

Kent County Waste To Energy

Part of an integrated solid waste management plan



KENT COUNTY
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Works**

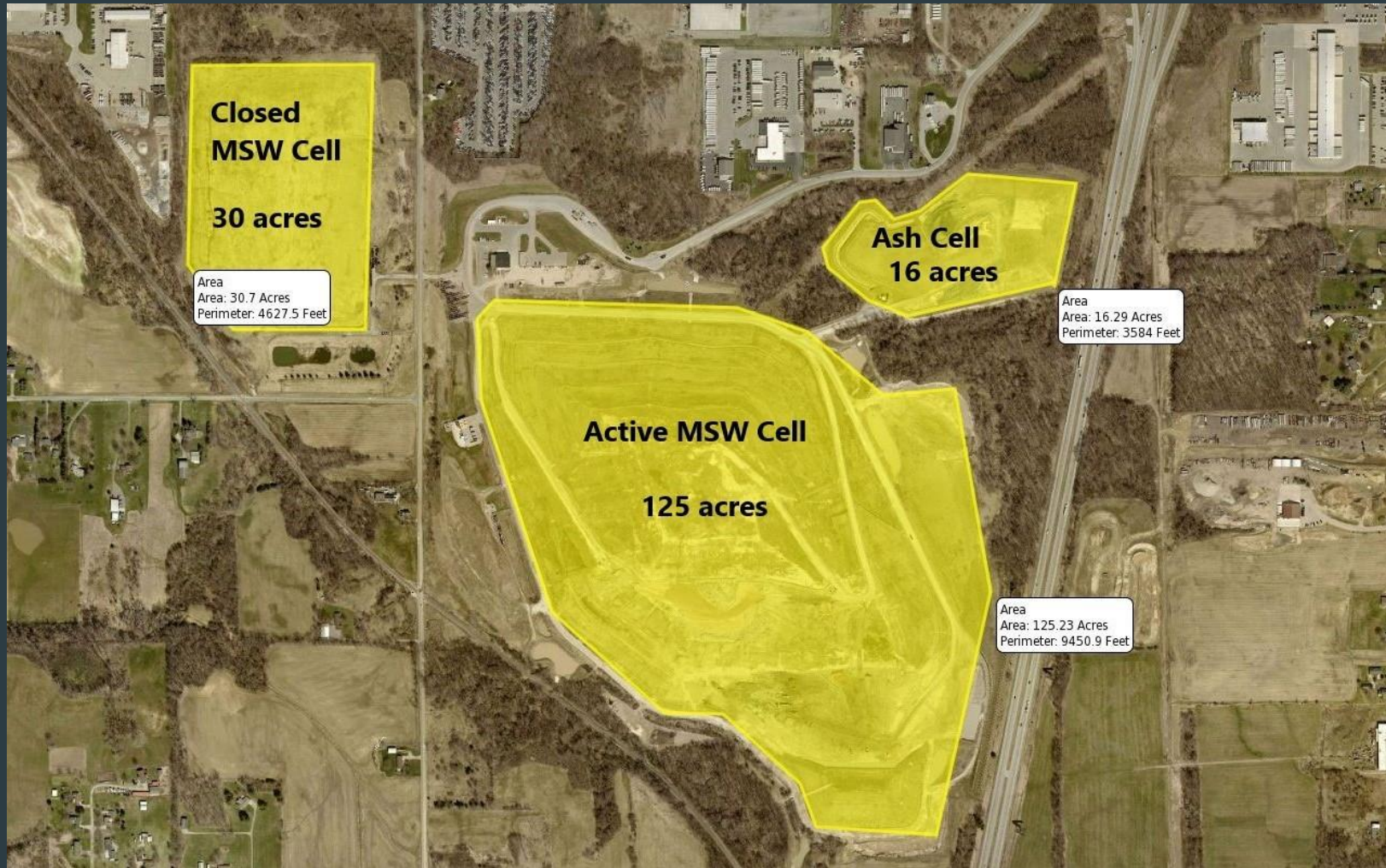
Facility Purpose

- ▶ The WTE facility's primary purpose is to preserve landfill airspace by reducing the volume of waste being sent to landfill. The combustion process reduces the waste volume by approximately 90%.
- ▶ Without the Kent County WTE, the South Kent Landfill would have been closed 15-20 years ago and a new landfill site would be needed for the County's solid waste needs.
- ▶ To put it into perspective, the South Kent Landfill, opened in 1987 and has almost 8 million tons of MSW buried on 155 acres as of 2024.
- ▶ The WTE opened in 1990, has processed 6.2 million tons of waste and the remaining ash residue (less any recovered ferrous) covers 16 acres.



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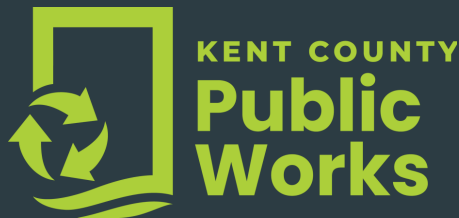




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Serving the Metro Six and Kent County

- ▶ The WTE facility began operation in 1990 and accepts combustible, post-recycled Municipal Solid Waste (MSW) from the six core cities of the Grand Rapids Area, otherwise known as the Metro-six. This includes Grand Rapids, East Grand Rapids, Grandville, Kentwood, Walker, Wyoming.
- ▶ The Special Waste program at the Facility is a service to local, State and Federal law enforcement agencies for secure, witnessed destruction of contraband, evidence, confidential documents, medical records and Med Take-Back pharmaceuticals. In 2023, the facility received and destroyed 238,280 pounds of material from 69 local, State and Federal government agencies.



