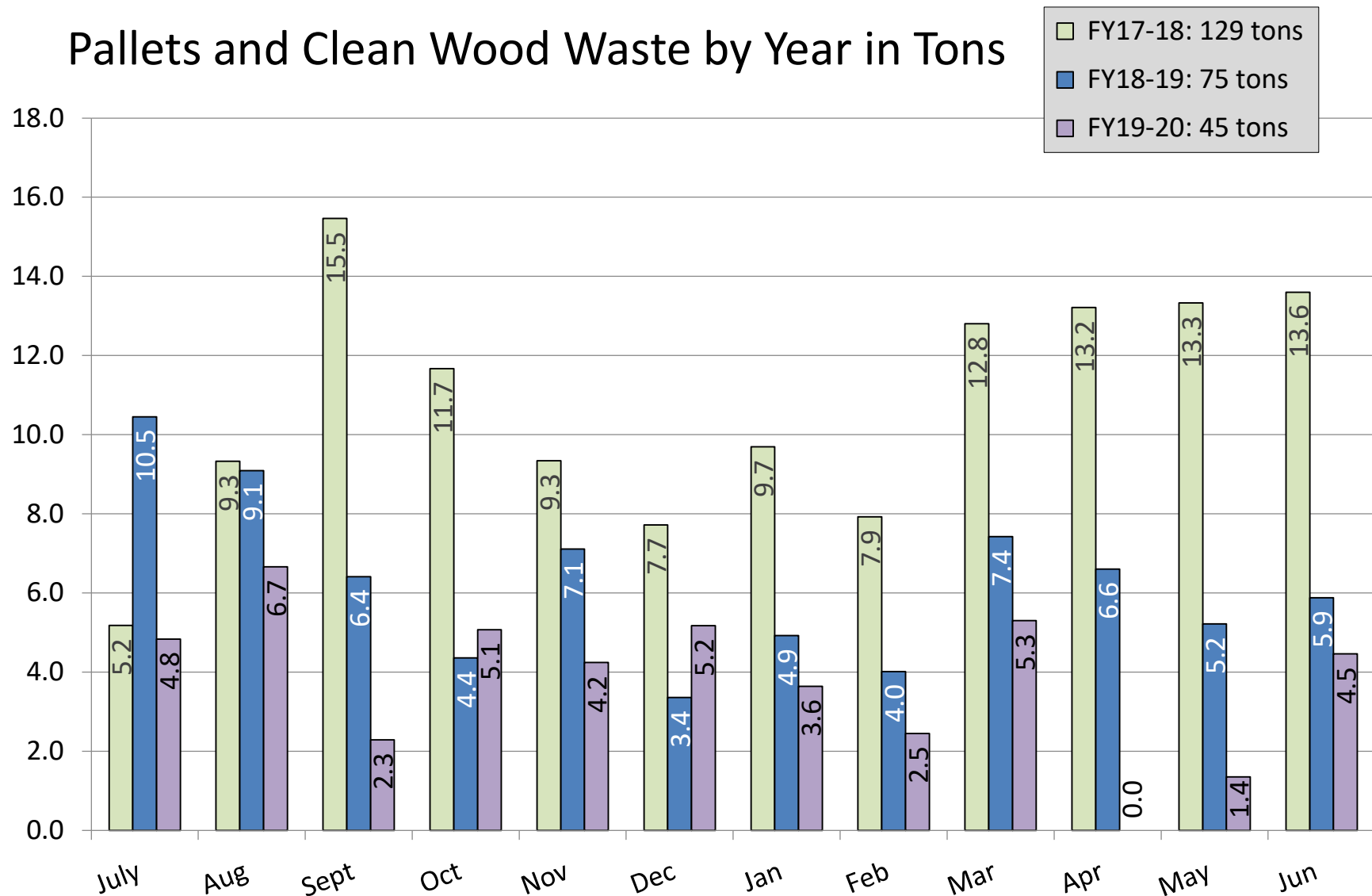


**MRF** stands for Material Recovery Facility which is a facility that separates mixed loads into materials that can be recycled and those for which no market exists (thus they are landfilled).

*Note:* A mixed load may contain construction and demolition waste (which is landfilled) AND materials that can be recycled (clean wood waste, pallets, scrap metal, concrete and brick, and other materials of value.)

*(from non-contracted construction activities)*

# Pallets and Clean Wood Waste by Year in Tons



OWRR began collecting pallets from campus via bi-weekly routes in 2010-11. As of FY 17-18, pallets are picked up at least weekly, sometimes multiple times per week. In FY18-19, Orange County began rejecting pallets made from processed wood (particle board). This may account for a lower quantity of pallets collected starting in September 2019. Painted and particle board are collected separately and disposed as either C&D waste.

**FISCAL YEAR 2019-20 WASTE RECOVERY TREND REPORT**  
**SOURCE SEPARATED CONSTRUCTION AND DEMOLITION MATERIALS (RECYCLED)**

<b>SCRAP METAL</b>												
<b>BALLASTS</b>	Jul-19	Aug-19	Sep-19	Oct-19	Nov-19	Dec-19	Jan-20	Feb-20	Mar-20	Apr-20	May-20	Jun-20
Monthly Tons	0.00	0.00	1.84	1.06	0.00	7.76	0.00	0.00	0.00	0.00	0.00	0.00
<b>Y-T-D Tons</b>	<b>0.00</b>	<b>0.00</b>	<b>1.84</b>	<b>2.90</b>	<b>2.90</b>	<b>10.66</b>	<b>10.66</b>	<b>10.66</b>	<b>10.66</b>	<b>10.66</b>	<b>10.66</b>	<b>10.66</b>
Last Year Monthly Tons	1.22	0.00	1.06	0.00	0.00	0.00	0.83	0.00	0.00	2.68	0.00	0.00
% Incr./Decr. Monthly	N/A	0%	74%	N/A	0%	N/A	N/A	0%	0%	N/A	0%	0%

<b>SCRAP METAL</b>	Jul-19	Aug-19	Sep-19	Oct-19	Nov-19	Dec-19	Jan-20	Feb-20	Mar-20	Apr-20	May-20	Jun-20
Monthly Tons	22.52	21.25	12.61	12.03	7.63	6.40	10.80	20.60	8.31	0.00	0.00	4.74
<b>Y-T-D Tons</b>	<b>22.52</b>	<b>43.77</b>	<b>56.38</b>	<b>68.41</b>	<b>76.04</b>	<b>82.44</b>	<b>93.24</b>	<b>113.84</b>	<b>122.15</b>	<b>122.15</b>	<b>122.15</b>	<b>126.89</b>
Last Year Monthly Tons	18.90	23.82	19.15	18.20	16.94	8.84	21.53	17.76	17.79	31.13	22.47	22.45
% Incr./Decr. Monthly	19%	-11%	-34%	-34%	-55%	-28%	-50%	16%	-53%	N/A	N/A	-79%

<b>METAL TOTAL</b>	Jul-19	Aug-19	Sep-19	Oct-19	Nov-19	Dec-19	Jan-20	Feb-20	Mar-20	Apr-20	May-20	Jun-20
Monthly Tons	22.52	21.25	14.45	13.09	7.63	14.16	10.80	20.60	8.31	0.00	0.00	4.74
<b>Y-T-D Tons</b>	<b>22.52</b>	<b>43.77</b>	<b>58.22</b>	<b>71.31</b>	<b>78.94</b>	<b>93.10</b>	<b>103.90</b>	<b>124.50</b>	<b>132.81</b>	<b>132.81</b>	<b>132.81</b>	<b>137.55</b>
Last Year Monthly Tons	20.12	23.82	20.21	18.20	16.94	8.84	22.36	17.76	17.79	33.81	22.47	22.45
% Incr./Decr. Monthly	12%	-11%	-29%	-28%	-55%	60%	-52%	16%	-53%	N/A	N/A	-79%

<b>PALLETS AND CLEAN WOOD--SOURCE SEPARATED</b>												
<b>PALLETS &amp; CLEAN WOOD</b>	Jul-19	Aug-19	Sep-19	Oct-19	Nov-19	Dec-19	Jan-20	Feb-20	Mar-20	Apr-20	May-20	Jun-20
Monthly Tons	4.83	6.66	2.29	5.07	4.24	5.17	3.64	2.45	5.30	0.00	1.35	4.46
<b>Y-T-D Tons</b>	<b>4.83</b>	<b>11.49</b>	<b>13.78</b>	<b>18.85</b>	<b>23.09</b>	<b>28.26</b>	<b>31.90</b>	<b>34.35</b>	<b>39.65</b>	<b>39.65</b>	<b>41.00</b>	<b>45.46</b>
Last Year Monthly Tons	10.45	9.09	6.41	4.36	7.11	3.36	4.92	4.01	7.42	6.60	5.22	5.88
% Incr./Decr. Monthly	-54%	-27%	-64%	16%	-40%	54%	-26%	-39%	-29%	N/A	-74%	-24%

<b>CONCRETE AND BRICK--SOURCE SEPARATED</b>												
<b>CONCRETE &amp; BRICK</b>	Jul-19	Aug-19	Sep-19	Oct-19	Nov-19	Dec-19	Jan-20	Feb-20	Mar-20	Apr-20	May-20	Jun-20
Monthly Tons	0.00	8.00	0.00	0.00	8.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Y-T-D Tons</b>	<b>0.00</b>	<b>8.00</b>	<b>8.00</b>	<b>8.00</b>	<b>16.00</b>	<b>16.00</b>	<b>16.00</b>	<b>16.00</b>	<b>16.00</b>	<b>16.00</b>	<b>16.00</b>	<b>16.00</b>
Last Year Monthly Tons	0.00	0.00	0.00	0.00	0.00	8.00	0.00	0.00	8.00	0.00	0.00	1.00
% Incr./Decr. Monthly	0%	N/A	0%	0%	N/A	N/A	0%	0%	N/A	0%	0%	N/A

