

Ramsey County Environmental Health - CIP Proposal

Contents

- I. Summary - CIP Request(s)
- II. Background
 - a. Ramsey County Solid Waste Management Plan
 - i. Yard Waste
 - ii. Wood Waste
 - b. Yard Waste Site Operations – Includes yard & wood waste processing
 - c. Wood Waste Management
 - d. Emergency Preparedness & Response
- III. Ramsey County Wood Waste Management Plan
- IV. CIP Request Details
 - a. Yard Waste Sites
 - i. Site Conditions
 - ii. Working Conditions
 - b. Wood Waste Processing Equipment
- V. Solid Waste Fund

Ramsey County Environmental Health - CIP Proposal

I. Summary – CIP Request

As part of Public Health's wood waste management responsibility, as laid out in the Ramsey County Solid Waste Management Plan, we are proposing capital investments in two primary categories:

- Site improvements at our seven county-operated Yard Waste sites. These improvements include:
 - a. Converting gravel paving surfaces to durable cement paving surfaces in significant areas of the four Yard Waste sites that receive brush. These surfaces require ongoing maintenance and repair due to the volume of processing with heavy machinery, trucks and equipment. Durable cement pavement will increase the life span of the paving surface, thus reducing ongoing maintenance costs, will increase efficiencies of processing, and will decrease the air-borne dust at the sites, which will increase air quality for our residents and employees.
 - b. Installation of modern attendant booths at all seven Yard Waste sites, replacing utility sheds, which currently act as workstations for County employees. Modern attendant booths, like that installed at the Ramsey County Environmental Center, will improve work conditions for County employees, increase site safety for the public, and increase security for the site operations.
- Purchase of wood waste processing equipment, specifically 1-2 Air-Curtain Burners to be operated at a third-party wood yard. Purchase of equipment and contracting of labor would be in partnership with Washington County, who has already entered cooperative contracts for purchasing and operating this equipment. Owning this equipment would aid Ramsey County and our municipal partners in managing the excessive amount of wood waste being generated that is currently exceeding our capacity and budgets to manage the material. By reducing emissions and producing biochar, air curtain burners offer a more sustainable waste disposal solution than current practices.

These investments would be paid for out of the County's Solid Waste Fund. There would be no additional requests for funding and there is no request for levy funding or bonding. In total, these requests equal \$6 million (\$4 million for Yard Waste site improvements; \$2 million for wood waste processing equipment). Details of the request are provided in this document.

Ramsey County Environmental Health - CIP Proposal

II. Background

a. Ramsey County Solid Waste Management Plan

<https://www.ramseycounty.us/SolidWasteManagementPlan.pdf>

Waste and Recycling in Ramsey County is guided by the County's Solid Waste Management Plan, which establishes strategies and priorities for a span of 20 years. The plan:

- Focuses on improving public health, supporting the economy, and reducing greenhouse gas emissions and climate change impacts.
- Aims to reduce waste, increase recycling, and minimize landfilling through collaboration with residents, businesses, and partners to meet state and county goals.
- Addresses priorities from the Ramsey County's Countywide Strategic Plan, including *Residents first: effective, efficient and accessible operations*.

Two large-volume components in the Solid Waste Management Plan are yard waste and wood waste. Issues such as climate change, invasive species, pests and financial barriers all affect how the county manages these waste streams.

i. Yard Waste

- Yard waste includes leaves, grass clippings, garden waste and tree and shrub waste.
- State law prohibits yard waste from being put in the trash or being disposed of in a landfill or resource recovery facility.

ii. Wood Waste

- Wood waste includes woody plant material found in brush and tree waste like branches, logs, and tree stumps.
- Wood waste volumes in the region have increased dramatically in recent years due Emerald Ash Borer (EAB), an invasive insect that kills ash trees, and increased storm occurrences and intensity.
- Policies in the Ramsey County Solid Waste Management Plan aid in addressing this issue.
 - The first of which includes working with state agencies, municipalities and other entities to ensure a healthy and sustainable tree canopy by responding and adapting to emerging threats of disease, invasive species and climate change.
 - Secondly the County is to partner with municipalities and other entities to prioritize the highest and best use of wood waste resulting from EAB and other causes.

b. Yard Waste Site Operations – Includes yard and wood waste processing

Ramsey County is committed to ensuring residential yard & wood waste is properly managed through accessible and convenient methods, including at County owned and operated yard waste sites.

