

MRF of the Month

Boulder County Recycling Center



Situated adjacent to an eight-acre wetland, with the majestic Rocky Mountains as a backdrop, sits a recycling facility that was designed with environmental sustainability in mind. Owned by the Boulder County Resource Conservation Division, but operated by non-profit processor Eco-Cycle, some of the green elements of the 62,795-square-foot (processing building is 50,589 square feet, administration building is 12,206 square feet) Boulder County Recycling Center (BCRC) include: The use of sustainable and recycled materials in the building's construction; collected rooftop water being reused for irrigation purposes; and, each of the facility's buildings being internally lit via daylighting. Additionally, the facility was designed around protecting the adjoining wetland, thus it utilizes an innovative water quality management system that polishes and cleanses collected storm water before it's discharged into the existing wetland.

Initially a dual-stream facility when the center came on-line in 2001, the BCRC was modified for commingled processing in 2007 after the county implemented a new ordinance that requires collection companies to offer residents pay-as-you-throw waste disposal, single-stream recycling and organics collection (for residents in the unincorporated portions of Boulder County). According to Jerry Martin, the BCRC's operations director, the MRF is the primary materials processor for the 350,000 plus residents (145,000 households) of Boulder and Broomfield Counties. Presently, nearly 80 percent of Boulder and Broomfield Counties have converted to single-stream curbside collection, with the balance being served by drop-off centers.

The recycling center has four independent processing systems: One line for residential and commercial commingled fiber; one



Technical Specifications*

Boulder County Recycling Center

Location:

Boulder, Colorado
Multi-Material MRF

Start-up date:

2001 (converted to single-stream in 2007)

Number of processing lines:

Four (commingled containers, residential and commercial commingled fiber, glass and other source-separated materials)

Throughput:

Tons per month: 5,000
Single-stream: 25 tons per day
Glass: 65 tons per day

Approximate tons of material processed (2008): 45,000

Commingled
containers: 30,600
Fiber: 14,400

Residue rate:

Nearly five percent (2008)

2007-2008 Materials Processing and Recycling in the United States: Yearbook and Directory

5th Edition — Print or CD-ROM

The 1,300 page Yearbook is the only comprehensive guide to Materials Recovery Facilities (MRFs) in the United States, providing information on 583 operating, planned and shut projects. A nationally recognized resource, it provides a strategic analysis of the post-consumer recycling industry and a database of U.S. Material Recovery Facilities. It is an invaluable reference tool for solid waste decision makers, planners, consultants, and organizations interested in the present and future of recycling.

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line for residential and commercial commingled containers; one line for glass; and one baling system for source-separated material (news, cardboard, white ledger, paperboard, other fibers and separated grades of plastic).

In 2008, the MRF processed nearly 45,000 tons of recyclables, with 68 percent of the total material processed being fiber related. Containers made up the remaining 32 percent. In addition, the BCRC lays claim to the Centennial State's sole glass optical sorting system, processing and producing about 65 tons of glass per day for the Golden, Colorado-based MillerCoors LLC bottling plant, the world's largest single-site brewery. The center processes recovered glass for other Denver area MRFs as well. Processed material can be shipped from the center via truck or the rail spur rail line that services the MRF, a form of transport that allows the facility to reduce truck traffic.

The source-separated portion of the facility utilizes a RRT Design & Construction system, consisting of Hustler Conveyor Co. conveyors, a Bulk Handling Systems cardboard screen and Marathon balers. The system was designed to process at an average of 24 tons per hour. The single-stream side of the center, designed by Van Dyk Baler Corp., consists of Bollegraaf screens (one glass, two newsprint and one mixed paper) conveyors, and an HBC 120 fully-automated baler. Further, the optical sorting system used for glass processing was manufactured by Binder + Co. AG.

According to Martin, the biggest issues currently affecting processing operations at the MRF include plastic bags clogging screens and loose, shredded paper, or other small contaminants under two inches in size, interfering with the optical sorters – contaminating

the finished glass product if not removed by hand.

Education is of the utmost importance at the facility, thus the BCRC includes an education center, with interactive educational displays, a backyard composting demonstration area, and a viewing walkway and observation tower located inside the MRF, which allows visitors to witness every facet of the recycling process.

Employing as many as 40 people – this does not include the 17 inmates from the Boulder County Jail Inmate Program working the facility's commingled processing line – single-stream recyclables are processed during one shift, five days a week, while glass is processed over two separate shifts, six days a week.

*Know of a North American-based materials recovery facility that you feel *Resource Recycling* readers should know about? If so, e-mail your recommendation, with hi-resolution pictures, to justin@resource-recycling.com, and your facility may just be highlighted in a future "MRF of the Month" column.

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