MISCELLANEOUS--SOURCE SEPARATED												
CARPET -- seasonal (move-out)	Jul-19	Aug-19	Sep-19	Oct-19	Nov-19	Dec-19	Jan-20	Feb-20	Mar-20	Apr-20	May-20	Jun-20
Monthly Tons	0.00	2.62	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Y-T-D Tons	0.00	2.62	2.62	2.62	2.62	2.62	2.62	2.62	2.62	2.62	2.62	2.62
Last Year Monthly Tons	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.62	0.00
% Incr./Decr. Monthly	0%	Last Year This	0%	0%	0%	0%	0%	0%	0%	0%	ne ThisMont	0%
MISC TOTAL	Jul-19	Aug-19	Sep-19	Oct-19	Nov-19	Dec-19	Jan-20	Feb-20	Mar-20	Apr-20	May-20	Jun-20
Monthly Tons	0.00	2.62	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Y-T-D Tons	0.00	2.62	2.62	2.62	2.62	2.62	2.62	2.62	2.62	2.62	2.62	2.62
Last Year Monthly Tons	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.62	0.00
% Incr./Decr. Monthly	0%	Last Year This	0%	0%	0%	0%	0%	0%	0%	0%	ne ThisMont	0%
SOURCE SEPARATED TOTAL	Jul-19	Aug-19	Sep-19	Oct-19	Nov-19	Dec-19	Jan-20	Feb-20	Mar-20	Apr-20	May-20	Jun-20
Monthly Tons	27.35	38.53	16.74	18.16	19.87	19.33	14.44	23.05	13.61	0.00	1.35	9.20
Y-T-D Tons	27.35	65.88	82.62	100.78	120.65	139.98	154.42	177.47	191.08	191.08	192.43	201.63
Last Year Monthly Tons	30.57	32.91	26.62	22.56	24.05	20.20	27.28	21.77	33.21	40.41	32.93	29.33
% Incr./Decr. Monthly	-11%	17%	-37%	-20%	-17%	-4%	-47%	6%	-59%	ne ThisMont	-96%	-69%

NON-MSW LANDFILLS (Construction/Demolition or Land Clearing and Inert Debris)												
CONSTRUCTION AND DEMOLITION LANDFILL (ORANGE COUNTY)												
WI	Jul-19	Aug-19	Sep-19	Oct-19	Nov-19	Dec-19	Jan-20	Feb-20	Mar-20	Apr-20	May-20	Jun-20
Monthly Tons	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.27	0.00
<b>Y-T-D Tons</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>1.27</b>	<b>1.27</b>
Last Year Monthly Tons	1.75	0.00	0.00	2.82	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
% Incr./Decr. Monthly	N/A	0%	0%	N/A	0%	0%	0%	0%	0%	0%	N/A	0%

UNC (UNC trucks & rollofts)	Jul-19	Aug-19	Sep-19	Oct-19	Nov-19	Dec-19	Jan-20	Feb-20	Mar-20	Apr-20	May-20	Jun-20
Monthly Tons	5.44	4.03	4.57	3.52	13.30	2.09	12.54	4.36	8.30	0.00	8.16	5.04
<b>Y-T-D Tons</b>	<b>5.44</b>	<b>9.47</b>	<b>14.04</b>	<b>17.56</b>	<b>30.86</b>	<b>32.95</b>	<b>45.49</b>	<b>49.85</b>	<b>58.15</b>	<b>58.15</b>	<b>66.31</b>	<b>71.35</b>
Last Year Monthly Tons	39.59	21.53	11.91	1.41	4.17	9.48	31.17	4.90	12.76	6.81	8.77	11.27
% Incr./Decr. Monthly	-86%	-81%	-62%	150%	219%	-78%	-60%	-11%	-35%	N/A	-7%	-55%

TOTAL Orange County C&D Landfill	Jul-19	Aug-19	Sep-19	Oct-19	Nov-19	Dec-19	Jan-20	Feb-20	Mar-20	Apr-20	May-20	Jun-20
Monthly Tons	5.44	4.03	4.57	3.52	13.30	2.09	12.54	4.36	8.30	0.00	9.43	5.04
<b>Y-T-D Tons</b>	<b>5.44</b>	<b>9.47</b>	<b>14.04</b>	<b>17.56</b>	<b>30.86</b>	<b>32.95</b>	<b>45.49</b>	<b>49.85</b>	<b>58.15</b>	<b>58.15</b>	<b>67.58</b>	<b>72.62</b>
Last Year Monthly Tons	41.34	21.53	11.91	4.23	4.17	9.48	31.17	4.90	12.76	6.81	8.77	11.27
% Incr./Decr. Monthly	-87%	-81%	-62%	-17%	219%	-78%	-60%	-11%	-35%	N/A	8%	-55%

2018-19 note: ME room clean up project. Also, Orange County rejects particle board pallets for recycling and directs them to the C&D landfill for disposal.

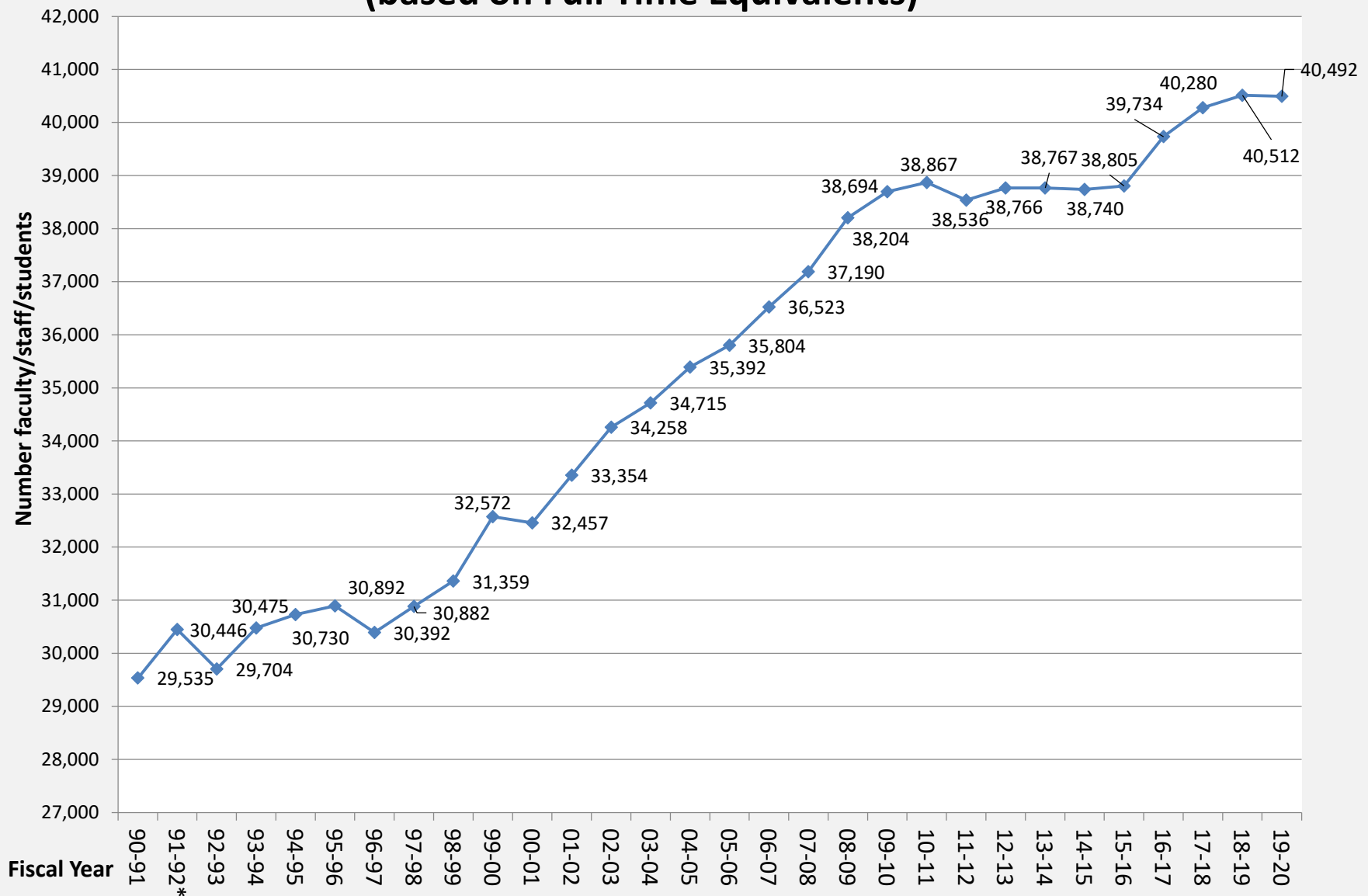
MIXED LOAD CONSTRUCTION WASTE PROCESSING FACILITIES (MRF)												
Wake Reclamation (Owned by Waste Industries) - 421 Raleigh View Rd., Raleigh												
Wake Reclamation--MRF	Jul-19	Aug-19	Sep-19	Oct-19	Nov-19	Dec-19	Jan-20	Feb-20	Mar-20	Apr-20	May-20	Jun-20
Monthly Tons	0.00	11.78	1.00	2.69	2.13	0.00	0.00	6.45	3.76	0.00	1.30	0.00
<b>Y-T-D Tons</b>	<b>0.00</b>	<b>11.78</b>	<b>12.78</b>	<b>15.47</b>	<b>17.60</b>	<b>17.60</b>	<b>17.60</b>	<b>24.05</b>	<b>27.81</b>	<b>27.81</b>	<b>29.11</b>	<b>29.11</b>
Last Year Monthly Tons	0.00	0.00	0.00	2.18	4.10	2.70	2.91	1.97	4.46	0.00	1.44	0.00
% Incr./Decr. Monthly	0%	N/A	N/A	23%	-48%	N/A	N/A	227%	-16%	0%	-10%	0%

RECYCLING (55% of total)	Jul-19	Aug-19	Sep-19	Oct-19	Nov-19	Dec-19	Jan-20	Feb-20	Mar-20	Apr-20	May-20	Jun-20
Monthly Tons	0.00	6.48	0.55	1.48	1.17	0.00	0.00	3.55	2.07	0.00	0.72	0.00
<b>Y-T-D Tons</b>	<b>0.00</b>	<b>6.48</b>	<b>7.03</b>	<b>8.51</b>	<b>9.68</b>	<b>9.68</b>	<b>9.68</b>	<b>13.23</b>	<b>15.30</b>	<b>15.30</b>	<b>16.01</b>	<b>16.01</b>
Last Year Monthly Tons	0.00	0.00	0.00	1.20	2.26	1.49	1.60	1.08	2.45	0.00	0.79	0.00
% Incr./Decr. Monthly	0%	N/A	N/A	23%	-48%	N/A	N/A	227%	-16%	0%	-10%	0%

