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University of Oregon

# Materials Tracking Report

Fiscal Year 2020

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# FY2020 Highlights

Recycling and waste reduction have been foundational components of the University of Oregon's sustainability programming for nearly 30 years. It is one of the few activities that every UO community member participates in daily. This material recovery report summarizes the results of this collective effort for the 2020 fiscal year (FY20). The report has been re-structured from previous years for clarity, to include reduction and re-use initiatives, and better analyze long-term trends. The data are used to evaluate and continuously improve our diversion programs. The report relies on data collected by the Zero Waste program, Design and Construction, Landscape and Grounds Maintenance, Dining Services, Environmental Health and Safety, and several other units handling small and/or specialized materials. These units collect and weigh materials directly, use established volume-to-weight conversions provided by the EPA, and/or receive weights by 3<sup>rd</sup> party vendors contracted to haul UO waste and/or diverted materials. The University of Oregon Sustainability Office collects and analyzes the data and produces this annual report. All material weights are reported in tons except where noted.

## Key takeaways for FY20:

- Covid-19 dramatically changed consumption patterns for the last quarter of FY20. Changes in waste and diversion numbers should be viewed through this lens.
- The University of Oregon produced 3,613 tons of waste but recycled 1,954 tons and re-used 96 tons. This equals a recovery rate of 57%.
- UO's diversion rate is higher than both Lane County's (51%) and State of Oregon's (41%) diversion rates. UO's diversion rate is in the top half of the Pac-12.
- UO's diversion rate improved steadily from 31% in 1993. It has remained above 50% for the past eight years.
- UO's recycling and reuse programs have significantly reduced material sent to the landfill in both absolute and per capita terms since data collection began in FY93.
- The annual report now includes construction and demolition (C&D) materials. Approximately 70% of C&D materials were diverted from the landfill in FY20. During the past five years C&D diversion averaged approximately 80%.
- Material sent to the landfill has been trending up slightly during the last five years, but it is not yet clear why this is.
- Glass, metal, and plastic amounts by weight have decreased dramatically over the last decade. This is mostly because beverage manufacturers and distributors are substituting lighter weight plastics for glass.
- Paper collection and diversion has decreased from its high of 906 tons per year in FY04 to 435 tons in FY19. This reduction of 470 tons of paper is strong evidence of a transition to paperless offices happening across campus. However, UO must now pay 3<sup>rd</sup> parties to accept our recycled paper. Previously it was sold and the revenue helped offset Campus Zero Waste's program costs.
- There was no increase in the landfill per ton tipping fee in 2020. The fee remains at \$84.13/ton for commercial haulers delivering directly to the landfill. The county stated an intention to increase tipping fees in the future, but COVID-19 may delay it.

# Diversion and Waste Totals FY20 (in tons)

TOTAL REDUCED MATERIAL*	470
TOTAL RE-USED MATERIAL	96
TOTAL RECYCLED MATERIAL	1,954
TOTAL LANDFILLED MATERIAL	1,563
TOTAL MATERIAL	3,613
FY20 DIVERSION RATE	57%

