



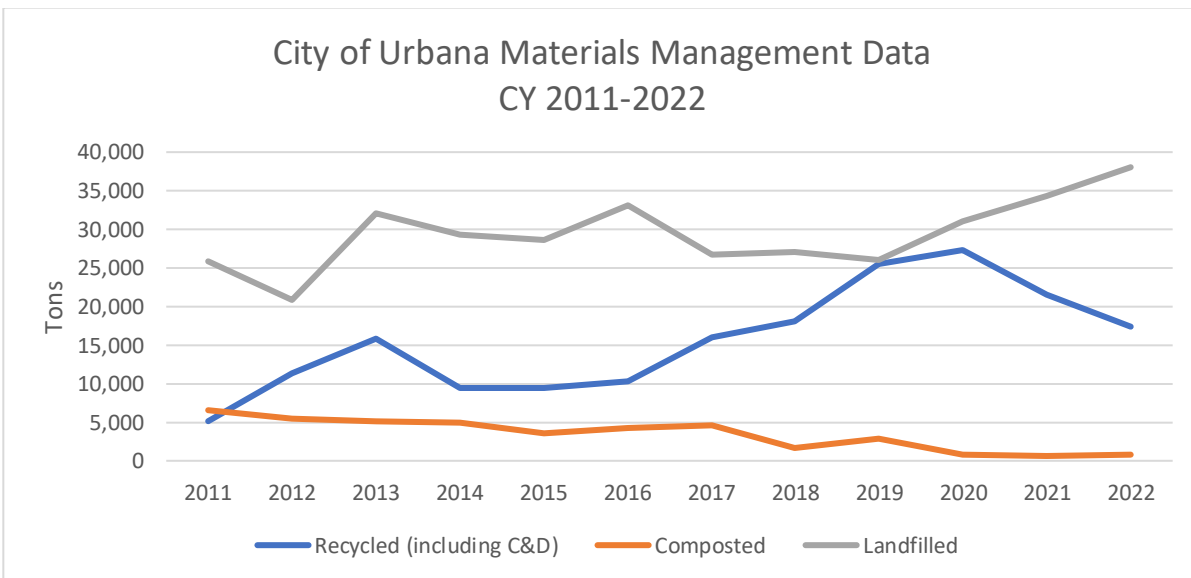
ANNUAL REPORT

CY 2022

URBANA MATERIALS MANAGEMENT CY 2022

Diversion Rate

In 2022, there was a total of 56,188 tons of materials *generated* in Urbana. This includes garbage, recycled construction & demolition (C&D) debris, commodity recycling from households, and landscape materials composted. Data was compiled using the totals that haulers provide the City of Urbana, along with data from divisions within the Urbana Public Works department. Of the total materials generated, 38,046 tons were landfilled as garbage; 17,315 tons were recycled, including C&D; and 827 tons of landscape materials were composted. Urbana’s waste diversion rate in 2022 was 32%. Below is a look at recycled, composted, and landfilled tonnages since 2011.



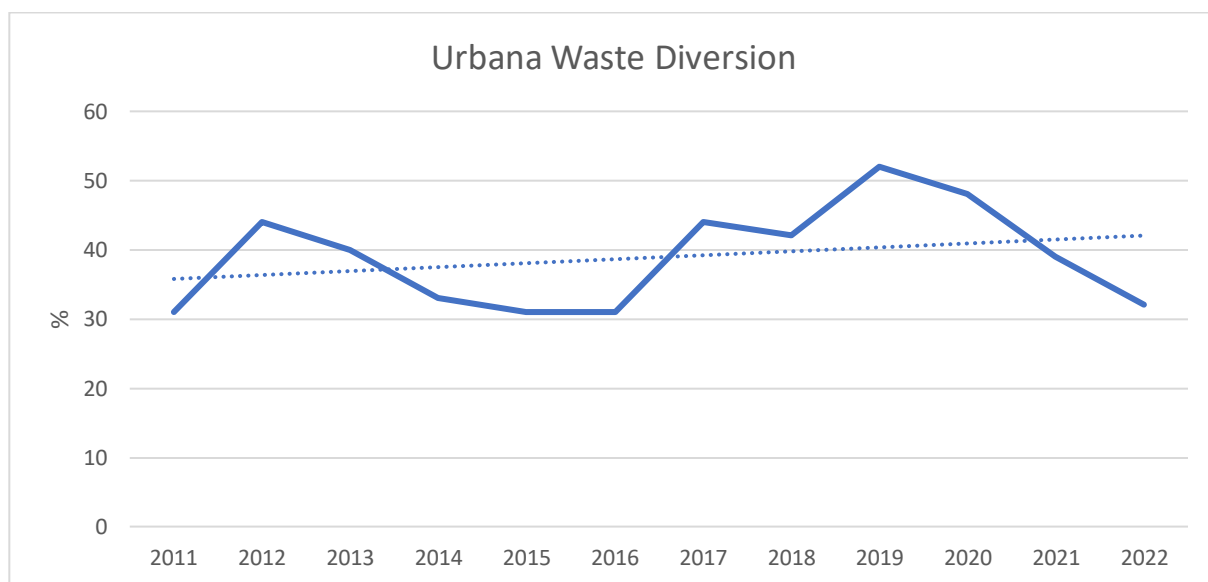
The City of Urbana began tracking data in 2011 when licensed garbage haulers in Urbana were required to provide the quantity of garbage, recycling (including C&D) and landscape debris collected on an annual basis.