LANDFILL (45% of total)	Jul-19	Aug-19	Sep-19	Oct-19	Nov-19	Dec-19	Jan-20	Feb-20	Mar-20	Apr-20	May-20	Jun-20
Monthly Tons	0.00	5.30	0.45	1.21	0.96	0.00	0.00	2.90	1.69	0.00	0.59	0.00
<b>Y-T-D Tons</b>	<b>0.00</b>	<b>5.30</b>	<b>5.75</b>	<b>6.96</b>	<b>7.92</b>	<b>7.92</b>	<b>7.92</b>	<b>10.82</b>	<b>12.51</b>	<b>12.51</b>	<b>13.10</b>	<b>13.10</b>
Last Year Monthly Tons	0.00	0.00	0.00	0.98	1.85	1.22	1.31	0.89	2.01	0.00	0.65	0.00
% Incr./Decr. Monthly	0%	N/A	N/A	23%	-48%	N/A	N/A	227%	-16%	0%	-10%	0%

MIXED LOAD CONSTRUCTION WASTE PROCESSING												
(This section totals all C&D MRFs used. If others are used, expand section above and enter data for the specific facility.)												
TOTAL RECYCLED AND LANDFILLED												
TOTAL	Jul-19	Aug-19	Sep-19	Oct-19	Nov-19	Dec-19	Jan-20	Feb-20	Mar-20	Apr-20	May-20	Jun-20
Monthly Tons	0.00	11.78	1.00	2.69	2.13	0.00	0.00	6.45	3.76	0.00	1.30	0.00
Y-T-D Tons	0.00	11.78	12.78	15.47	17.60	17.60	17.60	24.05	27.81	27.81	29.11	29.11
% Incr./Decr. Monthly	0%	N/A	N/A	N/A	N/A	0%	0%	N/A	N/A	0%	N/A	0%
Last Year Monthly Tons	0.00	0.00	0.00	2.18	4.10	2.70	2.91	1.97	4.46	0.00	1.44	0.00
MRF RECYCLE TOTAL	Jul-19	Aug-19	Sep-19	Oct-19	Nov-19	Dec-19	Jan-20	Feb-20	Mar-20	Apr-20	May-20	Jun-20
Monthly Tons	0.00	6.48	0.55	1.48	1.17	0.00	0.00	3.55	2.07	0.00	0.72	0.00
Y-T-D Tons	0.00	6.48	7.03	8.51	9.68	9.68	9.68	13.23	15.30	15.30	16.01	16.01
Last Year Monthly Tons	0.00	0.00	0.00	1.20	2.26	1.49	1.60	1.08	2.45	0.00	0.79	0.00
% Incr./Decr. Monthly	0%	N/A	N/A	23%	-48%	N/A	N/A	227%	-16%	0%	-10%	0%
MRF LANDFILL TOTAL	Jul-19	Aug-19	Sep-19	Oct-19	Nov-19	Dec-19	Jan-20	Feb-20	Mar-20	Apr-20	May-20	Jun-20
Monthly Tons	0.00	5.30	0.45	1.21	0.96	0.00	0.00	2.90	1.69	0.00	0.59	0.00
Y-T-D Tons	0.00	5.30	5.75	6.96	7.92	7.92	7.92	10.82	12.51	12.51	13.10	13.10
Last Year Monthly Tons	0.00	0.00	0.00	0.98	1.85	1.22	1.31	0.89	2.01	0.00	0.65	0.00
% Incr./Decr. Monthly	0%	N/A	N/A	23%	-48%	N/A	N/A	227%	-16%	0%	-10%	0%
CONSTRUCTION AND DEMOLITION WASTE TOTALS--AMOUNT RECYCLED AND LANDFILLED												
TOTAL C&D LANDFILLED	Jul-19	Aug-19	Sep-19	Oct-19	Nov-19	Dec-19	Jan-20	Feb-20	Mar-20	Apr-20	May-20	Jun-20
Monthly Tons	5.44	9.33	5.02	4.73	14.26	2.09	12.54	7.26	9.99	0.00	10.02	5.04
Y-T-D Tons	5.44	14.77	19.79	24.52	38.78	40.87	53.41	60.67	70.66	70.66	80.68	85.72
Last Year Monthly Tons	41.34	21.53	11.91	5.21	6.02	10.70	32.48	5.79	14.77	6.81	9.42	11.27
% Incr./Decr. Monthly	-87%	-57%	-58%	-9%	137%	-80%	-61%	26%	-32%	N/A	6%	-55%
TOTAL C&D RECYCLED	Jul-19	Aug-19	Sep-19	Oct-19	Nov-19	Dec-19	Jan-20	Feb-20	Mar-20	Apr-20	May-20	Jun-20
Monthly Tons	27.35	45.01	17.29	19.64	21.04	19.33	14.44	26.60	15.68	0.00	2.07	9.20
Y-T-D Tons	27.35	72.36	89.65	109.29	130.33	149.66	164.10	190.70	206.38	206.38	208.44	217.64
Last Year Monthly Tons	30.57	32.91	26.62	23.76	26.31	21.69	28.88	22.85	35.66	40.41	33.72	29.33
% Incr./Decr. Monthly	-11%	37%	-35%	-17%	-20%	-11%	-50%	16%	-56%	N/A	-94%	-69%

## Total Campus Population, 1990-present (YTD) (based on Full Time Equivalents)

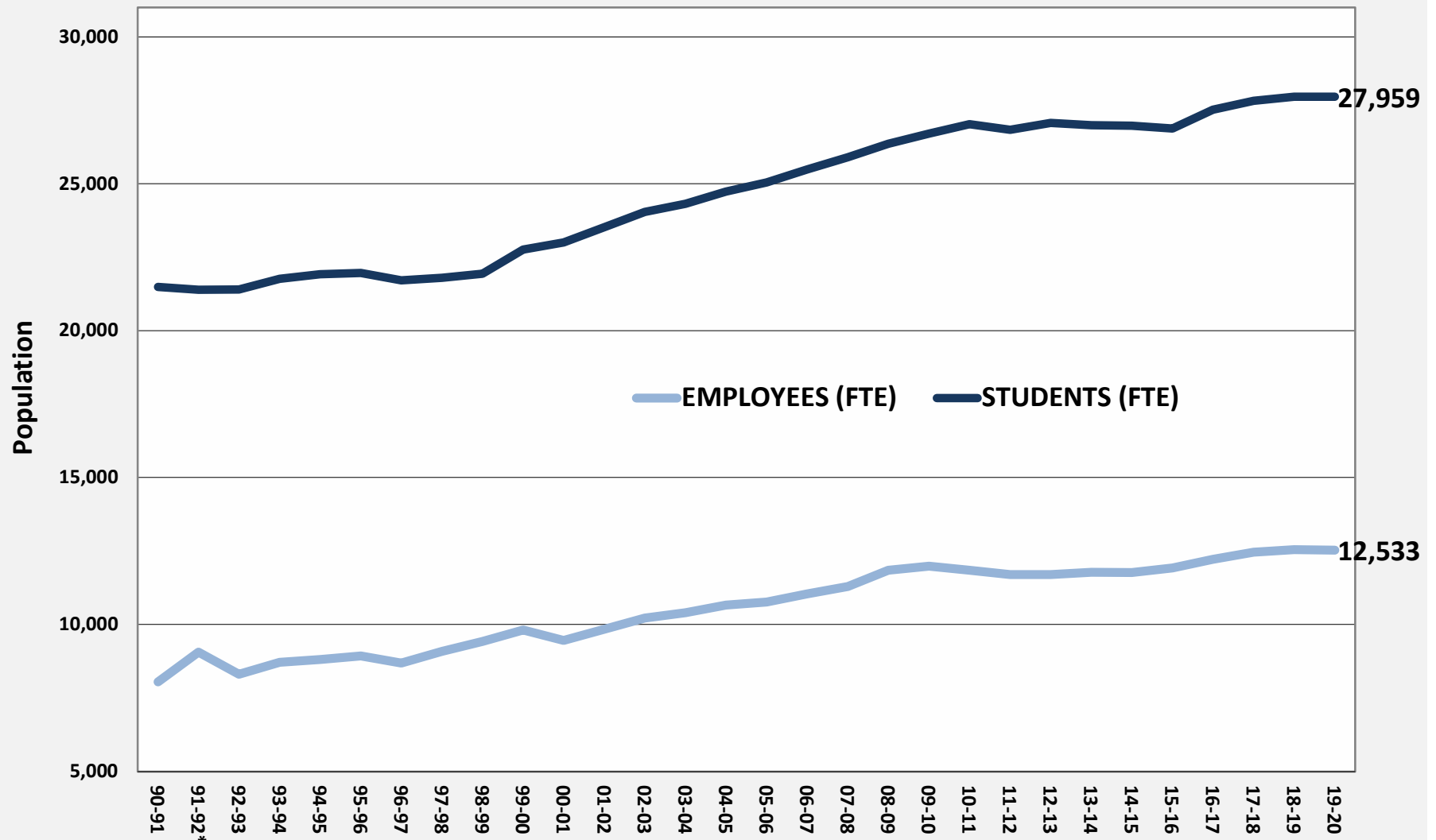


12/7/2021

OWRR 19-20, Total Campus Population

## Students (Full Time Equivalent) and Employees FY90-91 to Present

(Source: UNC Office of Institutional Research and Assessment <https://oira.unc.edu/reports/>)



