



## Update on waste management in Dakota County and other technologies

General Government & Policy Committee of the Whole  
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January 21, 2025

### Agenda



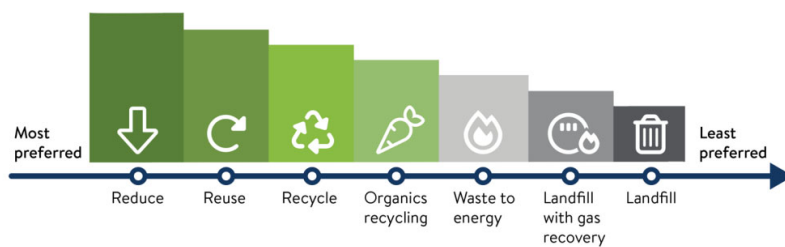
- County's role in solid waste management
- Solid waste management system in the county
- Update on landfill capacity
- Alternative technologies to landfilling
- Future changes to the waste management system

## County role and state direction



- The MN Waste Management Act protects natural resources and public health (MN Stat. 115A.02).
- Counties are responsible for managing waste to meet state goals with solid waste management plan (MN Stat. 473.803).
- The waste management hierarchy establishes preference for waste management (MN Stat. 115A.02).

### Minnesota's waste hierarchy



## Preference for private sector management



State statute lists preference for private-sector waste management (MN Stat. 473.803, subd.1)

[A county solid waste management plan] shall... encourage ownership and operation of solid waste facilities by private industry. For solid waste facilities owned or operated by public agencies or supported primarily by public funds or obligations issued by a public agency, the plan shall contain criteria and standards to protect comparable private and public facilities already existing in the area from displacement...

## Privately operated waste management system



### Waste management system operation:

- Trash collection and landfills
  - Trash or mixed solid waste (MSW), construction & demolition waste, industrial wastes
- Recycling collection and Material Recovery Facilities (MRFs)
- Curbside bulky and problem waste collection
- Yard and food waste composting sites
- Donation/Reuse Centers

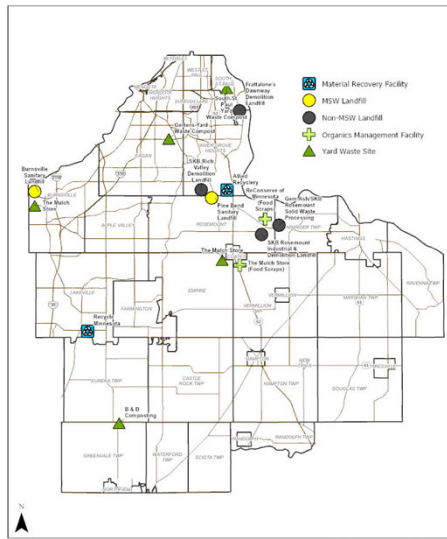
### County has a role:

- Recycling Zone (household hazardous waste & recycling drop-off )
- Food waste (organics) drop-off
- Fix-it clinics
- Special event collections (bulky or problem materials collection)

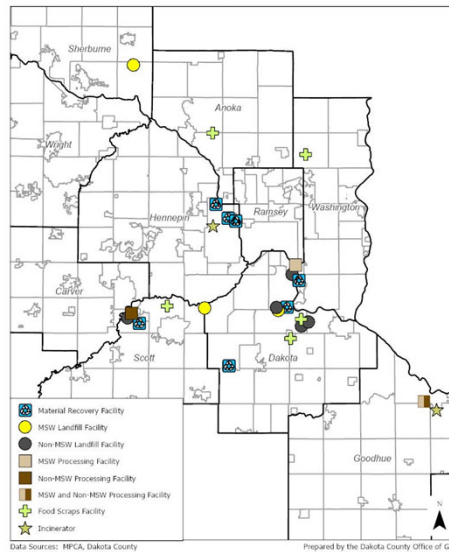
## Solid waste facilities



Waste Facilities Located in Dakota County



Waste Facilities Serving the Twin Cities Region



## Landfill capacity



Landfill	Year filled (estimate)
Burnsville Sanitary Landfill (Waste Management)	2110 <i>(2072 if HERC closes in 2033)</i>
Pine Bend Sanitary Landfill (Republic)	2048*
SKB Rosemount (Waste Connections)	2036*
Dawnway Demo	2031

\* Assumes current expansion requests are approved. Requests will be presented to County Board in 2025.



## Alternatives to landfilling

## Waste to energy (WTE)



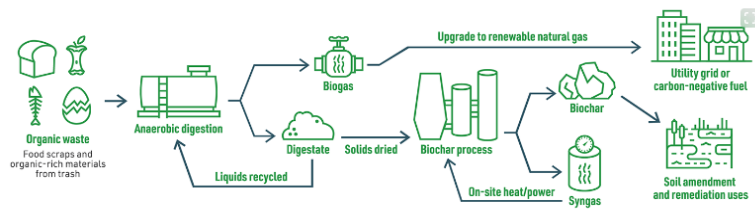
- Burns trash and uses heat to make steam generating electricity
  - Ash is a byproduct and landfilled
- Facilities:
  - Red Wing – waste processing and WTE
  - Ramsey/Washington Recycling & Energy Center (R&E Center) – waste processing
    - Then delivered to Red Wing or Mankato WTE facilities
  - Hennepin Energy Recovery Center (HERC) – mass burn facility with some preprocessing



## Anaerobic digestion (AD)



### WHAT IS ANAEROBIC DIGESTION?



Graphic provided by R&E.

- Dem-Con Companies developing a facility in Scott County
  - 75,000 tons/year facility
  - Operations expected early 2027
- BioEnergy DevCo has been exploring options in Dakota County

## Gasification



- A chemical process heating trash that breaks down trash into a syngas.
- Trash (MSW) is feedstock for high temperature chemical conversion process.
- Syngas can be turned into transportation fuels, chemicals, fertilizer, or natural gas substitutes.

## Other technologies



- Chemical recycling – recycling at the molecular level, converting waste into base chemicals
- Alternative processing systems such as using an autoclave

- New MN Pollution Control Agency Metropolitan Solid Waste Management Policy Plan and revised county solid waste management plan to divert more waste:
  - New: Curbside organics by 2030
  - New: Pre-processing at landfills by 2030
  - Expand: Waste reduction education and assistance
  - Recycling strategies
    - Continue: Generator requirements
    - Expand: Standardized education requirements
    - New: Hauler feedback when customer sorts improperly
- Unknown impacts from new packaging waste and cost reduction act

## Discussion