



RAMSEY/WASHINGTON  
RECYCLING & ENERGY

# Anaerobic Digestion as a Food Waste Solution

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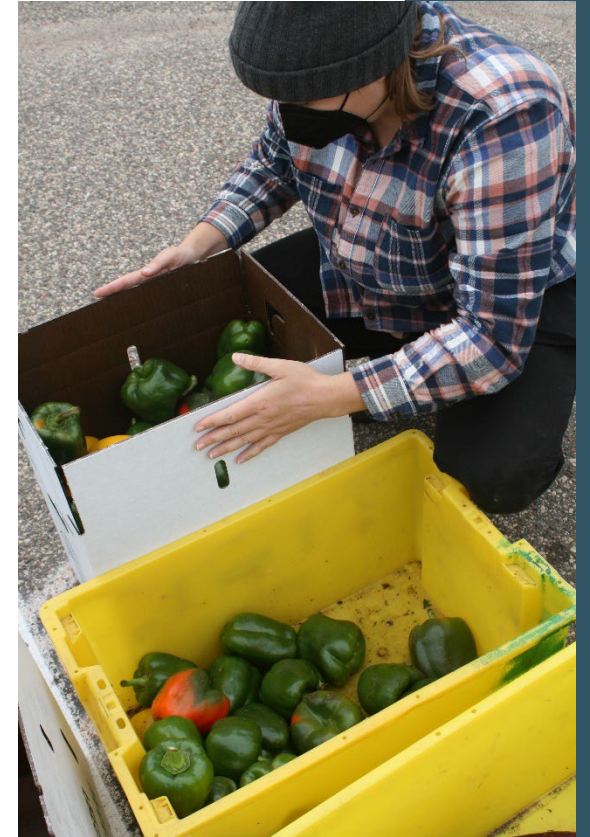
Ramsey County WRAC meeting

May 7, 2024

# Ramsey/Washington Recycling & Energy

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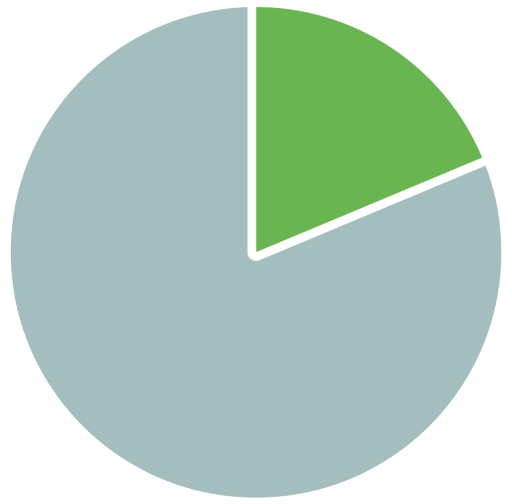
- Ramsey & Washington counties: working together to manage waste responsibly since the 1980s
- 810,000+ residents, 70,000+ businesses
- **Goals:**
  - Protect public health and the environment
  - Advance racial and health equity
  - Achieve 75% recycling by 2030
  - Prevent waste and capture value from waste
- 882,000 tons of discarded materials annually
  - About 50% recycled/composted
  - About 50% trash



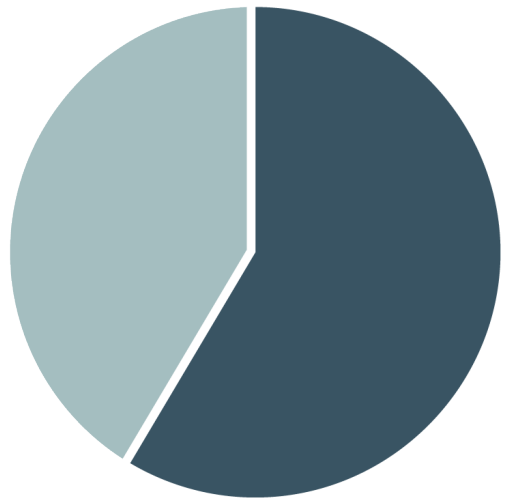
# The Food Scraps Problem

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20% OF RESIDENTIAL TRASH



58% OF METHANE EMISSIONS FROM MUNICIPAL LANDFILLS



Source: EPA



# The Food Scraps Solutions

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**1st:** prevent/reduce food waste

