

Update

April 2015

2015 Solid Waste Update

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The City of Midland Landfill

4311 E. Ashman St.
989.837.6988

Open Weekdays
8 a.m. – 4 p.m.

Saturdays
8:30 a.m. – noon
(March – November only)

Household refuse, yard waste, construction and demolition waste can be brought directly to the City of Midland Landfill. Each residence is allowed to bring one free load per month of up to three cubic yards of refuse.

Midland County's Waste Disposal Strategic Plan.

Midland County has a strategic plan for everything, it seems. Waste disposal is no exception.

In accordance with State law, the Midland County Solid Waste Management Committee (Committee) was formed to promote safe, regulatory-complaint, and cost-effective disposal of solid waste. The primary goals of the Committee's adopted Solid Waste Plan are resource and energy recovery, maintaining a high-quality environment, and addressing public health concerns through education, recycling programs, and long-term waste management planning.



Waste diversion and segregation are fundamental to reducing the environmental impact of waste disposal. Finding ways to recycle unwanted materials can result in new products and even revenue, as is the case with paper, plastic, metal, and yard waste.

Taking advantage of advances in waste disposal technology can also pay dividends if implemented successfully. Midland County continues to make progress in meeting and surpassing the goals set forth by the Committee.

Here's where we are and where we're going:

Active Gas Collection: Gas generated by decomposing garbage is captured through a collection system buried in the waste. The system became operational in

2009 and has successfully met its primary objectives: the gas collection system has substantially reduced landfill odors leaving the site; the gas collected serves as a fuel in the City's green energy facility; and combustion of the gas destroys 90% of its greenhouse gas potential.



Gas-To-Energy: Gas is collected through a vacuum system and piped to a specialized engine running an electricity generator. The sale of produced electricity provides revenue to offset installation and operational expenses and to fund future expansion. The gas, combined with gas from the waste water treatment process, is currently generating a continuous output of nearly 1.6 megawatts of electricity. That is enough to power over 1,200 homes!

Bioreactor technology: Treated liquid sludge from the Wastewater Treatment Plant is introduced into the waste received daily at the landfill. The sludge helps waste decompose more quickly, and allows it to settle and compress, making more space available in the cell. This supports the gas-to-energy process by accelerating generation of landfill gas, thus creating more electricity. Since starting the program in 2014, sludge addition increased quickly from 500 to its current 3,000 gallons per day, with room for continued growth. Sludge addition has proven effective at this early stage,

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with decomposition creating viable quality gas within weeks instead of months. The bioreactor design is the first of its kind and will be used as a research tool that could develop standard practices for the industry.

As you read on, you will see that recycling continues to be an important part of Midland's waste collection system. Composting, metals recycling, and concrete and asphalt reuse continue as part of the landfill's operations. And, with continued support, the household hazardous waste collection and tire disposal programs conducted by the County and City will continue into the future.

The Solid Waste Plan was written in accordance with the Michigan Department of Environmental Quality's guidelines, with input from City, County, industrial, and residential representatives, and has been approved by all City and Township boards in Midland County.

You can review a complete copy of Midland County's current Solid Waste Plan at the Grace A. Dow Memorial Library. If you have questions or need further information after reading this newsletter, please visit the City website at www.cityofmidlandmi.gov or contact the City at the number below.

Sincerely,

Noel Bush

Midland County Solid Waste

Management Committee

(989) 837-6988



Taking a Look at the Landfill's History

The City of Midland has operated a sanitary landfill since the 1960s. Prior to 1980, the landfill only accepted refuse collected from city residents; Midland County refuse was disposed of in small dumps around the county. In an effort to minimize the number of landfill sites and maximize efficiency, Midland County and the City agreed to have just one "closed county" landfill. Midland's landfill accepts non-hazardous solid waste generated by Midland County residents and businesses only. Waste collected outside of Midland County is disposed of at landfills outside of Midland.



Waste Disposal Options

...in the City of Midland

Within the city, the Department of Public Services (DPS) provides weekly curbside refuse collection in tied plastic bags, covered garbage cans with handles, and gray 95-gallon refuse bins. Yard waste collection is added to the weekly collection process April through November. Recyclables such as newspapers, cardboard, certain types of glass, plastics, and metal are collected curbside by a private contractor. Heavy item and brush collection are provided monthly by DPS for items such as brush, refrigerators, asphalt, boxes of any size, and mattresses.

To obtain information on refuse, borrow-a-container, recycling, or monthly heavy item collection days

and proper curbside placement, contact DPS at (989) 837-6900 or refer to the City's website at www.cityofmidlandmi.gov.

...for Township Residents

For each township in Midland County, waste collection is competitively bid by contractors to ensure that township residents receive responsive and cost-effective service. Each township's contract determines whether curbside recycling, heavy item, brush, grass, and leaves collection will be included.

Contact your local township office for specific information on waste disposal within your township.