Since 2011, recycling (including C&D) has increased more than three-fold, landscape materials received for composting has decreased mainly because the City of Champaign no longer utilizes the facility for the city’s yard debris, and garbage landfilled has increased since 2020, attributed to the pandemic. During this time frame many individuals were working from home, schooling at home, and eating at home

URBANA MATERIALS MANAGEMENT CY 2022

contributing to higher residential municipal waste landfilled. Between 2011 and 2019 the average tons of garbage landfilled was 28,000 for the City of Urbana; however, in the past three calendar years (2020-2022) there has been a 23% increase in garbage landfilled.

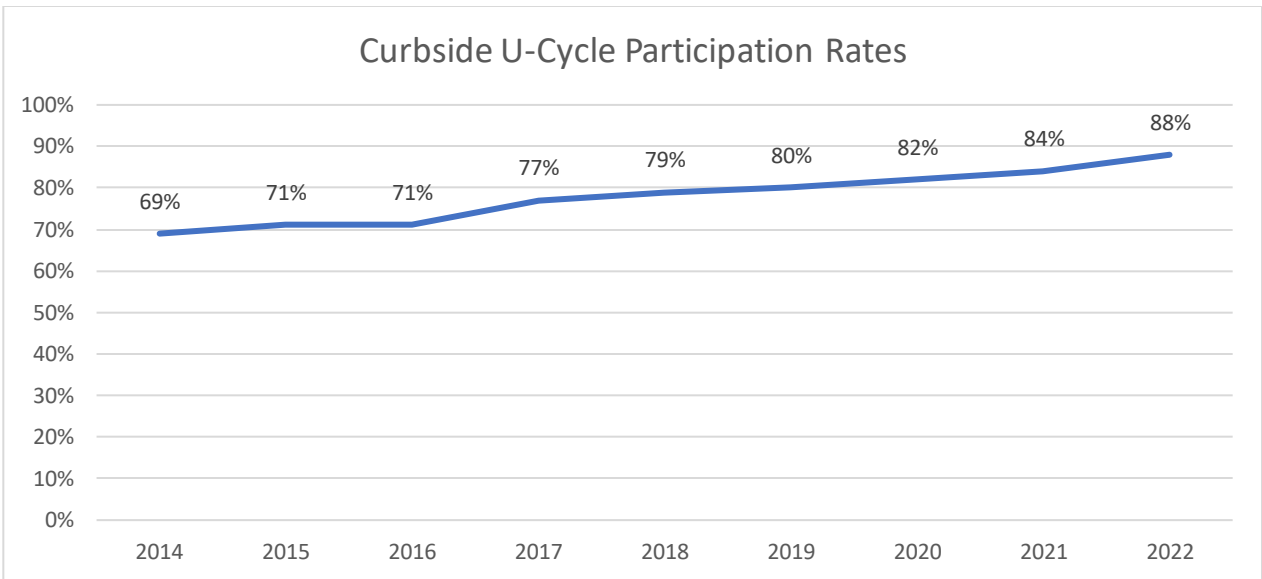
The waste diversion rate for the past 12 calendar years averaged 39%. The chart below shows the diversion rates (%) per year.



Participation Rate: Curbside U-Cycle Program

The participation rate in the curbside U-Cycle program has been tracked since 2014. In 2014, the participation rate was 69%. In 2022, the curbside U-Cycle participation rate rose to 88%, an all-time high. The higher participation rate is partially attributed to a housing boom with more new construction households constructed in Urbana than in more than a decade. Participation rate is calculated by dividing the total number of single-family through four-plex households in Urbana by the number of households that have requested a U-Card or recycling bin (historically). Participation rate assumes those households with recycling receptacles are setting out recycling semi-frequently (averaging twice per month).

URBANA MATERIALS MANAGEMENT CY 2022



Environmental Impacts

In 2022, the curbside and multifamily U-Cycle programs recycled a combined 3,858 tons of commingled recycling, averaging 322 tons of recyclables collected and processed per month.