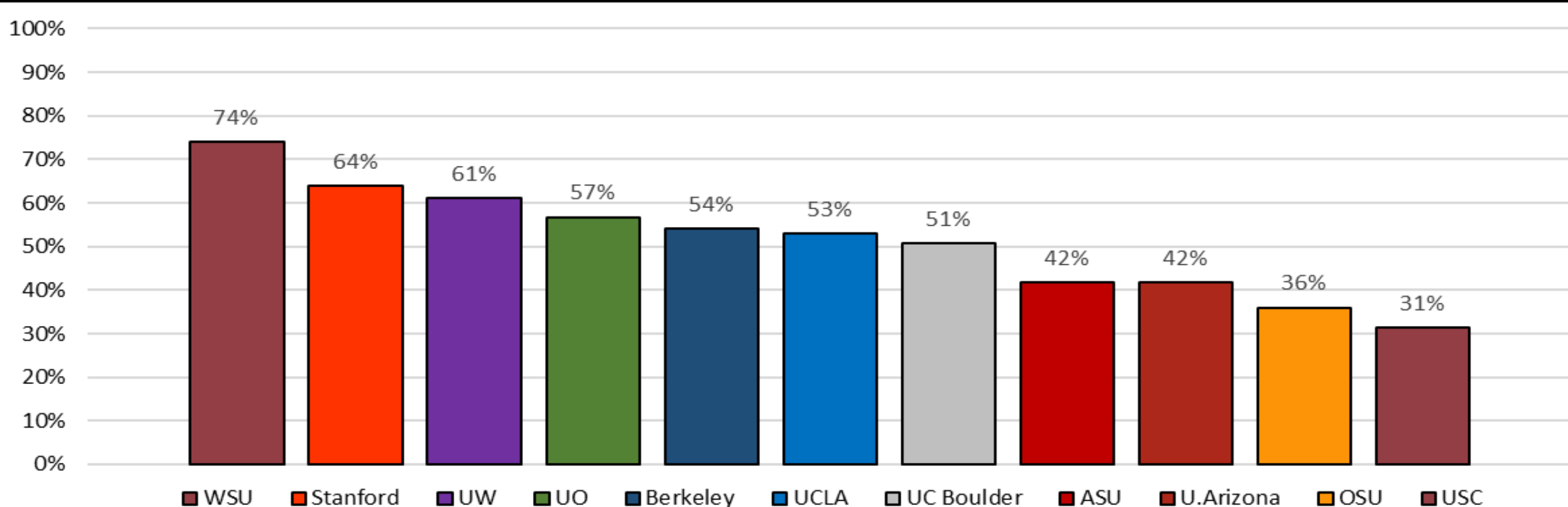
\* Reduction estimates not counted towards diversion rate.  
\*\* Categories with less than 3 tons of materials have been aggregated. See appendix for detailed breakout.

RE-USED MATERIALS	
Recovered and Donated Electronics	45.53
Recovered and Donated Food	31.07
Move-Out and Miscellaneous Donations	19.12
Chemicals Re-used on Campus	0.02
RECYCLED MATERIALS	
Paper Products	408.68
Cardboard	212.01
Office Paper - All Colors and Grades	116.38
Confidential Material	48.90
Books	23.29
Other Paper**	8.10
Food and Beverage Containers	240.65
Food Compost	184.53
Cooking Oil	15.11
Glass	12.01
Metal/Plastic (Commingle)	10.81
Glass (Deposits)	10.10
Plastics (Deposits)	3.21
Other Food and Beverage Containers**	4.88
Construction & Demolition Recycled	702.60
Large Projects	660.50
Small Projects and Misc	42.10
Other Materials	601.84
Yardwaste	372.00
Wood Waste	144.00
Scrap Metal	65.10
Environmental Health and Safety Collection	7.59
Tires	3.46
Toner/ Ink Jet Cartridges	3.18
Other Other**	6.51
LANDFILL MATERIALS	
Short Mountain General Landfill	1,200.05
Construction & Demolition	282.67
Small project C&D and misc	60.37
Environmental Health and Safety	20.14

# Regional and PAC-12 Recovery Rate Comparison

The University of Oregon's FY20 diversion rate is 57%. Comparing diversion rates is useful but difficult as methods, assumptions, and policy vary across jurisdictions and institutions. The most currently available recovery rates for 11 of 12 Pac-12 institutions are below. University of Oregon's recovery rate is ranked fourth amongst this group. The 2018 waste and recovery reports for Lane County and the State of Oregon, which are both produced by the Oregon Department of Environmental Quality, state the following:

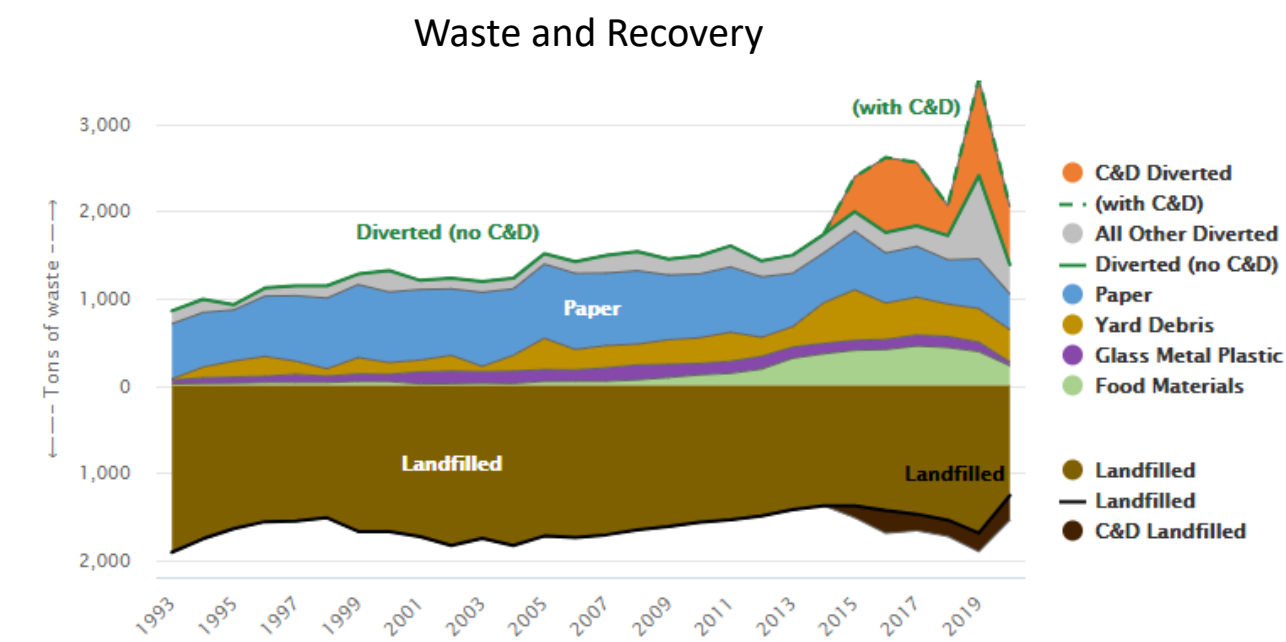
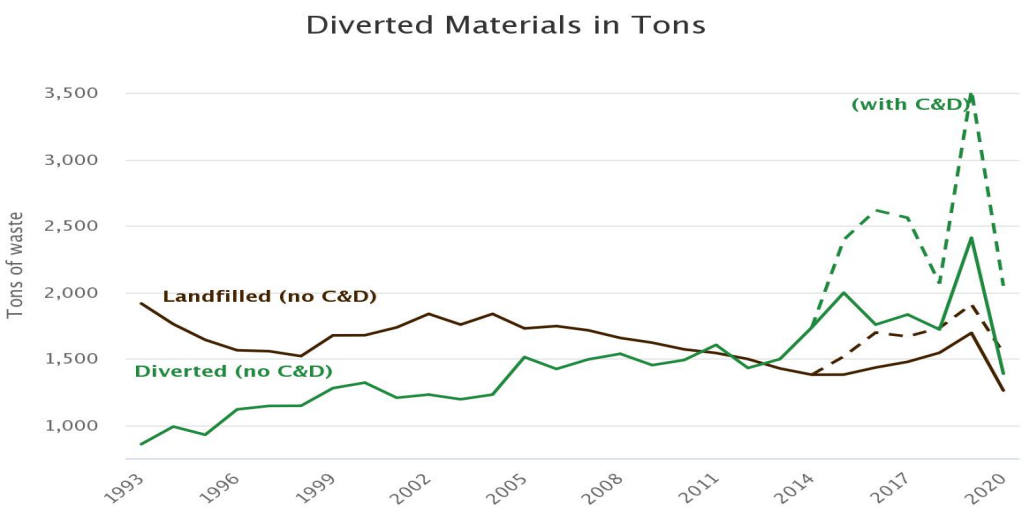
- University of Oregon has a 57% recovery rate
- Lane County has a 53.8% recovery rate and a goal of 63%
- State of Oregon has a 40.8% recovery rate and a goal of 52%