12/7/2021

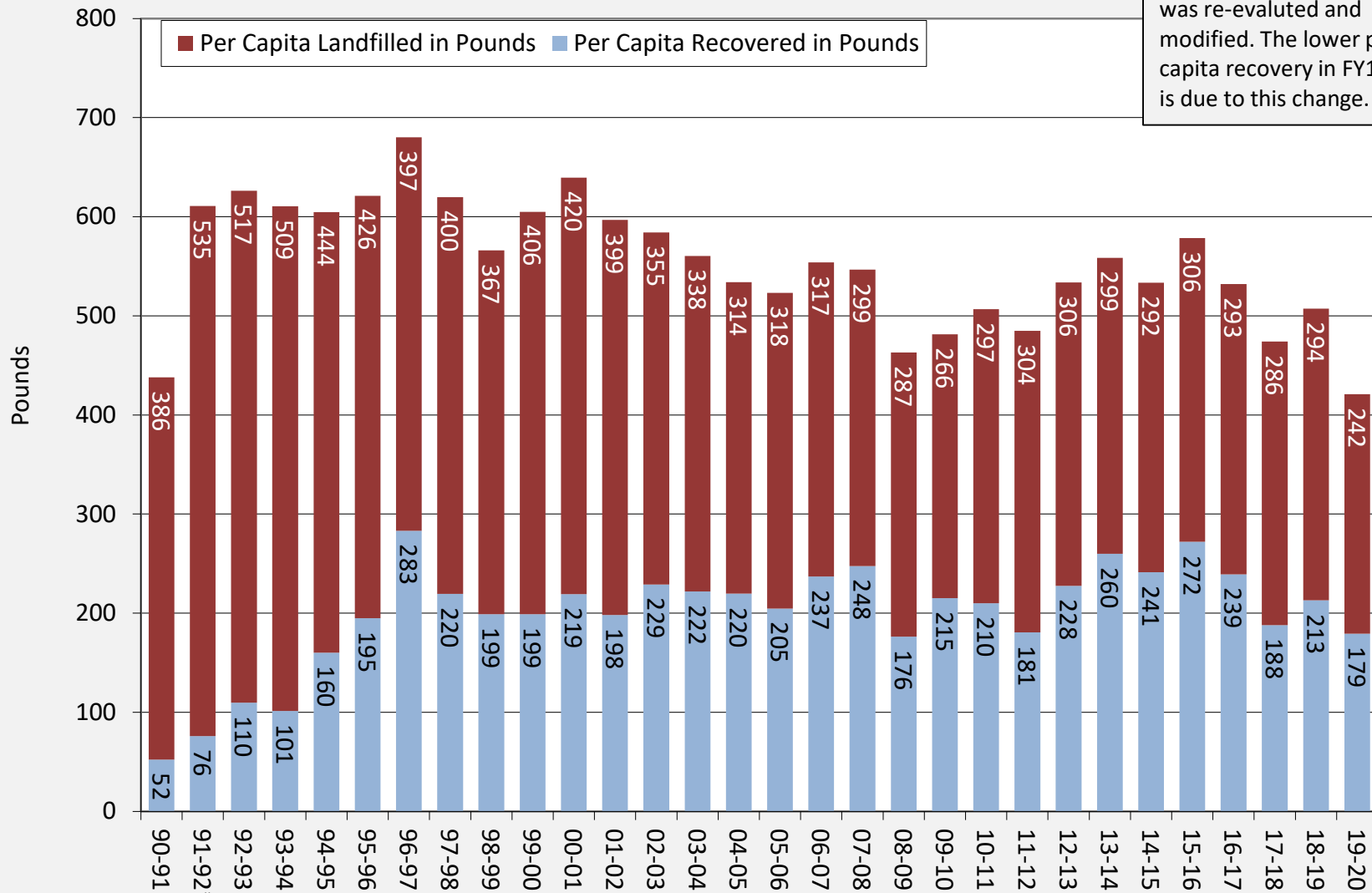
OWRR 19-20, Employees vs. Students

Page 47



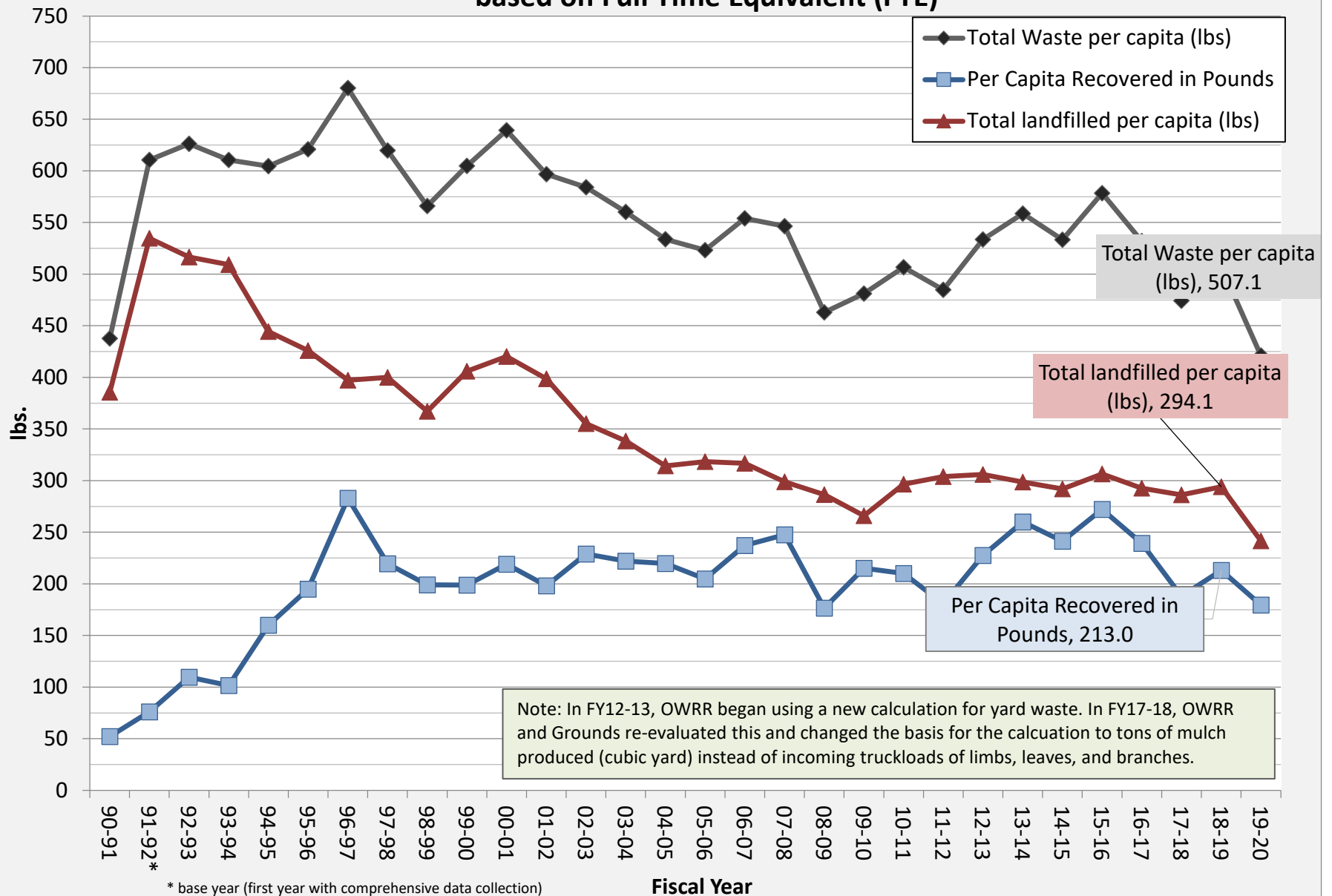
## Per Capita Landfill & Recovery based on Full Time Equivalent (FTE)

Yard waste calculations were changed in FY12-13. In FY17-18, this method was re-evaluated and modified. The lower per capita recovery in FY17-18 is due to this change.



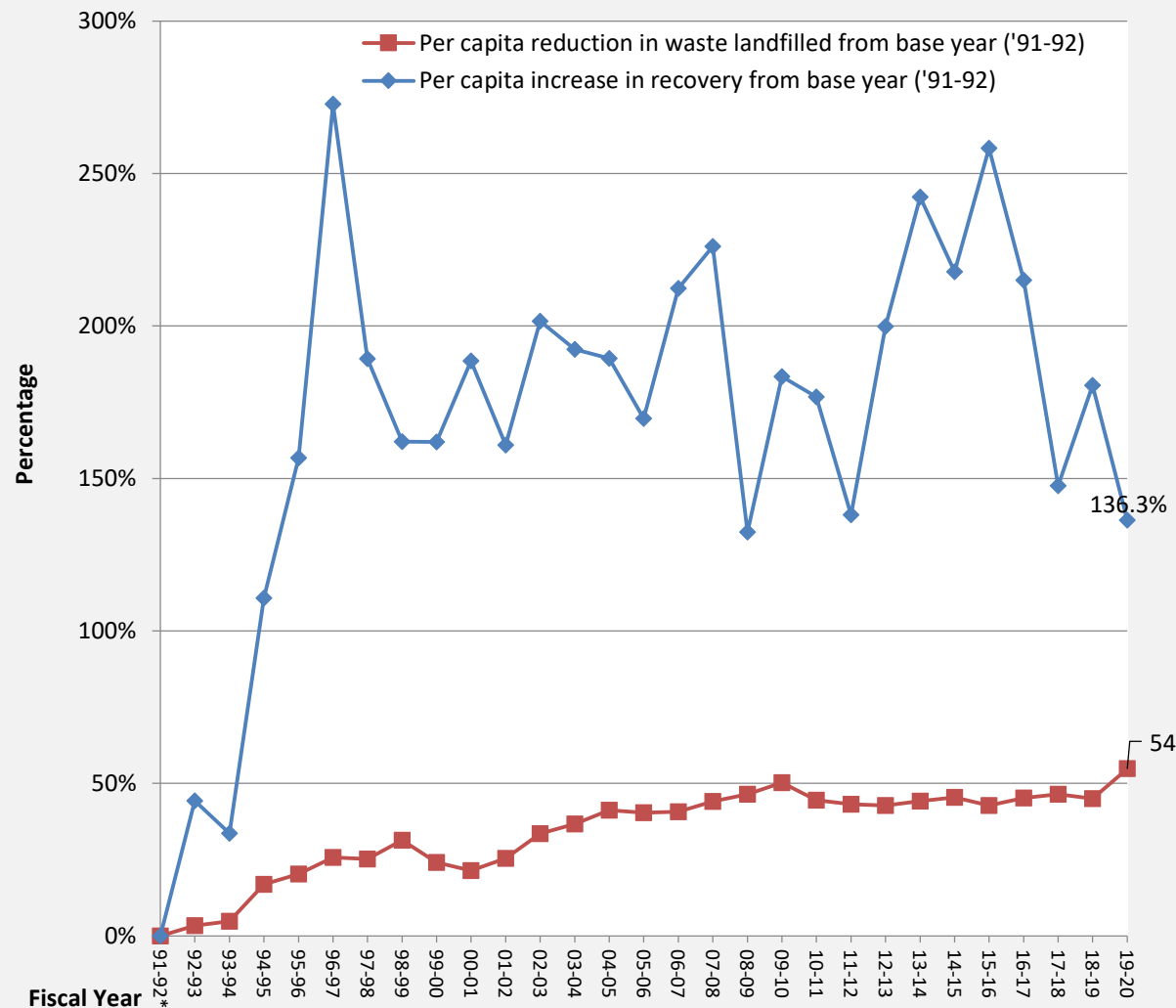
\* base year (first year with comprehensive data collection)

# Per Capita Waste, Landfill, & Recovery Weights, 1990-Current YTD based on Full Time Equivalent (FTE)



12/7/2021

## Change in Waste Landfilled and Change in Recovery Per Capita, From Base Year (91-92)



1992: Drop in population may account for per capita waste reduction spike.