The positive environmental impacts of recycling were assessed using an environmental footprint calculator provided by Montgomery County, Maryland. For our purposes we are only including U-Cycle recycling totals for paper, and commingled materials which includes plastics, glass, and metals. Here are the results.

By recycling 6 million pounds of paper and 2.1 million pounds of plastics, glass and metals in the U-Cycle programs in 2022:

- 15,941 trees were saved;
- 191,000 gallons of oil was conserved;
- 1.8 million kWh of electricity was saved; and
- 4.8 million gallons of water was conserved.

URBANA MATERIALS MANAGEMENT CY 2022



Economic Impacts

In 2022, the average annual household garbage collection cost in Urbana was \$23.21/month or \$278.52 annually. The average recycling collection cost in Urbana was \$3.25/month or \$39/annually.

Curbside Garbage Landfilled

- Curbside housing units 8,547
- Curbside Solid Waste Landfilled/Year (Est.) = 16,740 tons

(Curbside households account for 44% of Urbana's housing, multiplied by the total municipal waste landfilled at 38,046 tons)

URBANA MATERIALS MANAGEMENT CY 2022

Curbside Households Garbage Cumulative Cost (Based on annual hauler prices, not tipping fees)

- Estimated at \$2,380,510 per year
(8,547 HH x \$278.52/annual (avg.) = \$2,380,510)
- Cost per ton = \$143/ton
((\$2,380,510 / 16,740 tons = \$142/ton)
- Cost per pound = \$0.07/lb.
((\$142/ton / 2000 = \$0.07/lb.)

Multifamily Garbage Landfilled

- Multifamily Housing Units = 9,180
- Multifamily Solid Waste Landfilled/Year (Est.) = 21,306 tons

(Multifamily households account for 56% of Urbana's housing, multiplied by the total municipal waste landfilled at 38,046 tons)

Multifamily Households Garbage Cumulative Cost (Based on hauler prices, not tipping fees)

- Estimated at \$1,137,953 per year
(9,180 units x \$10.33*/unit/month (avg.)) x 12 months = \$1,137,953 per year
- Cost per ton = \$53/ton
((\$1,137,953/21,306 tons = \$53/ton)
- Cost per pound = \$0.03/lb.
((\$53 per ton / 2000 = \$0.03/lb.)

* [Multifamily Waste Study – Hennepin County, MN](#)

URBANA MATERIALS MANAGEMENT CY 2022

Curbside Recycling Costs

- Annual contractual cost in CY 2022 = \$153,637.50
- Tons of curbside recyclables collected in CY 2022 = 2,326 tons
- Cost per ton = \$66/ton
($\$153,637.50 / 2,326 \text{ tons} = \$66/\text{ton}$)
- Cost per pound = \$0.03/lb.
($\$66/2000 = \$0.03/\text{lb.}$)

Multifamily Recycling Costs

- Annual contractual cost in CY 2022 = \$182,620
- Tons of multifamily recyclables collected in CY 2022 = 1,532 tons
- Cost per ton = \$119/ton
($\$182,620 / 1,532 \text{ tons} = \$119/\text{ton}$)
- Cost per pound = \$0.06/lb.
($\$119/2000 = \$0.06/\text{lb.}$)

Conclusion

Materials recycled (including C&D) have steadily increased since CY 2011, a positive sign that recycling outreach and promotion are making an impact. Materials landfilled have increased the past three calendar years due to the pandemic and more householders working, schooling, and eating at home, along with an increase in online shopping. Landscape materials collected and composted has decreased since CY 2011, since there is no longer a contract with the City of Champaign.

URBANA MATERIALS MANAGEMENT CY 2022

Urbana's diversion rate in CY 2022 was 32%. The average diversion rate since CY 2011 was 39%. Additionally, curbside recycling participation has increased in the past seven years – CY 2022 had the highest curbside U-Cycle participation rate at 88%!

Curbside garbage disposal costs per pound are higher than multifamily disposal costs due to bulk collection savings at multifamily properties. Multifamily recycling costs per pound are higher than curbside recycling costs due to lower tonnages collected, and higher contamination rates.

The curbside U-Cycle program had the highest recycling rate to date in CY 2022 with 2,326 tons of recyclables collected! Urbana also saw a single-family housing boom in CY 2022 with new householders participating in the curbside U-Cycle program. The multifamily U-Cycle program recycling rate remained stable. The program collected 1,532 tons of recyclables, a slight dip from tonnages collected in CY 2021. Continued education and outreach efforts at the U-Cycle multifamily properties is necessary to maintain consistency and improvements in recycling rates moving forward.