**2nd:** connect surplus, edible food to people in need

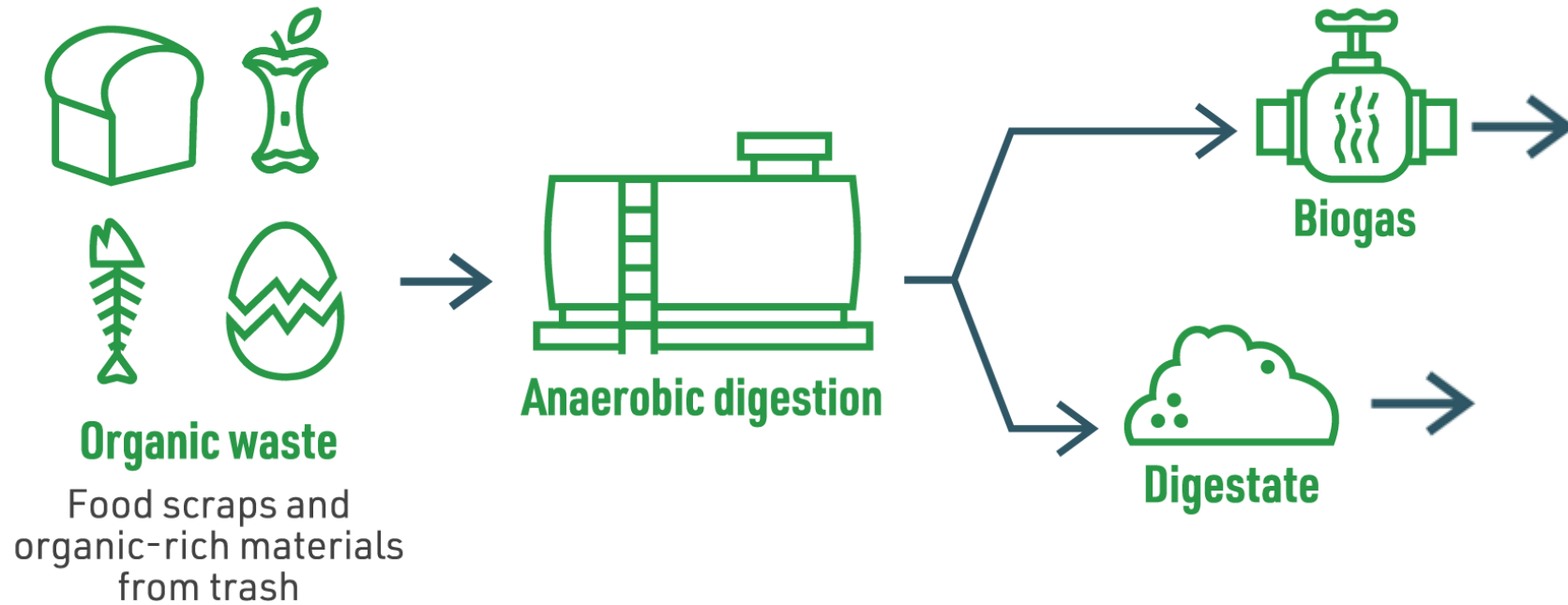
**3rd:** collect food scraps & recycle with anaerobic digestion and composting



# Anaerobic Digestion

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Microbes break down food waste in a large, airtight tank