1996: Large spike in per capita waste reduction may be accounted for by a combination of factors-- hurricane Fran, OWRR taking over cardboard recycling, and a drop in population.

1997-1999: Decrease in per capita waste reduction may be explained partially by the loss of the education/outreach position during those years.

2000: Increase in 2000 may be partially explained by beginning of food waste recycling program.

2001: Decrease in 2001 can be explained by Tidewater Fibre Corp. taking over outdoor contract and changing the way they report tonnage (actual as opposed to estimated weights).

2009: Decrease may have been due to a change in reporting of indoor recycling weights (from estimated to actual).

2011: Decrease may have been due to a change in reporting for yard waste (added actual and refined estimates based on brush, leaves, limbs, tree trunks).

2013: Increase is in part due to a project at Carolina North that resulted in an additional 157 tons recycled.

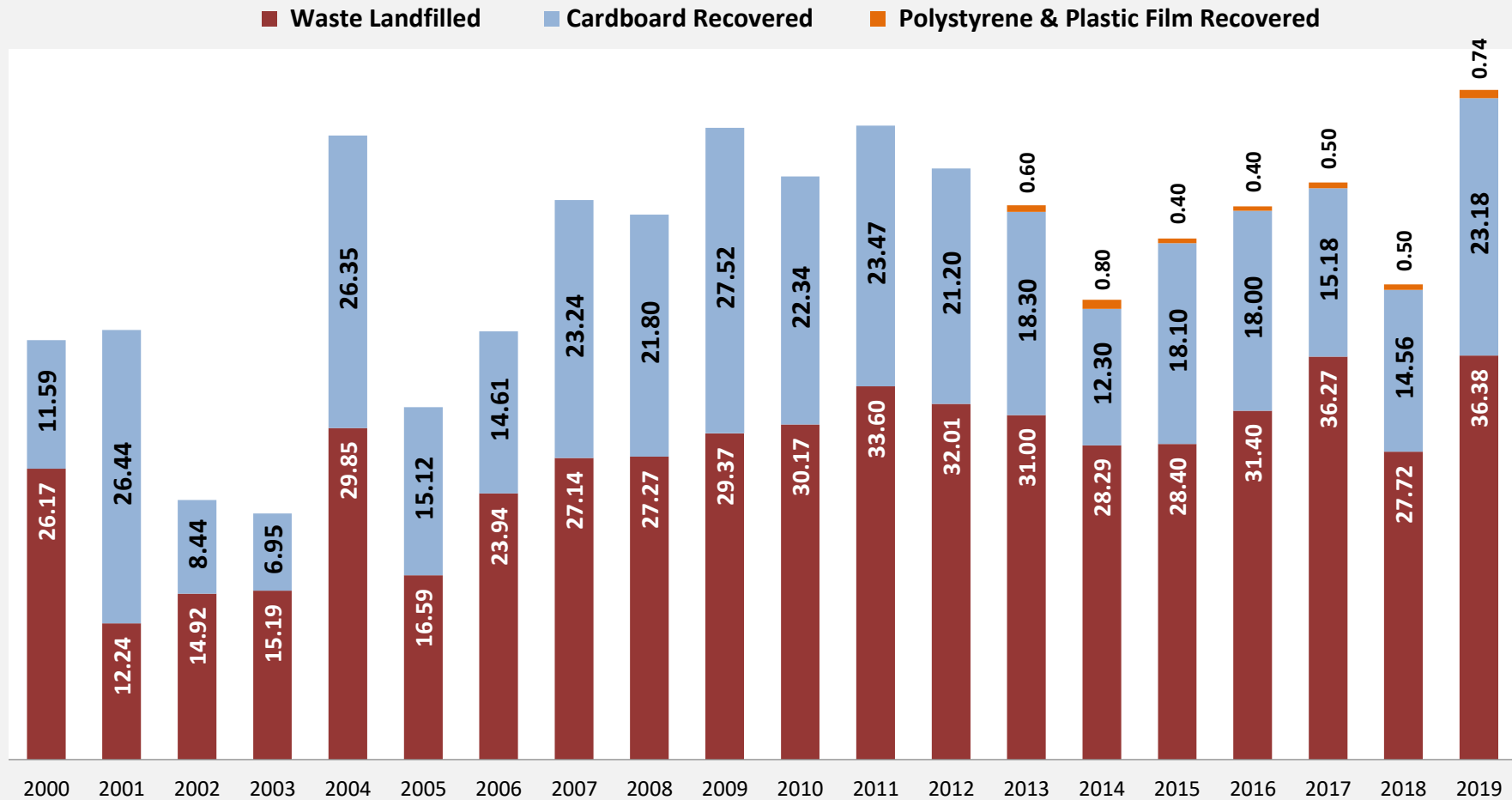
2017: In addition to changes in yard waste calculations, OWRR was significantly short staffed, thus new programs and outreach efforts were curtailed.

12/7/2021

OWRR 19-20, Per Capita Waste Reduction

Page 50

## Move-In Landfilled and Recycled In Tons



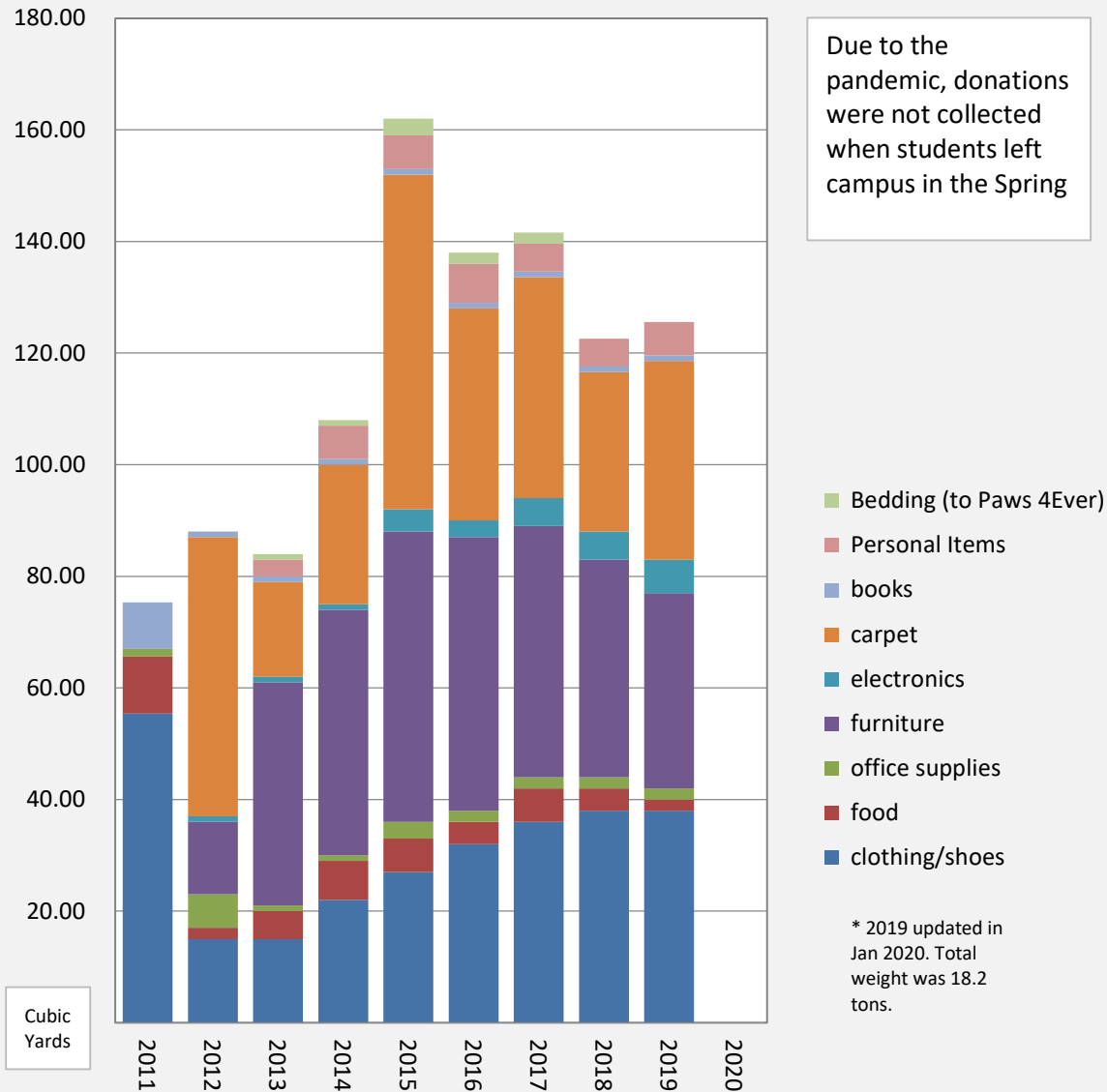
\*Tonnes (Landfilled and Cardboard) = all move-in rolloff hauls and front load hauls from second haul during move-in days.