Hazardous Waste and WTE

Hazardous Waste is not accepted at the WTE facility. 😊



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Equipment operators on the tipping floor at WTE conduct random inspections throughout receiving hours on incoming waste loads to look for incompatible or unacceptable materials including hazardous waste.



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WASTE INSPECTION REPORT
KENT COUNTY WASTE TO ENERGY FACILITY

Waste Hauler: _____ Date: _____

County Truck / Box Number: _____ Time: _____

Ticket No.: _____

A. Waste Description if Load is Acceptable Waste (Do Not Complete Parts B, C, D)

Primary Composition Based on Appearance

- Residential Commercial
 Light Industrial

Additional Comments: _____

B. Does the Load Contain a Majority of Unacceptable Waste that is not Hazardous Waste? Yes

If Yes, provide written description: _____

Disposition of Nonhazardous Unacceptable Waste:

- Returned to Vehicle
 Isolated and monitored for removal by waste hauler
 Moved to Open Top Transfer Area
 Other: _____

C. Does the Load Contain Hazardous/Suspected Hazardous Materials?

Yes **DO NOT MOVE ANY SUSPECT WASTES! CALL WTE OPERATIONS MANAGER AND VICINITY SHIFT SUPERVISOR AT ONCE!**

- Identifying Marks (specify): _____
 Number/Quantity of Items: _____
 Description of Materials (document with photos)* _____

D. Disposition of Hazardous or Suspected Hazardous Materials: _____

E. Inspector Name: _____ **Date:** _____

Signature: _____

Other Personnel: _____

* A Violation Report must be completed upon identification of hazardous waste.

Unacceptable waste determination:

- Poses threat to public health or safety.
 - Cause applicable air quality or water effluent standards to be violated by the normal operation of the Facility.
 - Has reasonable possibility of adversely affecting the operation of the Facility.
- Explosives - ammunition, blasting caps, fireworks, dynamite
 - Liquid Wastes - oils, gasoline, kerosene, paint, solvents, insecticides, sewage or process waters, sewage sludge
 - Demolition debris - drywall, aggregate, asbestos, debris, brick, cement, roofing material, soils
 - Miscellaneous -asphalt, drums, metal furniture, wire and cable, appliances, tires, motor vehicles/parts, trailers
 - Pathological or biological waste, sharps, needles, radioactive waste



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Exemption from WTE and Solid Waste Ordinances:

- ▶ Waste deliveries to the facility are from licensed commercial solid waste haulers.
- ▶ The material is visually inspected by County transfer station operators and the Vicinity crane operators during the unloading process. Problematic items and materials are loaded into transfer trailers and taken to landfill.
- ▶ Recurring problematic loads are documented, recorded and commonly exempted from the delivery requirements of the Solid Waste Ordinances. The exemption encourages haulers to dispose of the material at a more appropriate recycling or landfill facility.



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Can we do more?

Further and improved separation of recyclables, organic material separation and increased outreach & communication would drastically improve the benefits and processing capacity of the WTE facility as it stands today.



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Ash handling and treatment after combustion. Where does it go?

After combustion, ash residue is passed under a magnetic separator to recover ferrous metals. To date, the facility has recovered over 150,000 tons of ferrous metal from the ash. Enough to build two Gerald R. Ford Aircraft Carriers.



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Ash Testing and Transport

The combustion process utilizes lime to control Sulphur Dioxide which also helps maintain the PH of the ash in a safe to transport state. It is loaded and trucked in sealed trailers to the South Kent Landfill and discharged into the Ash Cell (otherwise known as the monofill as no other waste is placed there).



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Annual average statistics:

- Facility receives approximately 250,000 tons of MSW per year.
- Our two boilers process an average of 185,000 tons/year. The facility was designed for three boilers but a host of challenges and lack of funding prevented the work from occurring.
- Heat from the combustion process is used to generate steam and electricity. The facility generates approximately 100,000 mwh annually and is enough to power approximately 11,000 homes.
- The facility operates well below the limits defined by our Title V Air Permit and performs annual stack testing by third party testers to ensure the accuracy of our Continuous Emissions Monitoring System.



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Household Hazardous Waste

- The Department of Public Works does not accept Hazardous Waste from commercial sources but as a service to Kent County, we operate four Household Hazardous Waste drop-off sites and collaborate with the City of Wyoming to provide various locations and convenience.
 - Grand Rapids - 1045 Wealthy St. SW., Grand Rapids, MI. 49504
 - Rockford - 2908 Ten Mile Rd., Rockford, MI. 49341
 - Byron Center - 10300 South Kent Dr., Byron Center, MI. 49315
 - Kentwood - 5068 Breton Ave. SE., Kentwood, MI. 49508
 - Wyoming - 2350 Ivanrest Ave. SW., Grandville, MI. 4941
- For more information, chat with Johnathon Neracher (attending)
www.reimaginetrash.org/safehomes/safechem