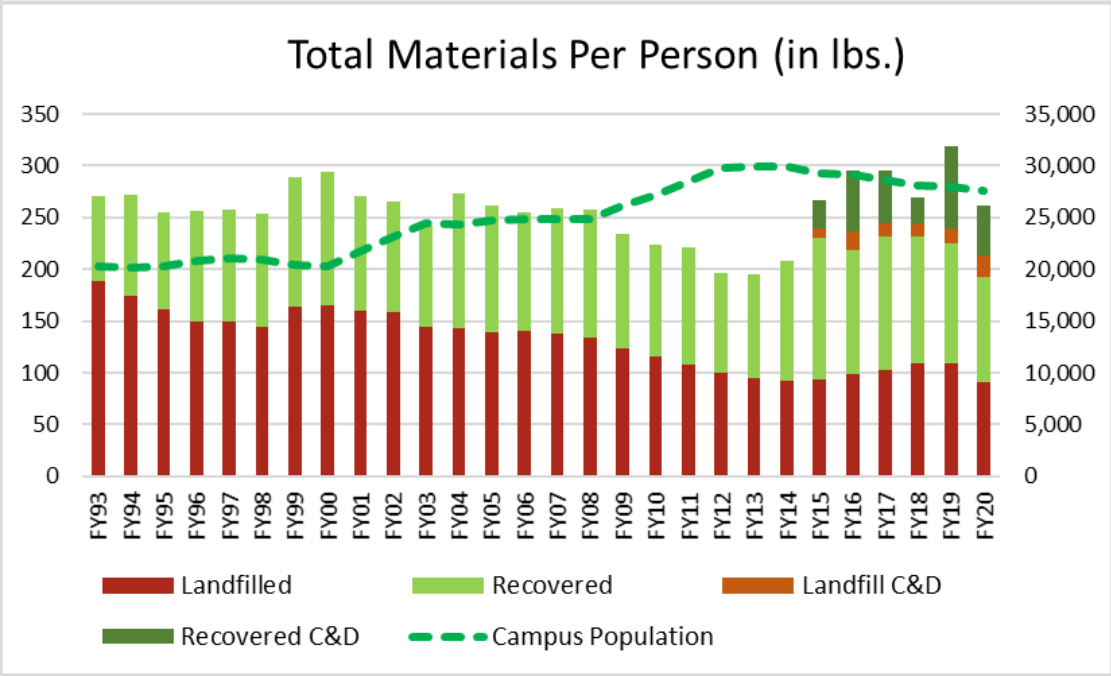
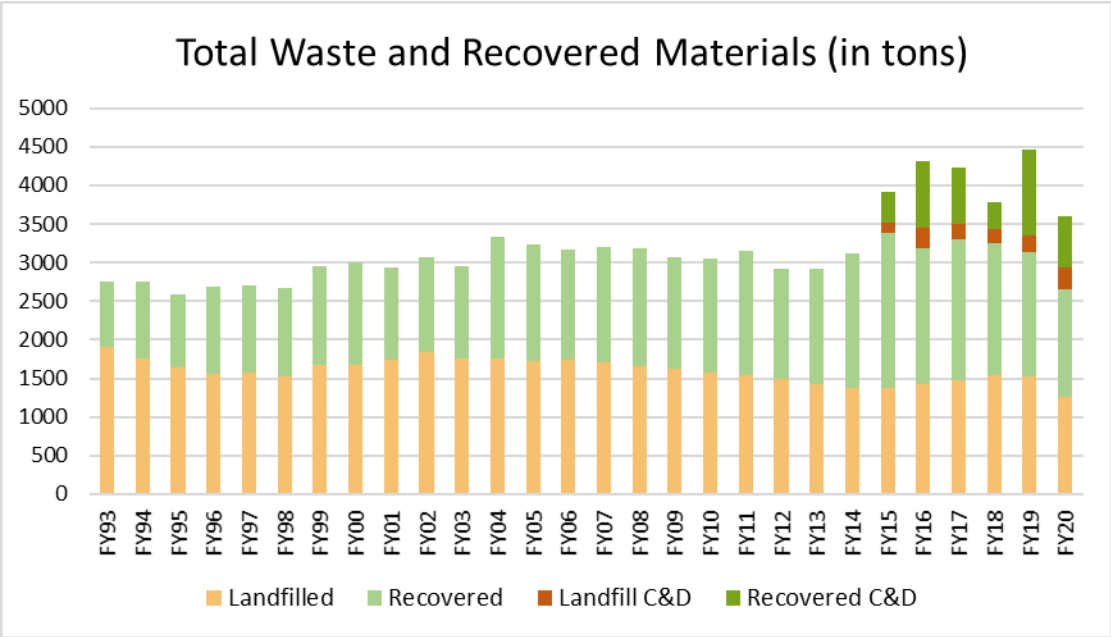
# Long-Term University of Oregon Material Recovery Trend