# Planned Digestion Facility

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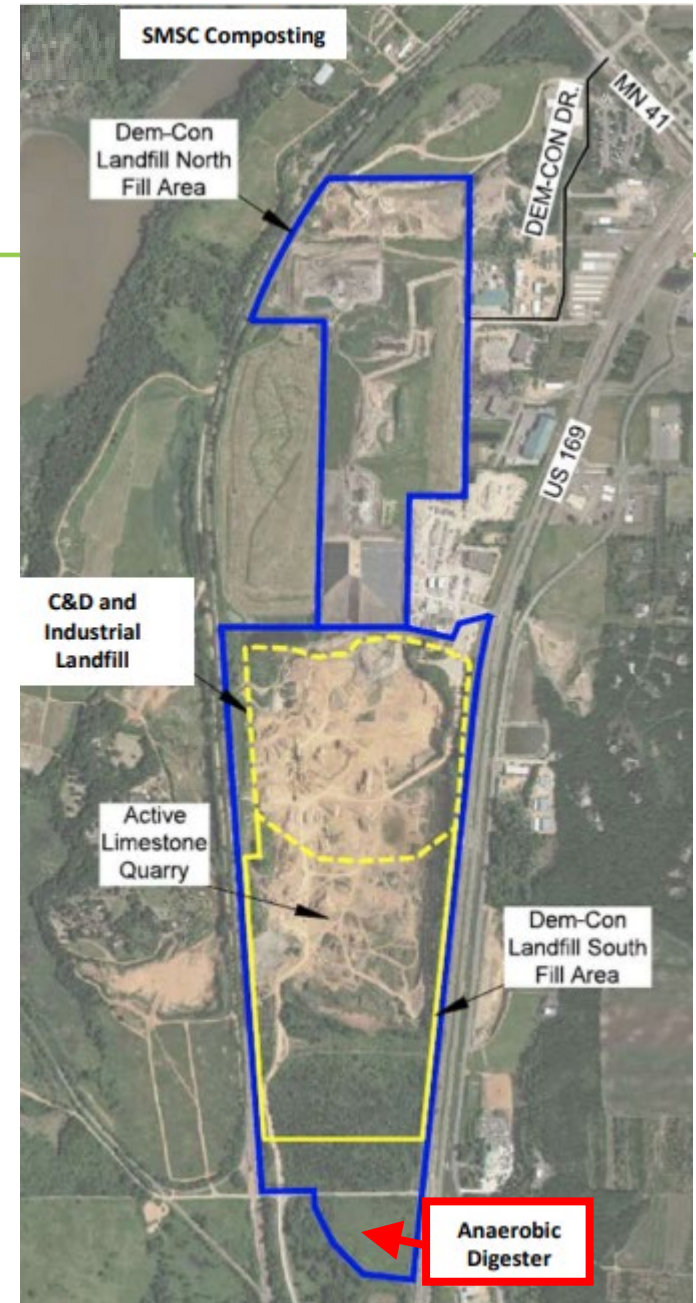
- Partnership with Dem-Con in Scott County
- Adds capacity to manage food scraps and help meet demand for food recycling options (along with composting)
- Process up to 75,000 tons per year
  - 30,000 tons of food scraps from Ramsey/Washington counties and 20,000+ tons of other organics that can't be composted
  - 10,000 tons wood waste/yard waste
  - 15,000 tons from other communities
- Greenhouse gas emission reduction = removing 6,100 cars from the road each year