\*\*2000 and 2001 statistics compiled by Matt Todd; 2002-2006 stats compiled by Amy Preble and Jen Maxwell. 2007 & 2008 stats compiled by BJ Tipton

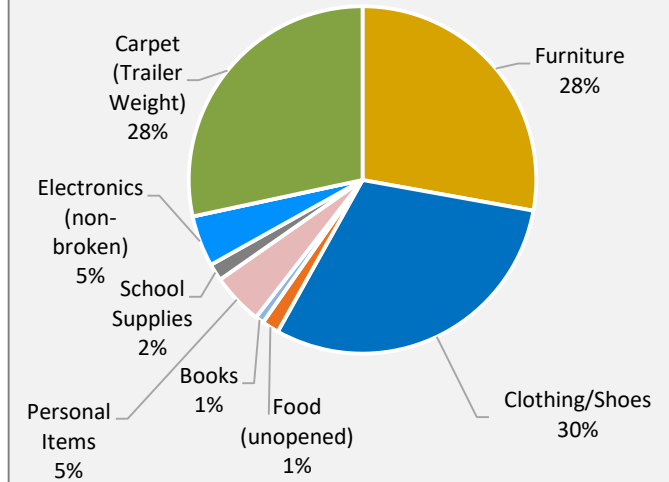
\*\*\* More data was reported in 2004, due to changes in Waste Industries reporting and their truck making a second route specifically for move-in.

\*\*\*\* A standardized formula was used to calculate move-in figures for 2006 - 2008.

## Student Donations by Volume Don't Ditch It! Donate It!



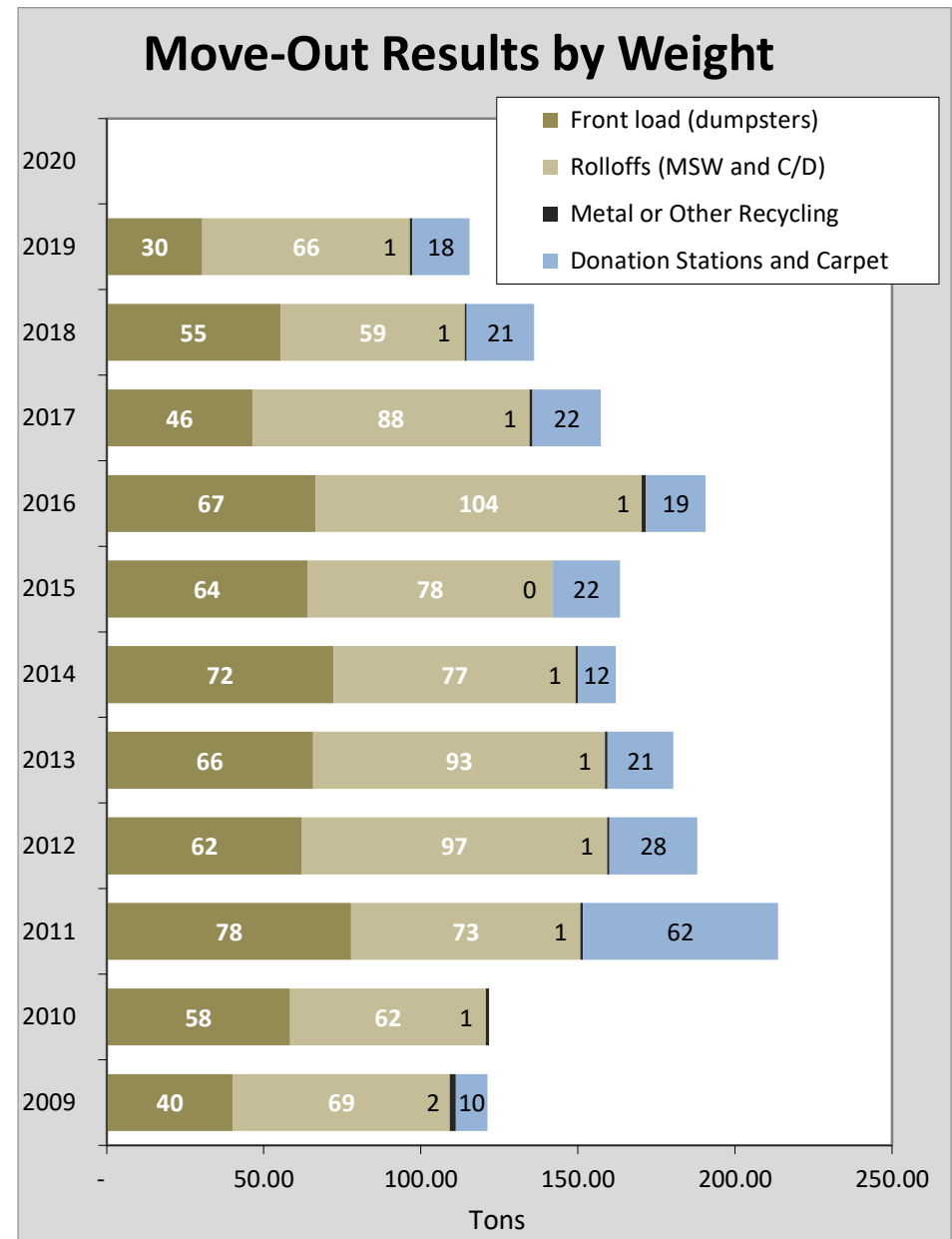
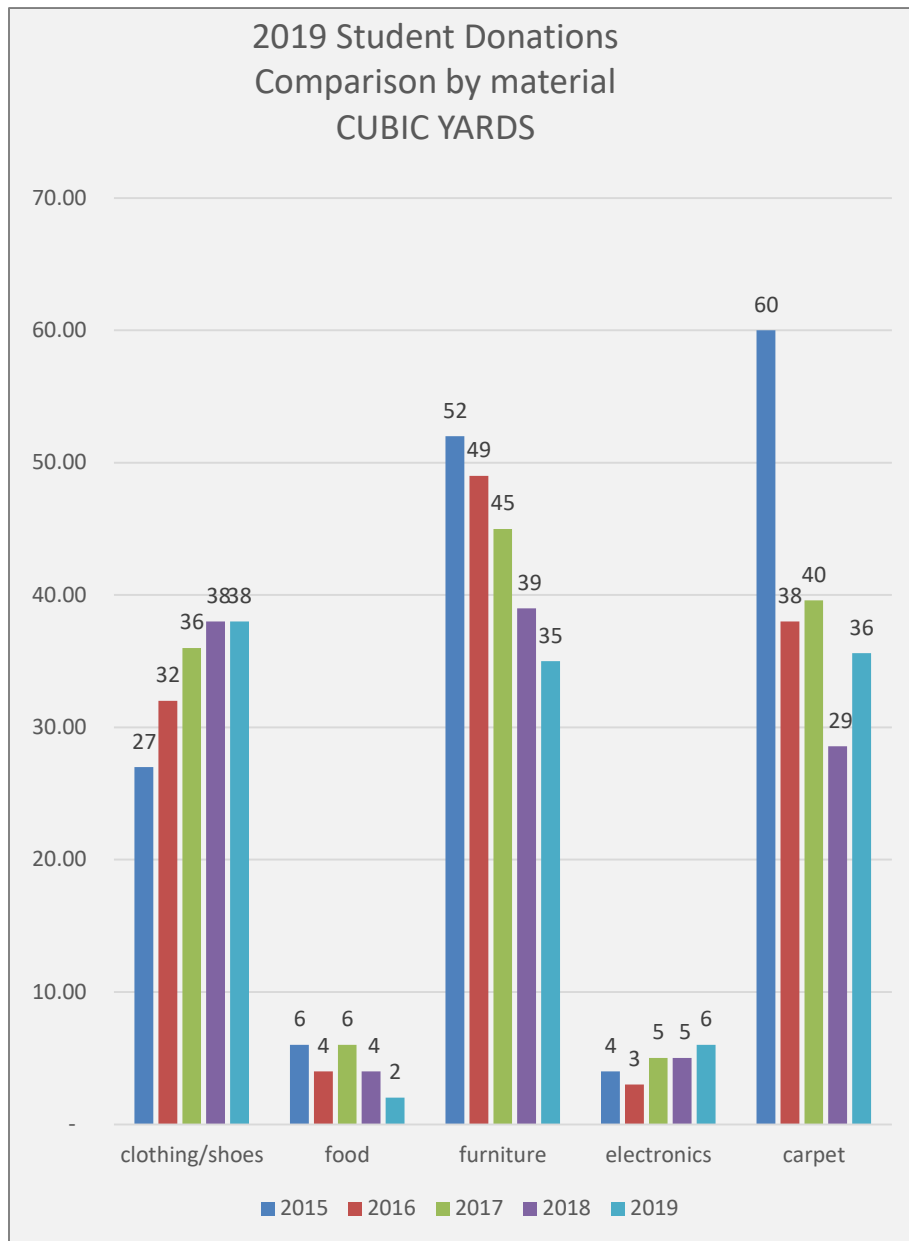
## 2019 Student Move-out Donations (Volume)



