WISCONSIN POLICY FORUM

# WISCONSIN RECYCLING CHANGES

*As consumers turn more heavily to online purchases, cardboard recycling has more than doubled in Wisconsin since 2013, while other paper recycling has dropped by 36%. The amount of recyclable material collected in the state has remained relatively stable overall, but recycling services have stressed local government budgets, in part because state aids have declined and now only cover approximately 16% of the total cost of recycling services.*

For every Wisconsinite, local governments collected an average of 136 pounds of recyclable materials in 2022, the lowest per capita amount in at least a decade. When totaled up, that amounted to about 2% fewer tons of recyclables in 2022 than in 2013. Amid this slow overall decline, the makeup of what the state recycles has changed considerably, with cardboard collections soaring and paper declining. These trends reflect changes in how people get their news, share information at home and at work, and purchase goods.

While operational costs for municipal recycling have grown slowly – 0.6% per year between 2013 and 2021 when adjusted for inflation – they still stress local government budgets. That's because over that time, state grants for recycling services have fallen as a share of total statewide local government recycling costs. The slight drop in recycling tonnage, combined with volatile prices for recycled materials, have also caused a drop in revenue from the sale of recycled materials, further reducing outside resources used to cover these costs. These factors, plus strict state limits on local government revenue, have pinched local budgets.

Recycling has substantial environmental benefits, chief among them preserving landfill space. Wisconsin DNR reports that since 1990, when Wisconsin's recycling efforts began in earnest, recycling has saved the equivalent of five landfills. Using recycled materials also reduces energy needed to produce aluminum containers and limits air pollution generated when making paper products. Recycling remains popular, with 94% of Wisconsin survey respondents indicating they recycle and feel it's worthwhile.

In our analysis, we use data from the Wisconsin Department of Natural Resources to see how recycling trends have changed over time, and data from the state's Department of Revenue to understand how local governments pay for these services.

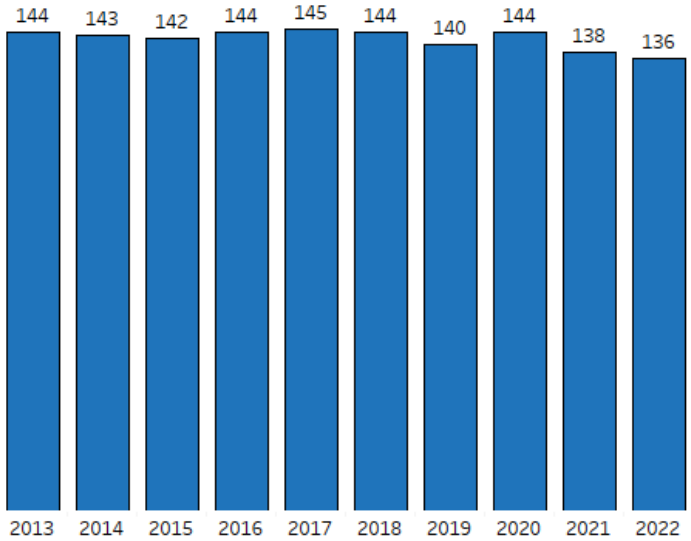
## WHAT WE RECYCLE IS CHANGING

Because the state only has data from recycling facilities that accept material from local governments, we can't be certain about statewide trends in overall recycling. We can be more certain, however, about the recyclables collected by local governments. The total weight of recyclable materials collected by these local governments in Wisconsin dropped by 6,900 tons (1.7%) between 2013 and 2022. The decline was larger -- 5.6% -- on a per capita basis, as shown in Figure 1.

