



City of Columbia

701 East Broadway, Columbia, Missouri 65201

Department Source: City Utilities - Solid Waste

To: City Council

From: City Manager & Staff

Council Meeting Date: August 18, 2025

Re: Recycling and Material Recovery Facility Update

Executive Summary

This report summarizes the restoration of residential, curbside, mixed container recycling along with information on the status of the Material Recovery Facility (MRF) and the next steps.

Discussion

The MRF was destroyed in a tornado on April 20, 2025. The debris has been cleared and the demolition is complete. The sorting equipment has been retained but is not yet fully functional and requires significant electrical work. Recycling material is collected in the same manner as before the tornado.

Residential Curbside Recycling:

In July an incremental step was made towards restoring recycling to its previous levels by beginning to transport mixed container to a transfer facility. At the end of July, about 14 tons of mixed containers (plastic and metal) have been trucked to a recycling company by Solid Waste personnel. Mixed containers in blue bags collected curbside from residential customers are being diverted to a small warehouse at the landfill. At this warehouse, the blue bags are being opened manually, similarly to the way they were opened prior to the tornado. The mixed containers are then crushed with a skid loader and loaded onto a 40 cubic yard (CY) open top roll-off dumpster. The 40 CY dumpster is tarped and trucked to a recycling company in Jefferson City.

At this private facility in Jefferson City, the mixed containers will be baled and then shipped to a sorting facility in Normal, Illinois. The bales will be opened and the containers will be sorted. Depending upon commodity prices and the percentage of each type of material, the City will receive a rebate for the mixed containers. The Jefferson City company will provide the rebate. The rebate amount is after the fees charged for sorting, baling and freight are deducted from the value of the mixed containers. In no event will the City pay the company in Jefferson City for any of the services provided should the rebate not cover the sorting, baling and freight charges. Staff is finalizing the agreement with the Jefferson City company for this interim service.

The sorting facility in Normal, IL will audit the mixed containers to understand the actual percentage of each type of material. Used beverage containers (UBC) made from aluminum, used steel food cans, natural color HDPE (#2), HDPE with color (#2), and PET (#1 transparent bottles) have value. Mixed plastics (#3 through #7), glass and residuals (trash) lower the value of the rebate. The reduction in the rebate is proportional to the amount of



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unwanted materials in the bales. Therefore, the City is asking residents to put mixed plastics (#3-#7 and clamshells), glass and residuals directly into their trash to increase the value of the recycling. Currently, mixed fiber received from residential recycling is going to the landfill. Commercially baled fiber is being sold.

The rebate is also a function of commodity prices which vary over time. For example, one source put used beverage containers at \$1,900 per ton in early June and \$1,600 per ton by late June.

Material Recovery Facility (MRF) Status:

Following the removal of the debris from the MRF, equipment is being evaluated to identify if it is operational. In regards to the sorting equipment, it is composed of three different components:

1. the baler and in-floor conveyor;
2. the fiber sort line; and
3. the container sort line.

All three components have been tested and are operational, but not functional. Cost estimates to make these components functional are being acquired. This includes new electrical control panels, wiring, and repairing safety features.

Solid Waste is in the process of restoring electrical line power to the control panel for the baler and in-floor conveyor. Restoring temporary operation of the baler and in-floor conveyor is dependent upon whether this equipment may be operated outdoors or whether the equipment requires an enclosure and the extent of any enclosure. The focus is on restoring temporary operation of the baler and the in-floor conveyor because restoration of this equipment will allow for baling and selling old corrugated cardboard (OCC) from commercial accounts and possibly baling and selling mixed fiber from curbside residential recycling.

Solid waste has about ± 45 commercial accounts that generated about $\pm 1,850$ tons of OCC between April 2024 and April 2025. To put this in context, Solid Waste sold about $\pm 6,300$ tons of commodities in calendar year 2024. Of that 6,300 tons, about 4,430 tons were OCC. If the baler and in-floor conveyor are temporarily operational, OCC could be baled and sold provided that the weather is not inclement and the residual (trash) in the OCC is not excessive.

Constructing a building over the sorting equipment seems to be the next incremental step in restoring recycling services to their previous level. Any building should meet the short-term need of restoring recycling service and the long-term need of more modern sorting equipment, improved worker safety and additional capacity as the City grows and participation rates increase. A pre-engineered metal building (PEMB) on the same footprint as the original building would meet the short-term need of restoring recycling service.



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A cursory cost estimate of \$2.5 million would provide a PEMB; supplied and erected with doors and insulation, along with allowances for:

1. foundation design;
2. structural concrete modifications on the south end of the building (the tipping floor);
3. an office and breakroom of about 1,500 square feet with fixtures similar to the original.

This PEMB would be of like kind and quality to satisfy the requirements of the City's insurance policy. From the time of placing an order for a PEMB, erection could be complete in 9 to 12 months contingent upon local and MDNR permitting.

The key to a PEMB that meets the long-term needs of the City is constructing a building that could be expanded to the south to increase the area of the tipping floor should additional capacity be needed or to accommodate single-stream recycling. Additionally, the north half of the building (the half that houses the sorting equipment) needs to be capable of expansion to the west in order to house upgraded sorting equipment with additional bunkers for materials that may gain marketability.

Staff is contacting local contractors to explore a design build approach for restoring the MRF to its previous condition and accommodating future needs. Once a contractor is selected, staff will return to Council with the contract for approval.

Concurrently with pursuing a building to restore recycling services, RRT Design and Construction is evaluating the City's recycling and waste diversion program. Based on RRT's presentation at the City Council on June 2, 2025, RRT's evaluation has been expanded to include reporting on the capital and operating costs for both permanent transfer of recyclables and local MRF processing of recyclables. RRT's report is expected by October 2025.

Fiscal Impact

Short-Term Impact: This is a report for informational purposes. No funds have been allocated.
Long-Term Impact: This is a report for informational purposes. No funds have been allocated.

Strategic & Comprehensive Plan Impact

Strategic Plan Impacts:

Primary Impact: Reliable and Sustainable Infrastructure, Secondary Impact: Not Applicable, Tertiary Impact: Not Applicable

Comprehensive Plan Impacts:

Primary Impact: Environmental Management, Secondary Impact: Infrastructure, Tertiary Impact: Not Applicable

Legislative History



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Date	Action
N/A	N/A

Suggested Council Action

This report has been prepared for informational purposes.