- UO’s diversion rate has steadily increased from 31% in 1993 to 57% in FY20.
- The diversion rate has remained above 50% since FY13.
- UO’s success in increasing diversion in other materials has mitigated the reduction of paper and glass in the waste stream. The institution-wide reduction in paper consumption has reduced FY19’s total weight of diverted materials by 470 tons compared to FY04. The transition from glass to lighter plastic beverage containers has a similar impact on the total amount diverted and the diversion rate.

Total Materials Comparison				
Total Materials Generated (in tons)				
Fiscal Year	Landfilled	Diverted	TOTAL	Waste Diversion Percentage
FY93	1914.54	846.52	2761.06	31%
FY94	1759.75	988.47	2748.22	36%
FY95	1641.47	951.67	2593.14	37%
FY96	1562.79	1116.05	2678.84	42%
FY97	1571.08	1138.86	2709.94	42%
FY98	1518.80	1144.90	2663.70	43%
FY99	1674.86	1281.02	2955.88	43%
FY00	1675.88	1321.58	2997.46	44%
FY01	1734.82	1205.55	2940.37	41%
FY02	1836.46	1229.34	3065.80	40%
FY03	1755.92	1193.98	2949.90	40%
FY04	1752.99	1577.13	3330.12	47%
FY05	1727.17	1510.73	3237.90	47%
FY06	1744.80	1422.17	3166.97	45%
FY07	1713.09	1494.40	3207.49	47%
FY08	1655.63	1535.22	3190.85	48%
FY09	1620.03	1450.98	3071.01	47%
FY10	1569.77	1489.42	3059.19	49%
FY11	1542.29	1603.34	3145.63	51%
FY12	1496.84	1429.66	2926.50	49%
FY13	1426.07	1496.11	2922.18	51%
FY14	1378.91	1734.74	3113.65	56%
C&D (Construction and Demolition) Included Below This Point				
FY15	1516.04	2338.23	3854.27	61%
FY16	1696.31	2575.59	4271.90	60%
FY17	1666.44	2560.51	4226.95	61%
FY18	1730.99	2053.08	3784.07	54%
FY19	1741.91	2725.59	4467.50	61%
FY20	1543.09	2053.06	3596.15	57%
Total From FY93-20	46,168.74	43,467.90	89,636.64	48.49%