Ramsey County Environmental Health - CIP Proposal

- Ramsey County maintains and operates a system of seven Yard Waste collection sites available to residents.
- The sites are open five days per week from April through November (weather permitting) and are also open on weekends during the winter.
- The sites are heavily used, receiving on average about 400,000 site visits and 40,000 to 45,000 tons of yard waste and 25,000 to 30,000 tons of wood waste annually.
- Soft material (leaves, grass etc.) is either composted on site or hauled to commercial sites for composting.
- All but one of the sites serve as transfer sites due to the lack of space for on-site composting.
- Most of the wood waste received at the Yard Waste sites is processed into mulch and used as a biofuel at Saint Paul District Energy's combined heat and power plant.

c. Wood Waste Management

- Approximately 2/3 of the wood waste generated in the entire Twin Cities Metro Region ends up at the Saint Paul Cogeneration facility operated by District Energy Saint Paul and is used as a biomass energy source.
 - The long-term financial viability of this facility to continue to accept wood waste is uncertain as energy markets continue to evolve.
 - The Ramsey County yard waste sites are currently at capacity for receiving residential wood waste and reliance on this facility as an outlet for the material could potentially result in shutdown of the sites to the public.
- Ramsey County has worked with many partners, including through the Partnership on Waste & Energy (PWE) that also includes Washington and Hennepin counties, to raise the urgency of finding near- and long-term solutions for managing the growth of wood waste, particularly due to the surge in volumes created by EAB infestation.
 - PWE has conducted studies on EAB and the wood waste management system and continues to work for legislative and regulatory solutions to keep District Energy operating, as it is currently the only large-scale, viable wood waste management market.
- Other efforts include development of urban wood products manufacturing and market demand for higher-value products and exploring innovative wood utilization options such as biochar.
 - Ramsey County and Washington County have been working together on solid waste management issues for decades.
 - In 2024, Washington County released a Request for Proposal (RFP) for wood waste utilization.
 - Washington County plans to utilize the resulting contracts to process tree waste into biochar through use of an air-curtain burner at a third-party wood yard.
 - Ramsey County Public Health has access to these contracts through Cooperative Purchasing Venture.
 - Purchase of equipment and labor for from the Washington County contracts would aid Ramsey County in managing the excess of wood waste generated from EAB, storms, and routine pruning and maintenance of trees and offer municipalities and other County departments in managing their wood waste.

Ramsey County Environmental Health - CIP Proposal

- The operation would also result in an additional outlet to process material received at the County yard waste sites in the event St. Paul Cogeneration/District Energy becomes unavailable.

d. Emergency Preparedness & Response

The Ramsey County Solid Waste Management Plan also addresses management of storm debris, which includes wood waste. The policies and strategies in the plan serve as an addendum to the Ramsey County Comprehensive Emergency Operations Plan and the Multi-Hazard Mitigation Plan and are intended to complement those plans.

The Ramsey County Solid Waste Management Plan addresses challenges and barriers to proper materials management related to emergency preparedness and response. This includes assisting municipalities plan and coordinate management of emergency debris by offering technical assistance and resources and identifying recycling and reuse opportunities.

III. Ramsey County Wood Waste Management Plan

The Minnesota Pollution Control Agency has mandated counties in the region develop Wood Waste Management Plans to prevent and manage wood waste in each county and throughout the region by the end of 2025.

Ramsey County Public Health is in process of developing Ramsey County's Wood Waste Management Plan. The tasks include working collaboratively on regional planning and offer support to municipalities, including working with the Minnesota Pollution Control Agency to identify funding sources for these efforts and evaluating alternative processing methods and emerging technologies, such as gasification, to manage wood waste.

Biochar production is considered an emerging technology and is defined further in the Solid Waste Management Plan to manage wood waste as high as possible on the wood waste hierarchy:

End-Use of Wood Waste - Promote existing programs that use EAB-effected wood and other wood waste for furniture, home goods, flooring and other purposes. Expand to include other wood waste uses as opportunities arise, including (but not limited to) milling; prioritizing purchasing of products from recovered waste wood; and production of biomass pellets, renewable fuels or carbon soil amendments.

IV. CIP Request Details

a. Yard Waste Sites – **Capital Investment \$4,000,000**

i. Site Conditions

- The Yard Waste sites ensure proper yard waste management for residents including capacity to temporarily receive and store materials received.
- Residential and heavy equipment activity takes a toll on the site surfaces.

Ramsey County Environmental Health - CIP Proposal

- Materials such as crushed asphalt and class 5 aggregate are continuously hauled into the sites to make repairs to large potholes and uneven surfaces that develop from drop off and haul out of yard waste.
- Much of the repair material gets transferred back out as an accessory to hauling the yard waste off site to private facilities.
- Maintaining site surfaces are not only important to provide ease of access to residents and hauling operations but is also necessary for proper surface water runoff (Ramsey County manages its yard waste sites in accordance with the Ramsey County Storm Water Management Plan).

Yard Waste Sites Capital Improvements - Paving surfaces (4 brush/wood sites)

Location	Acres	Ft ²	Prep. @ \$1.50/ft ²	Paving @ \$7.50/ft ²	Engineering/ Survey Drawings	20% Contingency	Total
White Bear Township	1.23	53,698 ft ²	\$80,547	\$402,735	\$50,000	\$96,666	\$629,948
Frank Sims	2.37	103,124 ft ²	\$154,868	\$773,430	\$75,000	\$169,716	\$1,173,014
Midway	1.53	66,462 ft ²	\$99,693	\$498,465	\$75,000	\$134,631	\$807,789
Arden Hills	0.66	28,924 ft ²	\$43,386	\$216,930	\$50,000	\$62,063	\$372,379
Total	5.79	252,208 ft ²	\$378,494	\$1,891,560	\$250,000	\$463,076	\$2,983,130