**DON'T DITCH IT**

**SINCE 2009!**

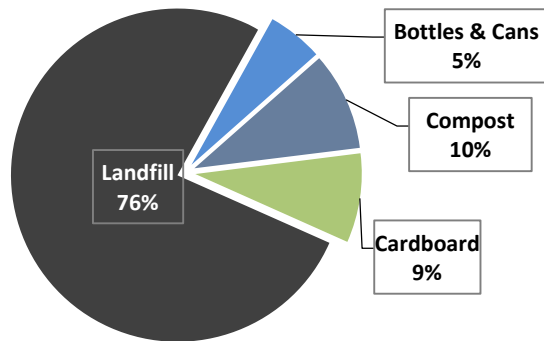
**DONATE IT**



## UNC Football Fall 2019: Game Day Waste & Recycling

Playing Against:	<b>Miami</b>	<b>App State</b>	<b>Clemson</b>	<b>Duke</b>	<b>Virginia</b>	<b>NC State</b>		<b>Season</b>	<b>Season</b>
Game Time:	8pm	3:30 PM	3:30 PM	4:00 PM	7:30 PM	3:30 PM		<b>Total</b>	<b>Average</b>
Approx. Attendance:	50,500	50,500	50,500	50,500	50,500	50,500			
Game Date:	9/7/2019	9/21/2019	9/28/2019	10/27/2019	11/3/2019	11/23/2019			
<b>Stadium (in tons)</b>									
<b>Stadium Landfill Total</b>	<b>8.14</b>	<b>9.25</b>	<b>11.05</b>	<b>10.11</b>	<b>9.53</b>	<b>8.90</b>	<b>0.00</b>	<b>56.98</b>	<b>9.50</b>
Rolloff at Loudermilk	2.51	2.44	2.78	2.89	2.27	2.58		15.47	2.58
Dumpster at Loudermilk*	1.20	1.20	1.20	1.20	1.20	1.20		7.20	1.20
Rolloff at Carolina Club			1.30	1.00	0.74	1.00		4.04	1.01
Dumpster at Kenan Center*	0.60	0.60	0.60	0.60	0.60	0.60		3.60	0.60
Truck (Sunday)	3.83	5.01	5.17	4.42	4.72	3.52		26.67	4.45
<b>Stadium Recycled Total</b>	<b>2.14</b>	<b>2.68</b>	<b>1.78</b>	<b>1.99</b>	<b>1.85</b>	<b>2.75</b>	<b>0.00</b>	<b>13.17</b>	<b>2.20</b>
<b>Bottles &amp; Cans Total</b>	<b>0.94</b>	<b>0.85</b>	<b>0.66</b>	<b>0.89</b>	<b>0.82</b>	<b>0.70</b>	<b>0.00</b>	<b>4.85</b>	<b>0.81</b>
Rolloff at Bell Tower Deck	0.84	0.75	0.56	0.79	0.72	0.60		4.26	0.71
Loudermilk Carts	0.05	0.05	0.05	0.05	0.05	0.05		0.30	0.05
Training Table Carts	0.05	0.05	0.05	0.05	0.05	0.05		0.30	0.05
<b>Cardboard Total</b>	<b>1.20</b>	<b>1.83</b>	<b>1.12</b>	<b>1.10</b>	<b>1.03</b>	<b>2.05</b>	<b>0.00</b>	<b>8.32</b>	<b>1.39</b>
Rolloff at Bell Tower Deck	0.55	1.18	0.47	0.45	0.38	1.40		4.43	0.74
Dumpster at Loudermilk**	0.43	0.43	0.43	0.43	0.43	0.43		2.59	0.43
Dumpster at Kenan Center**	0.22	0.22	0.22	0.22	0.22	0.22		1.30	0.22
<b>Stadium Compost Total</b>	<b>1.49</b>	<b>0.97</b>	<b>1.49</b>	<b>2.05</b>	<b>1.44</b>	<b>1.75</b>	<b>0.00</b>	<b>9.19</b>	<b>1.53</b>
Training Table Compost	0.00	0.00	0.00	0.28	0.00	0.00		0.28	0.05
Loudermilk Compost	1.49	0.97	1.49	1.77	1.44	1.75		8.91	1.48
<b>Total Stadium Landfill</b>	<b>8.14</b>	<b>9.25</b>	<b>11.05</b>	<b>10.11</b>	<b>9.53</b>	<b>8.90</b>	<b>0.00</b>	<b>56.98</b>	<b>9.50</b>
<b>Total Stadium Recovered ***</b>	<b>3.63</b>	<b>3.65</b>	<b>3.26</b>	<b>4.04</b>	<b>3.29</b>	<b>4.50</b>	<b>0.00</b>	<b>22.36</b>	<b>3.73</b>
<b>% Recovered by Weight</b>	<b>45%</b>	<b>39%</b>	<b>30%</b>	<b>40%</b>	<b>34%</b>	<b>51%</b>	<b>#DIV/0!</b>	<b>39%</b>	

	Miami	App State	Clemson	Duke	Virginia	NC State		Season Total	Season Average
Tailgate (in tons)									
Tailgate Landfill Total	3.22	2.60	2.44	3.73	2.55	2.00	0.00	16.54	2.76
Rolloff at Genome	1.24	1.00	0.99	1.94	1.07	1.00		7.24	1.21
Rolloff at Bowles Lot	1.98	1.60	1.45	1.79	1.48	1.00		9.30	1.55
Tailgate Bottles & Cans Total	0.05	0.10	0.06	0.13	0.02	0.00	0.00	0.36	0.06
Bell Tower Carts	0.01	0.02	0.01	0.01	0.00	0.00		0.04	0.01
Genome Carts		0.02				0.00		0.02	0.01
Stone Center Carts		0.02		0.02		0.00		0.04	0.01
Undergraduate Library Carts	0.00	0.01	0.00			0.00		0.01	0.00
Bowles Carts	0.03	0.03	0.03	0.08	0.01	0.00		0.18	0.03
Public Safety Cart	0.01	0.01	0.02	0.01	0.01	0.00		0.06	0.01
Total Tailgate Landfill	3.22	2.60	2.44	3.73	2.55	2.00	0.00	16.54	2.76
Total Tailgate Recovered	0.05	0.10	0.06	0.13	0.02	0.00	0.00	0.36	0.06
% Recovered by Weight	2%	4%	2%	3%	1%	0%	#DIV/0!	2%	
Total = Stadium + Tailgate (in tons, unless otherwise noted)									
Total Landfill	11.36	11.85	13.49	13.84	12.08	10.90	0.00	73.52	12.25
Total Recovered	3.68	3.75	3.32	4.17	3.31	4.50	0.00	22.72	3.79
% Recovered by Weight	32%	32%	25%	30%	27%	41%	#DIV/0!	31%	
Per Capital Waste (POUNDS)****	0.60	0.62	0.67	0.71	0.61	0.61	#DIV/0!	3.81	0.64
								Attend. Avg. = 50500	

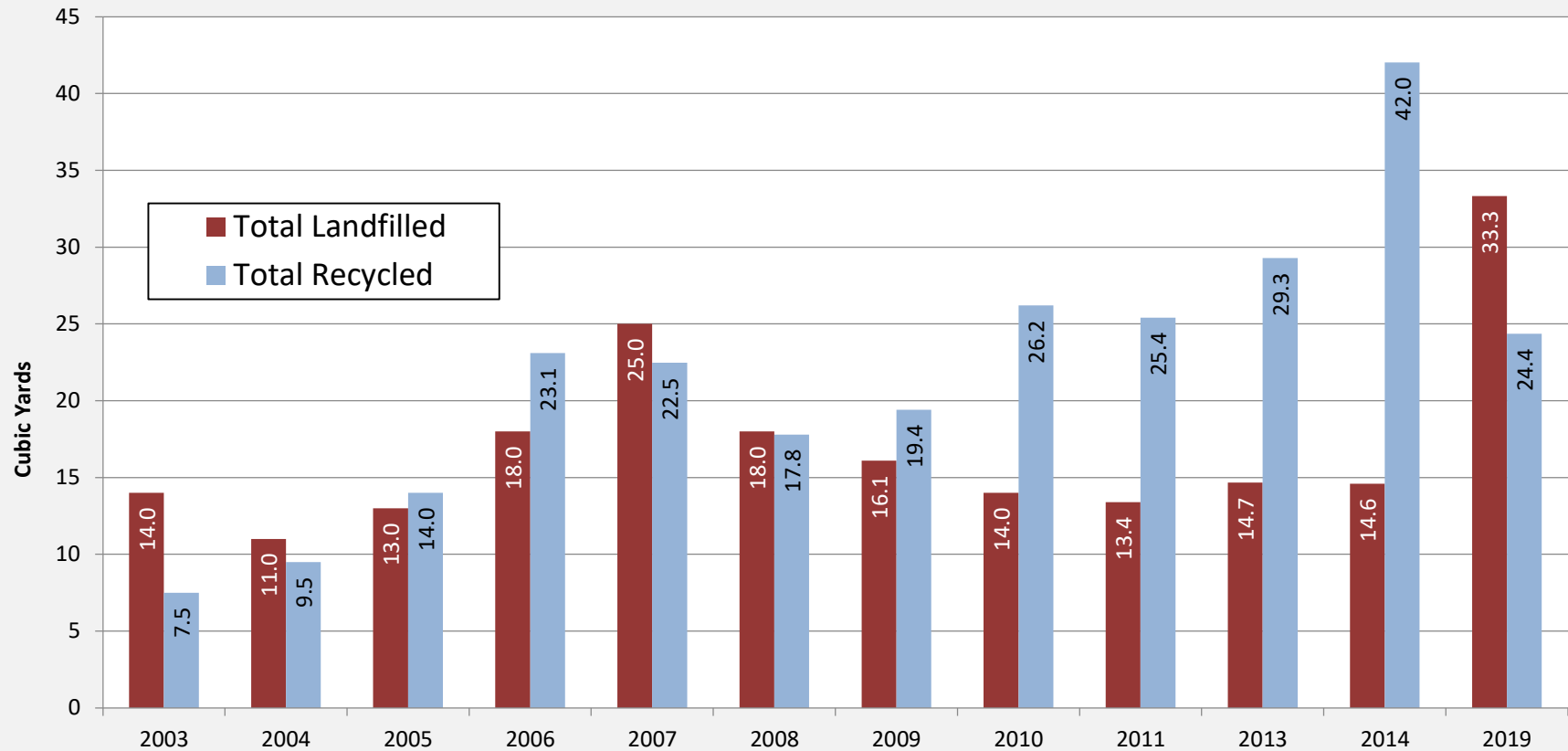


\*Estimated using 300 lbs/cubic yard -- EPA Solid Waste Volume to Weight Conversion Factors  
 \*\* Estimated using 106 lbs/cubic yard -- EPA Solid Waste Volume to Weight Conversion Factors  
 \*\*\* Recovered = Recycling + Compost  
 \*\*\*\*"Per capita" accounts for stadium fans only - staff, press, team, etc. are not included in total attendance count.