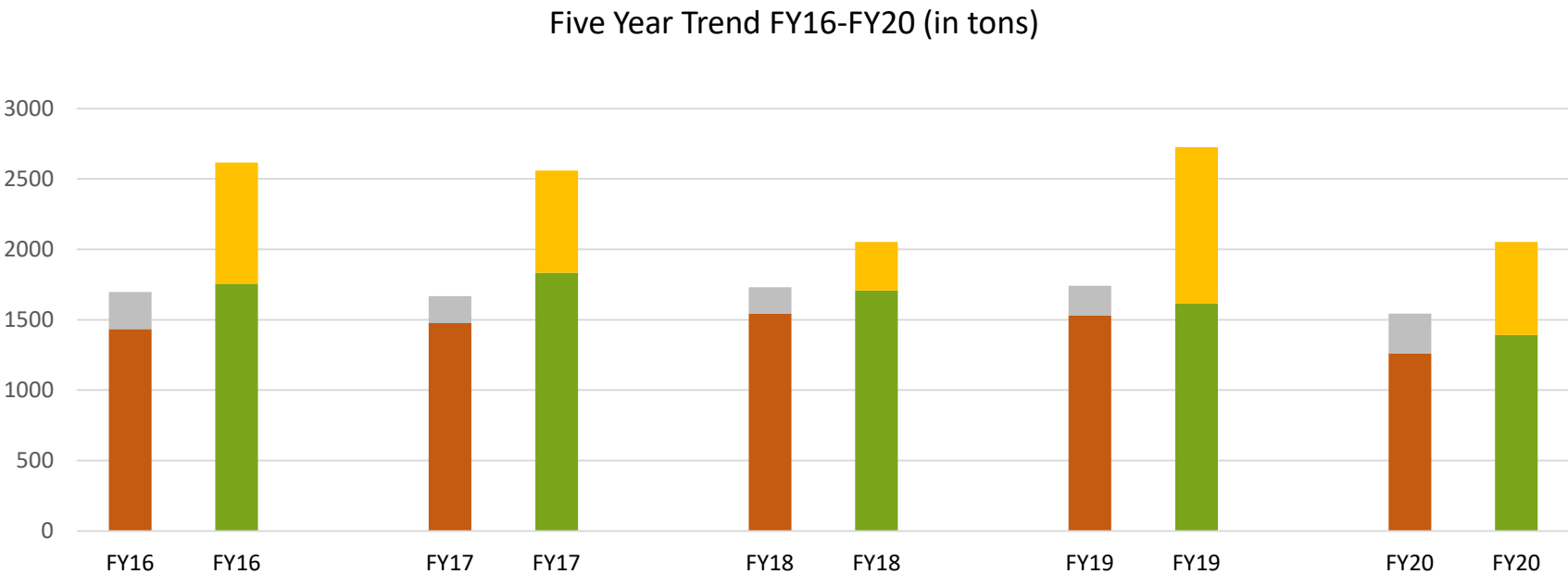


# Long-Term University of Oregon Material Recovery Trend Cont.



- Institutional diversion efforts are clearly reducing the total amount of material sent to the landfill since waste data collection began in FY93. (Note: C&D waste and diversion data is not available prior to FY15.)
- We estimate that landfilled material per capita has been reduced significantly since FY93.
- Recovered material per capita has been rising since FY93.
- NOTE: Complete data for all staff are only available back to FY15. Assuming the student/staff ratio is roughly constant, we were able to estimate staff numbers back to FY93.