Together, cardboard and paper make up the largest share of materials collected each year since 2013, accounting for approximately 60% of the statewide

**Figure 1: Per Person Reported Recycling Has Fallen**

Pounds of recyclables collected by local governments per person




Source: Wisconsin DNR

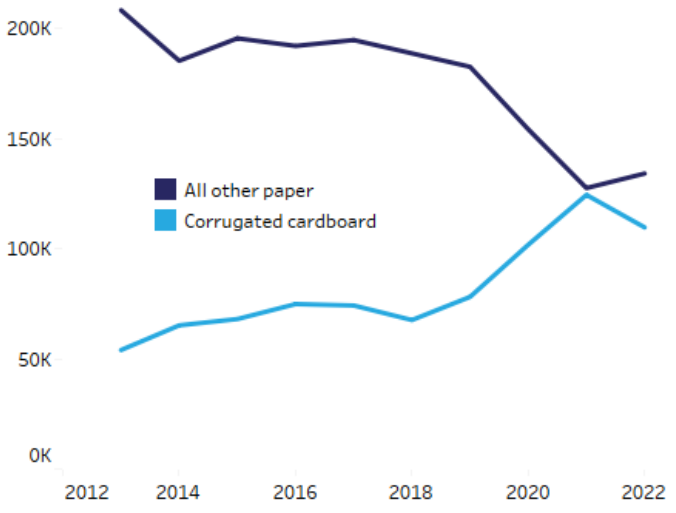
total. However, the split between the two has seen big changes. Newsprint, office paper, and other types of recyclable paper have seen a 35.6% drop, falling from 208,220 tons (over half of the total for all materials recycled in 2013) to only 134,089 tons in 2022. Paper product use has declined as fewer households buy newspapers, more correspondence and billing occurs electronically, and people print documents for personal use less often.

During the same period, corrugated cardboard recycling more than doubled, climbing from 53,974 to 109,651 tons. The biggest jump came between 2019 and 2021, when the amount of cardboard recycled jumped by 59.3%, likely due to increased online shopping and shipping during COVID lockdowns. When combined, paper products and cardboard contributed more to the overall drop in recycling than any other type of material, decreasing by 18,500 tons between 2013 and 2022, a 7.0% decline. Figure 2 shows the diverging trends between the two types of paper products.

Increased cardboard recycling could lead to fuller residential recycling carts because while the total tonnage of the two materials is about the same, cardboard is bulkier than other types of paper products. Given recycling carts are often smaller than garbage carts and are typically collected every other week rather than weekly, local governments may wish to consider changing their pickup frequency or standard recycling cart size if customers' carts are filling up more often.

**Figure 2: Cardboard Collection Grows While Other Paper Products Fall**

Tons of material collected by responsible units in Wisconsin by year




Source: Wisconsin DNR

Besides paper, other materials also saw big changes in recycling activity between 2013 and 2022. Aluminum containers saw the biggest drop on a percentage basis, falling by 16.4% or 1,800 tons. It's noteworthy that aluminum containers are the most valuable recyclable material, typically fetching payments of more than $1,000 per ton. Glass containers, the third most recycled material by weight, saw an increase of 10.8% or 9,900 tons over the nine-year period, while plastic climbed 11.5%, or 3,400 tons.

Recycling changes also align with societal changes. For example, younger people tend to consume less alcohol overall and less beer specifically, which could help explain some of the drop in aluminum recycling. However, there are other potential explanations for the falling volume of recycled materials, including the rising perception that recyclables all end up in a landfill and growing confusion about what can and cannot be recycled. Surveys conducted by the DNR have identified these two issues as hurdles to recycling among the public.

A practice known as lightweighting may also help explain some of the drop in recycled materials. Over time, some types of packaging have become thinner and lighter; for example, a plastic water bottle today weighs nearly 40% less and will be much easier to crumple than one from 10 years ago because of the thinner plastic used in its construction. Similarly, food manufacturers have replaced recyclable plastic or cardboard containers with pouches for products like applesauce and fruit drinks. While lightweighting may lead to fewer tons of material being recycled, it often represents a reduction in total material consumed and discarded, so it may still provide environmental benefits.

## WHO HANDLES WISCONSIN'S RECYCLING?

A combination of municipal, county, and private entities take responsibility for getting recyclable materials from where we discard them to the facilities that repurpose them. State law bans a number of materials from landfills and requires statewide access to facilities where these items can be recycled. In practice, that means the entire state is served by a "recycling responsible unit" that must ensure that residences, businesses, and other locations such as construction sites and special events have an option to dispose of banned materials.