Unknowns include buried utilities, buried construction demo Round up to **\$3,000,000**

ii. Working Conditions

- The sites employ 11 fulltime seasonal and several on-call Ramsey County Service Workers - Site Monitors.
- The workers are responsible for opening and closing the sites to the public and to oversee day-to-day operations that include monitoring of incoming materials, traffic control, handing out materials, and educating the public on Ramsey County's waste management and recycling programs.
- The nature of the yard waste sites requires workers to provide these functions in an outdoor environment. Therefore, heat, cold and other weather-related physical hazards are important in assessing worker safety.
- Site staff currently operate out of utility sheds designed to store equipment such as rakes and shovels and are inadequate to provide a controlled environment for the workers when they need to take a break from the elements.
 - Staff have complained of the conditions and there was recently a heat-related incident that resulted in a worker requiring medical attention.
 - Workers have also sought shelter in their personal vehicles during extreme weather conditions to operate either the car's air conditioner or heater.
 - This practice does not align with the County's vehicle idling (emissions) policy and wastes energy at the personal expense of the employee.

Ramsey County Environmental Health - CIP Proposal

- Workers have also shown up for work to find the existing sheds occupied by homeless, who remove locks to gain access during closed hours.
 - Vandalism and theft of materials stored in those sheds is also a reoccurring problem.
 - Law enforcement has been contacted on multiple occasions to report these incidents and to remove unauthorized individuals from the sheds.

These issues can be addressed by installing permanent sheds that are specifically designed to provide shelter for employees at remote locations. They are manufactured to provide a controlled environment (heating and air conditioning, lockable doors, and better viewing of the service area via large-pane windows. The units can also be configured to provide WiFi access to employees. Currently, employees do not have WiFi access and timesheets, trainings, and other correspondence is completed on paper while Ramsey County is moving more toward the paperless option for employee communications and functions.

Yard Waste Sites Capital Improvements – Attendant Booths (all 7 sites)

Location	Shed cost	Construction	Site Survey	20% Contingency	Total
Arden Hills	\$45,000	\$30,000	-	\$15,000	\$90,000
Battle Creek	\$45,000	\$30,000	\$25,000	\$20,000	\$120,000
Frank Sims	\$45,000	\$30,000	-	\$15,000	\$90,000
Midway	\$45,000	\$30,000	-	\$15,000	\$90,000
Mounds View	\$45,000	\$30,000	\$25,000	\$20,000	\$120,000
Summit Hill	\$45,000	\$30,000	\$25,000	\$20,000	\$120,000
White Bear Township	\$45,000	\$30,000	-	\$15,000	\$90,000
Total	\$315,000	\$210,000	\$75,000	\$120,000	\$720,000

Unknowns include trenching, permitting cascades. Round up to **\$1,000,000**

b. Wood Waste Equipment – **Capital Purchase \$2,000,000**

- Air Curtain Burners currently cost around \$800,000-\$900,000
 - Tiger Cat \$850,000
 - Phoenix 5000 \$825,000
- \$650k Annual Operating costs for one machine (in 2026 & 2027 proposed budget)
- Operating costs can be reduced with more machines.
- Washington County currently owns and operates a Phoenix 5000.
- Ramsey County could decrease the cost to Washington County while also seeing reduced operating costs. Purchase of a third machine would be considered in 2027.

Ramsey County Environmental Health - CIP Proposal

Unknowns include inflation & tariffs Equipment is imported. Round up to \$2,000,000

V. Solid Waste Fund

The Ramsey County Solid Waste Management Plan establishes policy priorities for the Solid Waste Fund balance as follows:

- Pursuant to State law, Minn. Stat. § 473.811 subd. 9, solid waste fund balance may be used for purposes only described in the Solid Waste Management Plan.
- Establish the following priorities for use of solid waste fund balance by Ramsey County, in this order:
 - Maintenance of a reserve fund for R&E bond obligation.
 - Maintenance of waste-related capital equipment/sites.
 - Financial incentives, such as grant programs, for the purpose of achieving solid waste goals.
 - Operating expenses that present significant opportunities for meeting environmental goals.
 - Capital purchases/investments that present significant opportunities for meeting recycling goals.
 - One-time waste management related expenses, such as purchase or development of fixed assets or capital equipment.
 - Saint Paul – Ramsey County Public Health, in consultation with the county manager and Finance Department, will bring requests forward for new funding commitments through the Capital Improvement Program process and/or through the requests for county board action process.
- The current Solid Waste Fund balance can easily support these capital investments, and they will not impair the County’s ability to fulfill its obligations as laid out in the Ramsey County Solid Waste Management Plan.

○ Solid Waste Fund – 2025 Balance	= \$44,356,210
○ Solid Waste Fund – 2025 Committed Dollars	= \$13,406,810
○ Solid Waste Fund – 2025 Available Balance	= \$30,949,900
○ Solid Waste Fund – 2025 Requests YW Sites	= \$4,000,000
– WW Equip.	= \$2,000,000
○ Solid Waste Fund – 2026 Balance minus CIP	= \$24,949,900