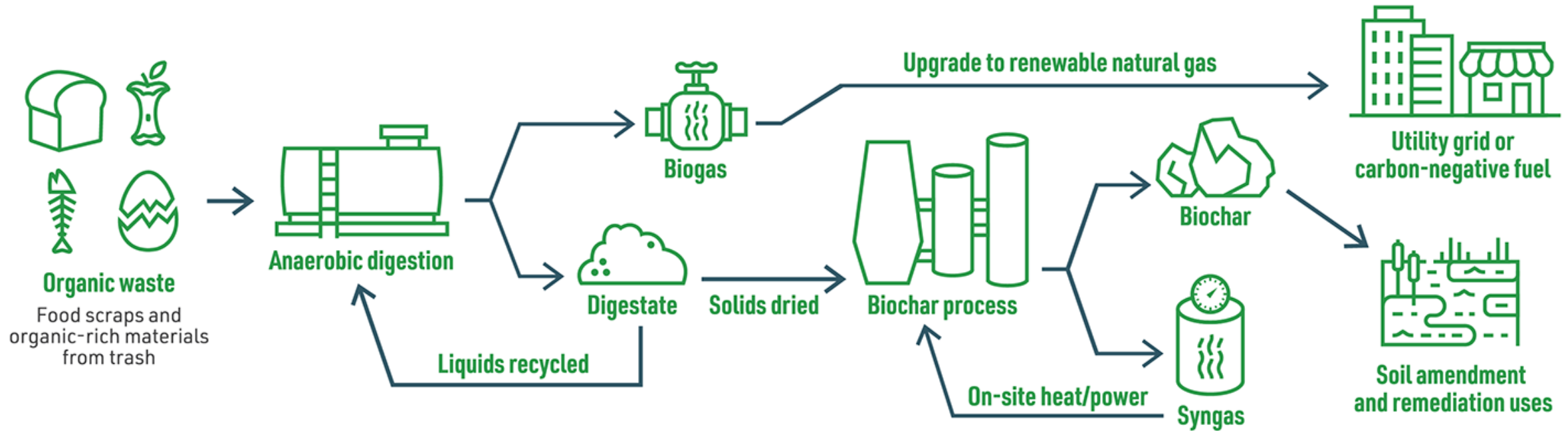
# Facility Location



- ~100 HZI digesters in Europe & North America
- High-tech monitoring odor filtration systems



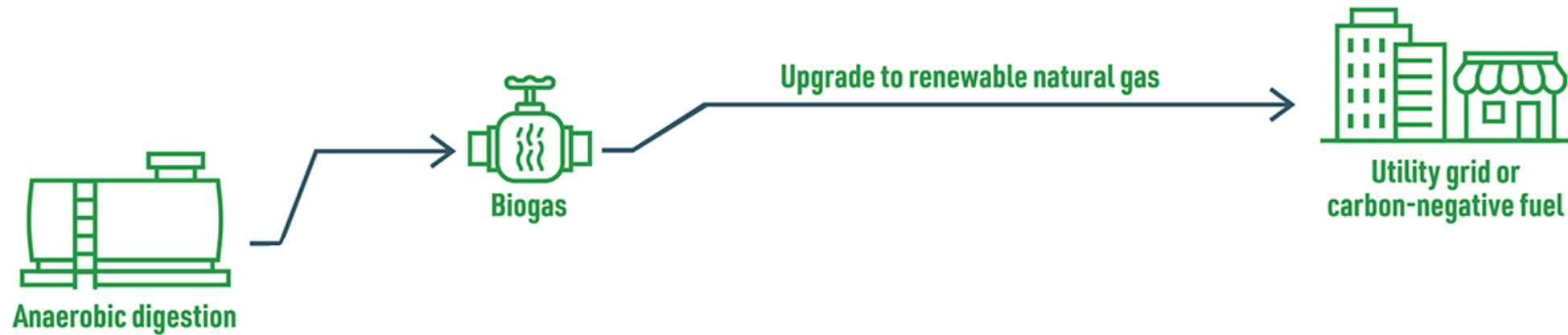
# Recycled Products to Benefit Communities





# Biogas

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- Like natural gas – but made from food waste, not fossil fuels
- Captured from digester and upgraded to utility grade
- Used for household/business/industrial utilities
- Can also be used as a carbon-negative vehicle fuel



# Digestate and Biochar

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- Digestate processed into biochar (charcoal-like material)
- Soil amendment – helps soils retain moisture/nutrients
- Can help clean up polluted soil and water
  - Promising for PFAS removal from environment
- Carbon sequestration (climate solution)





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# Thank you!



# Questions?