



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: December 4, 2023

Re: Report - Recycling and Waste Diversion Program Evaluation

Executive Summary

The purpose of this report is to provide Council with the Recycling and Waste Diversion Program Evaluation (final report) prepared by RRT Engineering, LLC and to request direction from City Council on several recommendations provided by RRT Engineering, LLC.

Discussion

On October 3, 2022 City Council authorized the City Manager to execute an agreement with RRT Engineering, LLC (RRT) to conduct a multi-faceted evaluation of the Solid Waste Utility's recycling and waste diversion programs. The scope of work included the evaluation of residential and commercial recycling collection programs; the Material Recovery Facility (MRF) and recycling center drop-off facilities, a study of the composition of materials at the MRF along with a study of the composition of waste delivered to the landfill; and, a review of the City's overall waste management system.

RRT has completed their evaluation and has submitted a final report that outlines their findings and provides the utility with several recommendations. Staff will need direction from the City Council on the following recommendations provided by RRT Engineering:

MRF Recommendations:

RRT's evaluation determined that MRF is at the end of its useful life and needs to be replaced. RRT presented four potential options to replace the MRF as follows:

- Option 1: Ceasing MRF operations permanently and implementing transfer to an out-of-town MRF. – Lowest cost but would rely on others to process recycling material.
- Option 2: Retrofit or upgrade the existing MRF. – Capital cost of approximately \$9M but does not allow for future growth.
- Option 3: Construct a New MRF on the current site. – Capital cost of approximately \$17M. Requires the transfer of recycling material to another MRF during construction.
- Option 4: Construct a New MRF on a different location on the Columbia Sanitary Landfill property. – Capital cost of approximately \$28M. Allows the existing MRF building and site to be re-purposed for other operational functions once the new MRF is completed. Also allows MRF operations to continue during construction.

Recycling Drop-Off Center Recommendations:

1. The three most-abused recycling drop-off sites be closed immediately. According to the report, these sites are not serving their intended function, and they consume operational resources without contributing to the recycling effort. The three sites are:



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- a. Downtown (10th and Cherry) – south side of 10th & Cherry Parking Garage.
 - b. University of Missouri (Bluford Hall) – along Kentucky Blvd.
 - c. University of Missouri (East Campus Plant Growth Facility) – near East Campus Road and Ashland Road.
2. Other locations be consolidated, staffed, gated and only open during daylight hours. The specific sites to be improved, consolidated or moved are:
 - a. Consolidate the South Providence Road and State Farm Parkway Recycling Drop-off Sites. The consolidated site should be gated and staffed.
 - b. Relocate or upgrade the site at Cosmo Park (Parks Management). RRT recommends this site either be upgraded or relocated and consolidated with the Yard Waste Drop-Off Center on Parkside Drive. The site should be gated and staffed.

Curbside Collection of Recyclables Recommendations:

1. Implement automated collections for curbside recycling with a program to co-collect bagged containers and loose fiber in one cart.
 - Staff believes that automating curbside collections will improve recruitment and retention of staff. Implementing automated residential curbside recycling collection may be the best method to restore this service in a reliable manner. Staff is currently developing a plan for implementation. This implementation will require purchasing additional roll carts at an estimated cost of \$2,200,000, leasing 10 to 12 additional automated side loading trucks at annual cost of approximately \$800,000 and filling vacant positions that require a commercial drivers license. This assumes that all customers would participate in recycling. If participation remains voluntary the costs would be reduced possibly as much as 50 percent. The service could potentially be restored sooner if it was provided on an every other week basis.
2. Discontinue collecting glass at the curb and focus on collecting glass in purple bins at Recycling Drop-Off Centers.
3. Procure specialized services to route collection trucks using computer software to create the most efficient collection routes.
4. Increase the recycling of cardboard.

Overall recommendations to improve the Recycling and Waste Diversion Program:

1. Improve education and outreach programs to promote recycling messages, targeted education in classrooms and community groups.
2. Hire a new staff person in the role of a Recycling Coordinator.
3. Create a Community Environmental Center at the Landfill campus that would function as a one-stop-shop for residents to bring recyclables, household hazardous waste and other wastes.

Staff recommends that after Council has had time to review the Recycling and Waste Diversion Program Evaluation prepared by RRT, they request that this topic to discussed at a Council Work Session.



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Short-Term Impact: This report does not have any short-term fiscal impacts.

Long-Term Impact: This report does not have any long-term fiscal impacts.

Strategic & Comprehensive Plan Impact

Strategic Plan Impacts:

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

Comprehensive Plan Impacts:

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

Legislative History

Date	Action
10/03/22	R151-22 Authorizing an agreement for professional engineering services with RRT Engineering, LLC for evaluation of the City's recycling and waste diversion program

Suggested Council Action

Request a work session be scheduled to provide staff direction on the recommendations in the report.