Counties and municipalities both serve as reponsible units, though they typically meet the state requirements in different ways. Municipalities typically fulfill the requirement through curbside recyclng collection, along with trash collection, using city employees or through contracts with private waste haulers. When counties serve as the responsible units, they operate recycling drop-off sites for residents of smaller communities, providing access to those who live in places without recycling collection services. County and municipal responsible units also perform education and outreach to ensure residents know what to recycle.

Once collected, recycleables are then hauled to recycling centers known as Materials Recovery Facilities operated by private firms, counties, or municipalities for sorting and processing. These facilities handle more than just recycled materials from reponsible units; they also take care of recycleables collected by private firms from businesses, multi-family residences, and construction sites, among other sources. Recycling facilites that receive materials collected by responsible units are required to report how much they ship to end users each year. These facilites reported a 9.3% drop in the tonnage of materials shipped to end users between 2013 and 2022 – bigger than the dip in statewide recycleables collected. However, since there are a number of facilities that do not report to the DNR, it is difficult to draw any conclusions about total statewide recycling.

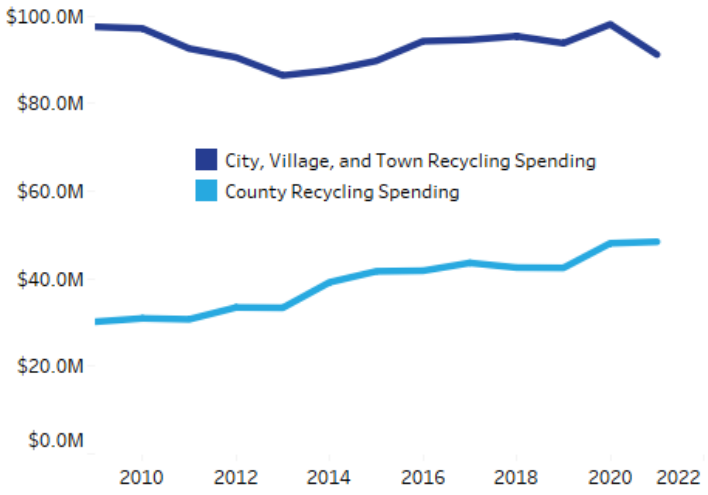
## LOCAL RECYCLING SPENDING GROWS SLOWLY

According to data reported to the Wisconsin Department of Revenue, between 2013 and 2021, statewide operating spending by municipalities on recycling activities grew by only 0.6% per year when adjusted for inflation. However, over that time recycling spending by counties grew at a much faster rate of 4.8% per year. Figure 3 shows the two trajectories, which differ because municipalities and counties typically provide a different set of services with distinct revenue sources.

Municipalities – especially cites and villages – tend to provide collection services either with their own staff or through contracts with private firms, with services paid for through either taxes, state aids, or fees. This puts downward pressure on costs, as local leaders try to keep taxes and fees on residents from increasing. The drop in costs from 2009 to 2013 was realized because

**Figure 3: Wisconsin Municipalities Spend Less While Counties Spend More on Recycling**

Spending by municipalities and counties on recycling, 2009-2021, in 2023 dollars




Source: Wisconsin Department of Revenue

labor costs for public employees fell in response to increased pension and healthcare contributions by public employees as a result of 2011 Wisconsin Act 10.

Counties do less collection work and more frequently operate landfills and recycling centers, and since they can charge fees for landfill deposits, they are less constrained by revenue limits, which has allowed their recycling spending to rise more rapidly than that of municipalities.