Recycling Drop-Off Centers

In addition to curbside collection of recyclables throughout the county, residents also have access to direct drop-off sites...

Midland Recyclers Recycling Center

4305 E. Ashman St. (located at the Sanitary Landfill) • (989) 631-1668 • www.midlandrecyclers.org

Hours of Operation:

Monday – Friday 8 a.m. until 4 p.m.
Wednesdays 8 a.m. until 6 p.m.
Saturdays. 9 a.m. until 1 p.m.

Midland Recyclers' Mission: Inspire the community to make a positive impact on the environment by providing the means and know-how to reuse and recycle.

Midland Recyclers has been a trusted community partner for 28 years. NOT the curbside recycling service provider, we are a non-profit organization that has a drop-off recycling center. Residents can bring their overflow recyclables between curbside pickups.

Midland Recyclers Recycling Center offers:

- Volunteer and work experience to people of all ages and abilities
- Environmental education programs and tours
- Self-serve shredding of confidential documents
- Low-cost moving and packaging supplies
- Reusable items for educators and crafters like corks, bottles, and buckets
- Cost-effective recycling options for local businesses
- Event recycling at local concerts and festivals
- We Sort – where we sort customers' recyclables for a small fee
- Acceptance of electronics and appliances
- "Hard to recycle" items such as polystyrene foam, batteries, plastic bags, shredded paper, and vinyl siding. Check out the website at www.midlandrecyclers.org for a complete list of what is accepted.

In partnership with Midland County Mosquito Control, approximately 2,000 tires (two semi-truck loads) are collected and sent to CM Rubber in Coleman, MI for recycling each year. Collections are held in May and September. Please check Midland County Mosquito Control's website for collection dates and locations at <http://co.midland.mi.us/MosquitoControl>.

Brady News and Recycling

3240 Schuette Rd. (989) 496-9900

Hours of Operation:

Monday – Friday 8 a.m. until 4:30 p.m.

Brady offers residential drop-off and programs for commercial/industrial recycling. Brady, serving the community for over 60 years, recycles: plastics (#1 and #2 containers excluding used oil and anti-freeze containers); metals (steel, aluminum, and others – call ahead to verify); newspapers; corrugated cardboard; office paper; mail (excluding plastic window envelopes); magazines; phone books; and catalogs.

Fritz Enterprises, Inc. (FEI)

4203 E. Ashman St. (located next to the Sanitary Landfill) • (989) 832-8802 • www.fritzinc.com

Hours of Operation:

Monday – Friday 8 a.m. until 4:30 p.m.
Saturdays. 8 a.m. until 1:30 p.m.

Fritz Enterprises, Inc. (FEI) has been operating a full scale scrap metal recycling facility since 2013. The facility is conveniently located next door to Midland Recyclers and the City of Midland Landfill on Ashman Street. FEI buys metals brought in by residents and businesses for recycling.

CM Rubber Technologies, Inc.

4602 W. Saginaw Rd., Coleman • (989) 465-0200 • www.cmrubbertechnologies.com

Hours of Operation:

Monday – Friday 8 a.m. until 4:30 p.m.

For more than a decade, CM Rubber Technologies, Inc. has been operating a large scale scrap tire recycling facility. The facility is located near Coleman on West Saginaw Road, and processes an average of 1 million tires (passenger tire equivalents), or about 22 million pounds, per year. The end products range from playground and landscaping surfaces to tire-derived fuel and drain field aggregate. Not previously recorded in the Solid Waste Update, this company increases the recycling rate of Midland County by seven percentage points.

Call or visit their website for more information on products, services, and fees.

Educate to Eliminate



With the goal of maintaining a high-quality environment, Midland County's Solid Waste Plan emphasizes education and environmental monitoring.

We appreciate and support the efforts of local recycling centers like Brady News, Fritz Enterprises, and Midland Recyclers, which advertise their operations to encourage public participation in recycling opportunities.

Midland Recyclers is supported through volunteers. Midland Recyclers coordinates free educational tours of the recycling center and landfill for students from preschool to college. The tours focus on recycling as a low-cost and environmentally responsible alternative to disposing of waste in landfills. Students bring recyclables from home and conduct hands-on sorting at the recycle center.

Touring the sanitary landfill teaches students about the waste disposal process and points out opportunities that are available daily to reduce, reuse, and recycle. The students receive a 'compost kit' consisting of informational brochures and a small cup of compost that was once grass and leaves diverted from a landfill.

During these tours, as many as 600 students each year see the direct benefits of recycling.



Hazardous Material Disposal Information / Collection Dates

Renew your personal commitment to the environment by calling the Midland County Health Department, (989) 832-6681, for a Household Hazardous Material drop-off appointment. Or visit the County's website at www.co.midland.mi.us for more information about this environment-friendly program. Four collections are scheduled for 2015. The dates this year are April 21, June 24, August 20, and October 21.