# Five-Year University of Oregon Material Recovery Trend



- Landfill
- Landfilled C&D
- Diverted
- Diverted C&D

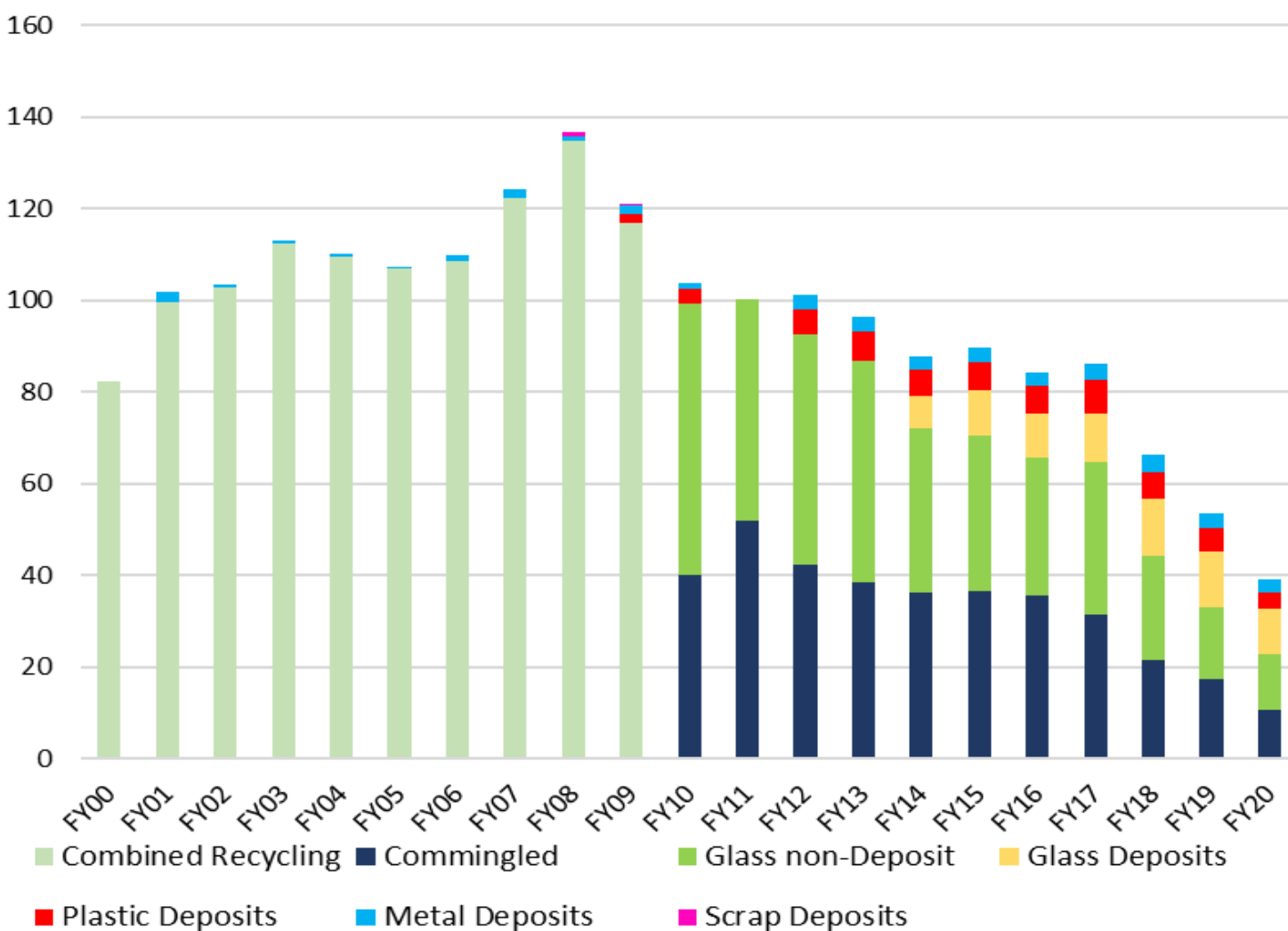
FY16	FY17	FY18	FY19	FY20
1433	1476	1544	1528	1220
263	191	187	214	343
1756	1833	1707	1615	1347
861	728	346	1111	703

- Waste generation is trending up slightly during the past five years. The roughly 25% increase in students living in on-campus during this period is likely partially responsible. We will continue to monitor and analyze this trend.
- In FY20 the COVID-19 pandemic resulted in fewer people on campus during the last quarter and less overall material generation.
- Construction and demolition (C&D) landfilled and diverted materials vary greatly year to year due to changes in construction activity. However the C&D diversion rate has generally been above 80%.



# Glass, Metal, and Plastic Containers Trend

Total Glass, Metal, Plastic FY00-FY20 (in tons)



The collection and recycling of glass, metal, and plastic containers represents a significant part of Campus Zero Waste's work. The vast majority of these items are beverage containers. The steady decline in tonnage since FY08 largely reflects the transition from glass to plastic beverage containers. Plastic is lighter. The reduction in weight does not lead to a reduction in work. The total number of beverage containers moving through our campus collection system is likely increasing.