[EPA Solid Waste Volume to Weight Conversions](#)

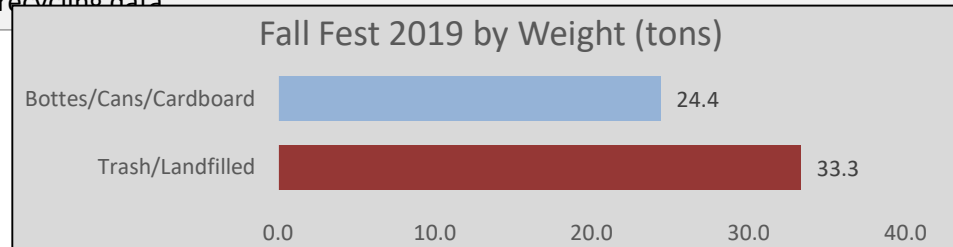


## Fall Fest: Trash & Recycling by Volume

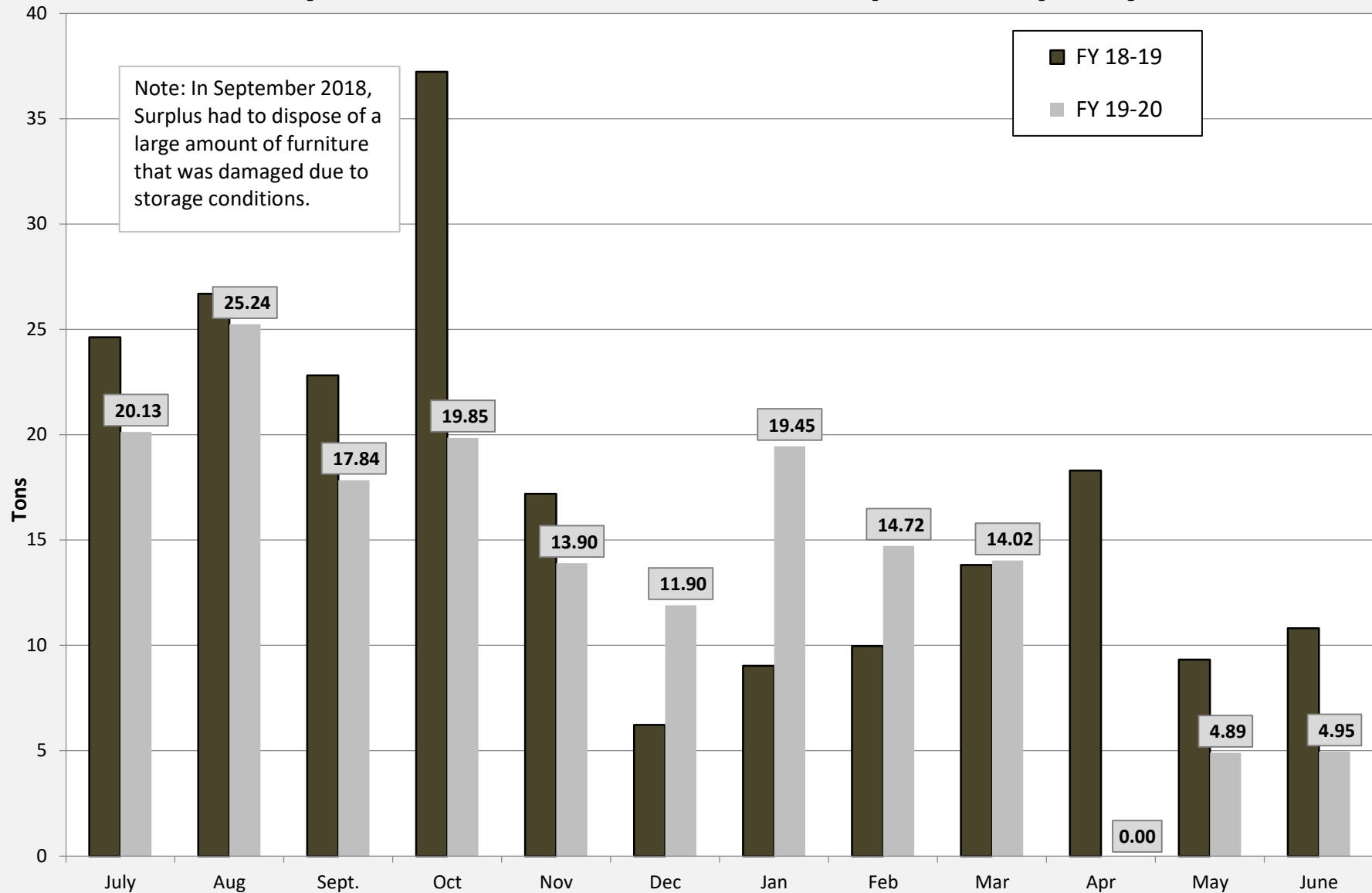


\* 2012 Fall Fest was cancelled. No data for 2015-2018 Fall Fests\*. 2018 Fall Fest ended early due to storm. 2019 was first year to de-bag bottles & cans and actual weights were used for recycling data.

2019	Landfill	Recycling	Recovery Rate
Weight	2.30	0.92	29%
Volume	33.33	24.37	42%



# Bulky Waste Landfilled from Surplus Property



**EPA College & University(C/U) Sector  
Year-to-Date EPA WARM Input Information**

<b>Material Category As Defined by the US EPA's WARM Model</b>	<b>EPA WARM Definition:</b> <a href="http://epa.gov/epawaste/conserve/tools/warm/materials.html">http://epa.gov/epawaste/conserve/tools/warm/materials.html</a>	<b>Tons</b>	<b>UNC's Waste Material within EPA Categories:</b>
<b>Corrugated Containers</b>	Corrugated cardboard boxes made from containerboard (liner and corrugating medium) used in packaging applications.	<b>396.6</b>	Corrugated Cardboard collected by Waste Industries
<b>Mixed Paper (primarily from offices)</b>	Office mixed paper is assumed to be 21% newspaper, 5% corrugated cardboard, 36% magazines, and 38% office paper.	<b>464.6</b>	Mixed Paper collected from Shimar, OWRR and Sonoco
<b>Office Paper</b>	Office paper represents paper made from uncoated bleached chemical pulp.	<b>361.0</b>	Confidential Paper as collected by OWRR & Hospital Contractor
<b>Textbooks</b>	Textbooks represent books made from paper produced from chemical pulp.	<b>7.6</b>	Hardback books are collected across campus by OWRR & Shimar
<b>Mixed Plastics</b>	Mixed plastics are made up of 39% HDPE and 61% PET plastic.	<b>67.6</b>	Mixed Plastics collected from Shimar, OWRR and Sonoco
<b>Glass</b>	Glass represents glass containers (e.g., soft drink bottles and wine bottles)	<b>21.5</b>	Glass collected from Shimar, OWRR, and Sonoco
<b>Aluminum Cans</b>	Aluminum cans represent cans produced out of sheet rolled aluminum ingot.	<b>8.6</b>	Aluminum Cans collected from Shimar, OWRR, and Sonoco
<b>Mixed Metals</b>	Mixed metals are made up of 35% aluminum cans and 65% steel cans.	<b>149.9</b>	Mixed Metals collected by EHS, Surplus, Shimar, OWRR and Sonoco
<b>Food Waste</b>	Food waste consists of uneaten food and wasted, prepared food from residences, commercial establishments such as grocery stores and restaurants, institutional sources such as school cafeterias, and industrial sources such as factory lunchrooms. This emission factor contains a weighted average of all food types in the waste stream currently modeled in WARM, including beef, poultry, grains, fruits and vegetables, and dairy products. The mix is assumed to be 9% beef, 11% poultry, 13% grains, 49% fruits and vegetables, and 18% dairy products.	<b>530.9</b>	Food Waste collected by Brooks Contractors, as well as Cooking Oil from Carolina Dining Services
<b>Yard Trimmings</b>	Yard trimmings are assumed to be 50% grass, 25% leaves, and 25% tree and brush trimmings from residential, institutional, and commercial sources.	<b>645.0</b>	Yard waste, limbs, brush and leaves as collected by UNC's Grounds department and made into mulch.
<b>Leaves</b>	Leaves consist of fallen leaves from deciduous trees recovered from residential, institutional and commercial sources.	<b>440.0</b>	Leaves are ground into a compost/mulch by Grounds.
<b>LDPE</b>	No longer included in warm. Added to Mixed Plastics.	<b>0.0</b>	Plastic Film as collected in the Student Union by OWRR
<b>Polystyrene</b>	No longer included in warm. Added to Mixed Plastics.	<b>0.0</b>	Polystyrene as collected by OWRR during Student Move-In events and processed by Shimar Recycling Services
<b>Mixed Electronics</b>	Mixed electronics consist of desktop CPUs (11%), Portable electronic devices (5%), flat panel displays (23%), CRTs (44%), peripherals (2%), hard copy devices (15%)	<b>145.1</b>	E-Waste, Printer Cartridges and Batteries as collected by Surplus and EHS

**EPA College & University(C/U) Sector  
Year-to-Date EPA WARM Input Information**

Material Category As Defined by the US EPA's WARM Model	EPA WARM Definition: <a href="http://epa.gov/epawaste/conservation/tools/warm/materials.html">http://epa.gov/epawaste/conservation/tools/warm/materials.html</a>	Tons	UNC's Waste Material within EPA Categories:
<b>Tires</b>	Tires represent scrap tires that have been disposed of by consumers and have several end uses in the U.S. market including as a fuel, in civil engineering, and in various ground rubber applications such as running tracks and molded products.	<b>7.1</b>	Tires as collected by UNC and processed at Orange County Landfill
<b>Fly Ash</b>	Fly ash is a byproduct of coal combustion that is used as a cement replacement in concrete.	<b>0.0</b>	Coal Combustion Byproducts (CCB) processed and recycled from UNC's CoGen Plant
<b>Concrete</b>	Concrete is a high-volume building material produced by mixing cement, water, and coarse and fine aggregates. In WARM, concrete is assumed to be recycled into aggregate, so the GHG benefits are associated with the avoided emissions associated with mining and processing aggregate.	<b>16.0</b>	Concrete as collected by Waste Industries from UNC Operations
<b>Dimensional Lumber</b>	Lumber includes wood used for containers, packaging, and building and includes crates, pallets, furniture and dimensional lumber like two by fours.	<b>45.5</b>	Pallets and Clean Wood Waste as collected by UNC and Waste Industries
<b>Carpet</b>	Carpet represents broadloom residential carpet containing a mix of nylon, PET and PP components within the face fiber, primary and secondary backing, and latex used for attaching the backings.	<b>2.6</b>	Carpet as collected by UNC
Sum of data for WARM model		3,309.4	
<b>Misc not included in warm</b>		123.5	Student donations, mattresses, batteries, bulbs, solvents, motor oil and filters
Total Recovered Tons		3,632.9	(including CCB actually recycled vs. beneficial fill)
Solid Waste (Trash) to Landfill		4,891.3	(not including standard CCB used for beneficial fill or landfilled)
Total Solid Waste Managed		8,524.2	
Recovery Percentage		42.62%	