Some household hazardous materials can lead to contamination of groundwater, well water, or other water sources when spilled on the ground, poured down the drain, or placed in trash containers. To prevent this, the Health Department and Landfill will coordinate proper and safe disposal of materials by a licensed recycler or hazardous waste incinerator. This is your opportunity to safely and properly dispose of most hazardous materials you may have in your home including...

Automotive Products

Spray paint
Auto polishes
Battery acid
Antifreeze
Motor Oil
Transmission fluid

Cleaning Products

Drain cleaners
Floor waxes
Furniture polishes
Bleach and ammonia products
Oven cleaners
Solvent and degreasers

Personal and Health Care Products

Hair sprays
Dyes
Shoe polish
Aerosols
Nail polishes and removers
Outdated or unused medications

Paint Products

Paint thinner
Oil-based paints
Brush cleaners
Paint strippers
Spray cans
Lacquers and varnishes

Garden Products

Bug sprays
Ant poisons
Insecticide powders
Fertilizers
Weed killers
Old gas/oil mixtures
Household batteries
Mercury thermometers
Old agricultural herbicides
and insecticides



Resource and Energy Recovery

Recycling and reusing are two great ways to reduce the amount of landfill space taken up with what can turn out to be useful "trash." To encourage these practices, Midland County participates in various resource recovery efforts...

...*generation of renewable energy* has been a successful addition to the resource recovery program already in place in Midland County. From the startup of the energy facility in early 2011 through 2014, the total electricity production using the gas byproduct of landfill and wastewater plant operations was just over 41 million kilowatt hours. At current production and average electricity use rates, the City generates enough renewable energy to power the equivalent of about 1,200 homes.

...*City curbside* waste collection includes recyclables collection. Once per month residents can place various recyclables including metal, plastic, and paper products in a specially-marked container at their curb on the same day as their weekly refuse collection. The recyclables are separated at a sorting facility that sells the materials to industry for reuse. Nearly 10,000 cubic yards of recyclables are collected county-wide each year.

...*recycling centers* such as Midland Recyclers, CM Rubber Technologies, Fritz Enterprises, and Brady News and Recycling combine to recycle over 60,000 cubic yards of goods annually.

...*within the City Landfill*, metal goods and appliances have a separate unloading area where the material is collected for recycling. Customers are encouraged to separate their loads when feasible to reduce waste volumes entering the landfill. About 600 cubic yards of metals were diverted from the landfill annually.

...*vehicles containing* loads of clean, unpainted, and dirt-free concrete or asphalt waste also have a separate area for disposal. The concrete is later crushed into recycled concrete gravel for road building and repair. The asphalt is used to help maintain haul roads inside the active landfill. Because of this recycling process, each year 2,700 cubic yards of concrete and 800 yards of asphalt are diverted from the landfill, saving landfill space and reducing operating costs.

...*a large-scale composting* operation is located at the landfill. Brush, leaves, and grass clippings brought to the landfill in kraft paper bags are shredded and mixed into piles that break down over time into a humus-

like product that's used to improve drainage and vegetation growth on City land. Compost has been used for projects such as erosion control, long-term cover and seeding, and replenishing top soil stripped from the site for other jobs. Roughly 45,000 loose cubic yards of material are diverted from the landfill each year through the composting operation.

...*gases are part* of the landfill's energy and resource recovery plan. Freon gas is removed from appliances such as refrigerators, air conditioners, and dehumidifiers by a certified contractor and reused to recharge active compressor systems. Freon gas is removed from hundreds of appliances annually. The previously mentioned landfill gas burned in the gas-to-energy facility is also a major recycling effort. Over 200 million cubic feet of landfill gas are captured and burned as fuel each year. That equates to about 2,300 Olympic-sized swimming pools!

...*the annual compacted* waste generated in Midland County was 340,731 cubic yards in 2014, compared with 331,721 cubic yards in 2013. The volume increase last year was the result of adding tire recycling by CM Rubber Technologies (10% of the total waste volume, not previously included in this report) and a 20% increase in yard waste volume. The change was offset by a 2% decrease in total landfilled waste, primarily in the contaminated soil category. The increase in recyclable volume, coupled with the decrease in non-recyclables, resulted in an improvement in Midland County's rate of waste being either reused or recycled in 2014.

The four-year recycling rate trend is positive. When including the CM Rubber recycling volumes, the recycling rate has increased: 32% in 2011, 34% in 2012, 36% in 2013, and 39% in 2014. The reuse and recycling includes spent foundry sand used as daily landfill cover in addition to the volumes mentioned previously for Midland Recyclers, Fritz Enterprises, Brady News, CM Rubber, City recycling, concrete and asphalt rubble, and compost and scrap metal recovery at the landfill. Landfill gas collected and converted to electricity is not included in the volume and percentage recycled figures.