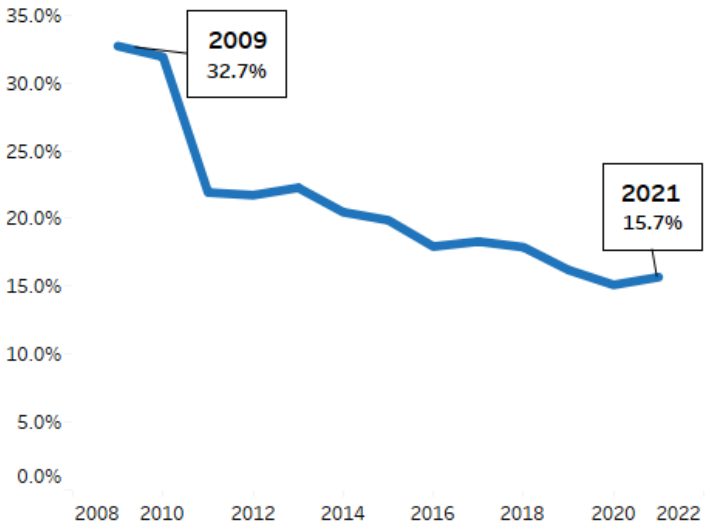
While local spending on recycling has grown slowly, state aid dedicated to recycling has covered a decreasing portion of local government costs to provide services (see Figure 4 on the next page) because state recycling grants have remained flat at either $19 or $20 million annually since 2011. Before large cuts included in the 2011-13 state budget took effect, state recycling aid covered more than 30% of the total spent on recycling by local governments. By 2021, that had dropped to only 15.7%.

## VOLATILE PRICES FOR RECYCLED MATERIALS

While recycling has an environmental benefit, recycled materials also have economic value and are sold to end users for repurposing into consumer goods and other products. Sales of these materials by local governments help them pay for recycling services. These payments defray a substantial portion of service costs -- in some

**Figure 4: State Covers Smaller Portion of Local Recycling**

State grant revenue reported by local governments as a percentage of total local government recycling spending, 2009-2021




Source: Wisconsin Department of Revenue

years nearly 20%, according to data from the state's Department of Revenue.

Between 2013 and 2019, the amount of revenue local governments reported per ton of recycled materials collected fell by 27.8%, as prices paid for these materials, and the tonnage sold, dropped. The price decline was especially acute between 2017 and 2019, when the price per ton of most recycled materials decreased dramatically, with some dropping by more than 70% and a few even falling to zero, according to a database maintained by the Wisconsin Council on Recycling. DNR officials indicate that one major reason for this drop was a change in policy by the Chinese government that prohibited the import of certain materials for recycling, which came in response to lax sorting of recyclables sent there from the U.S. and other countries.

Since 2021, however, recycling prices have rebounded somewhat, led by the price for mixed paper, which has nearly doubled. Higher prices help to defray the cost of providing services, as evidenced by a drop of $4.68 in the city of Madison's annual recycling fee in 2025. While in the short term, this is a positive trend, it again shows how volatile these prices are and underlines the risk of relying on them heavily to pay for recycling services.

## CONCLUSION

The cost to Wisconsin municipalities and counties for recycling collections continues to grow, though slowly. Those governments have three main sources to cover recycling service costs: local revenues like property taxes or customer fees, state aid, and proceeds from the sale of recyclable materials. If one source weakens, another one must pick up the slack.

State recycling grants have not kept up with growing costs, covering a smaller portion of the total each year. While the sale of recycled materials helps to fill a portion of that gap, the prices local governments receive for recycled materials can be volatile. This leaves local residents paying more for services through increased property taxes or fees for service. If state leaders want to ensure continued high-quality recycling services and limit the growth of local taxes and fees, they could consider increasing state recycling aids to again cover a larger portion of the costs.

The recent decline in the amount of recyclable materials being collected in Wisconsin also is notable, as the list of materials banned from landfills has not changed. This may reflect reduced consumption overall and changes in packaging practices, or it may be a sign that people are choosing to recycle a smaller portion of their household waste. Given the environmental benefits of recycling, and the popularity of the practice among state residents, if state leaders wish to see more waste diverted from landfills, it may be wise for state and local officials to determine if improvements can be made to educational efforts that encourage recycling.