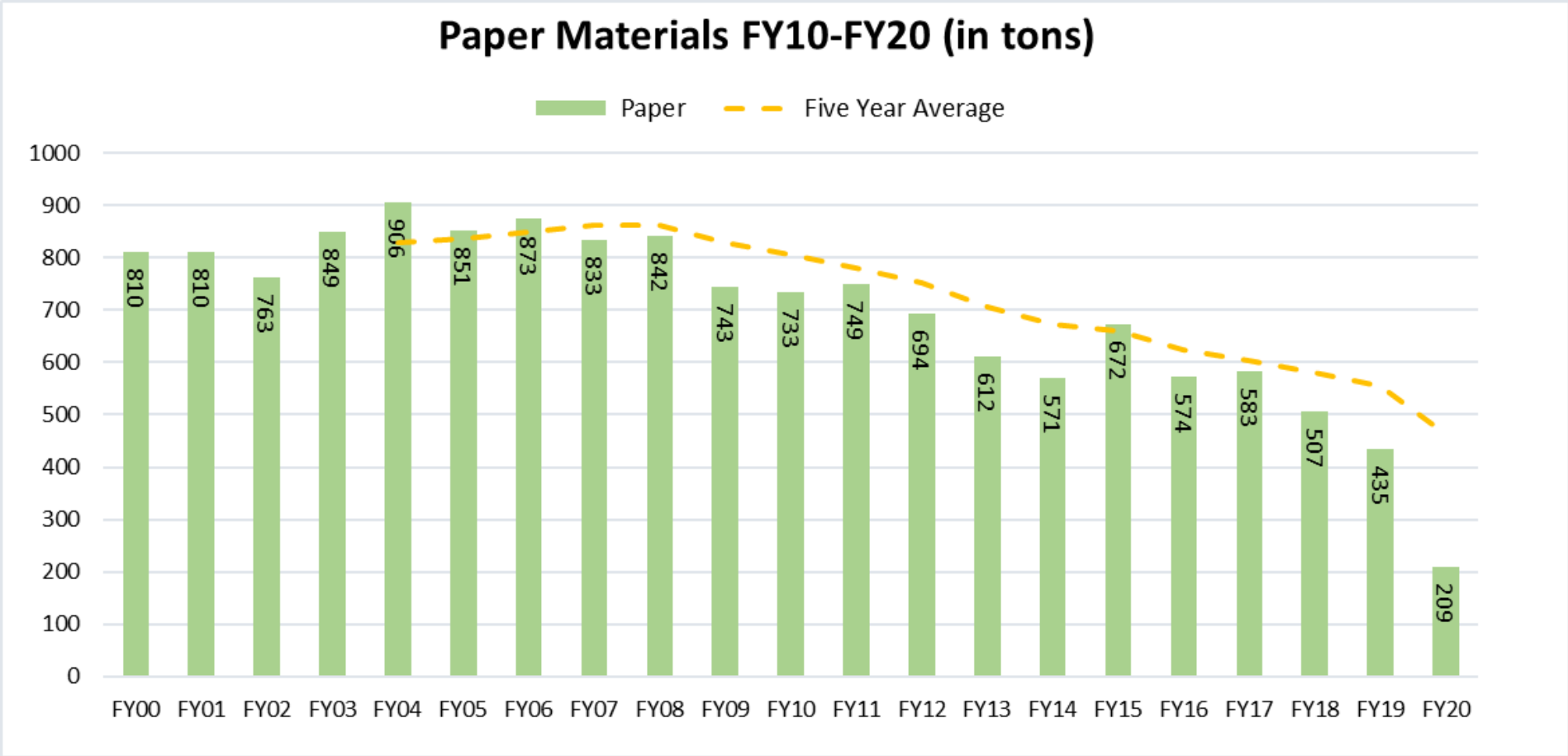
Beginning in FY18 we see slight declines in plastic and metal collection and recycling tonnage. The increase to \$.10 per redeemable item in that year incentivizes more people to return their containers directly and/or pick through recycling bins before Zero Waste can collect items.

The significant reduction in glass, metal, and plastic in FY20 is an anomaly directly linked to COVID's impact during April – June 2020.

**A note about terms:** From FY00 – FY09 recycling of plastic bottles and jugs, metal food containers, and all glass was **combined**. Beginning in FY10 glass was recycled separately but plastic bottles and jugs and metal food containers, not categorized as **deposits**, were **commingled**. Beginning in FY14 glass was further broken down into **deposits** and **non-deposits**.

# Paper Trend

- Paper use and recycling reached a high of more than 900 tons in FY04. It has been declining steadily ever since as more and more campus units transition to paperless systems.
- Roughly 470 fewer tons of paper were collected and recycled in FY19 as compared to FY04. (We’re not counting FY20 in this analysis given the unique impacts of COVID.) If this reduction in consumption was factored into the diversion rate, UO would increase its diversion rate by an additional 4%.
- Campus Zero Waste has seen significant declines in other office supplies including CDs, mailing envelopes, toner, and Tyvek.



# APPENDIX

Detailed Annual Report

