

January 2024



Metropolitan Solid Waste Management Policy Plan 2022-2042

A 20-year policy plan for solid waste management that sets goals and policy for the metropolitan solid waste system.

Legislative charge

Minn. Stat. § 473.149 - A metropolitan long range policy plan for solid waste management, prepared by the Pollution Control Agency, sets goals and policies for the metropolitan solid waste system. This plan includes goals and policies for solid waste management, including recycling consistent with section 115A.551 and household hazardous waste management consistent with section 115A.96, subdivision 6. The MPCA shall include specific and quantifiable metropolitan objectives for abating, to the greatest feasible and prudent extent, the need for and practice of land disposal of mixed municipal solid waste and specific components of the solid waste stream.

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Acronyms and initialisms

CII commercial, industrial, institutional
CON Certificate of Need
CSWMP County Solid Waste Management Plans
Demolition debris construction and demolition debris
EJ Environmental Justice
EPA U.S. Environmental Protection Agency
EPD Environmental Product Declaration
EPR Extended Producer Responsibility
GHGs Greenhouse gases
GHGe Greenhouse gas emissions
HERC Hennepin Energy Recovery Center
HHW household hazardous waste
ISW industrial solid waste
LRDG Local Recycling Development Grants
MLAA Metropolitan Landfill Abatement Account
MMSW mixed municipal solid waste
MN USGBC Minnesota U.S. Green Building Council
MPP Metro Policy Plan
MSW municipal solid waste
MnDOT Minnesota Department of Transportation
MPCA Minnesota Pollution Control Agency
MRF materials recovery facility
PFAS Per- and polyfluoroalkyl substances
PUC Minnesota Public Utilities Commission
RDF refuse derived fuel
RMD recycling market development
ROD restriction on disposal
SMM Sustainable Materials Management
SSO source separated organics
TCMA Twin Cities Metropolitan Area
WARM waste reduction model
WMA Waste Management Act
WTE waste-to-energy

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Part one: Introduction and background

In 1980, the Minnesota Legislature recognized the importance of waste management with the passage of the Waste Management Act (WMA) in Minn. Stat. § 115A. This statute's purpose is to protect the state's natural resources and public health by improving integrated solid waste management. The statute establishes the following hierarchy of preferred solid waste management practices, in order from most to least beneficial to the environment:

1. Waste reduction and reuse
2. Waste recycling
3. Composting of source-separated compostable materials, including but not limited to, yard waste and food waste
4. Resource recovery through mixed municipal solid waste (MMSW) composting or incineration
5. Land disposal which produces no measurable methane gas, or which involves the retrieval of methane gas as a fuel to produce energy to be used on-site or for sale
6. Land disposal which produces measurable methane, and which does not involve the retrieval of methane gas as a fuel to produce energy to be used on-site or for sale

The above hierarchy was established to achieve the following goals, as provided in Minn. Stat. § 115A.02(a):

1. Reduction in the amount and toxicity of waste generated
2. Separation and recovery of materials and energy from waste
3. Reduction in indiscriminate dependence on disposal of waste
4. Coordination of solid waste management among political subdivisions
5. Orderly and deliberate development and financial security of waste facilities including disposal facilities

To avoid confusion as to which types of plans are being discussed, this document will be referred to as the Metro Policy Plan (MPP); the plans the counties develop will be referred to as County Solid Waste Management Plans (CSWMP). The language in the statutes, where quoted, is not changed and is italicized for clarity.

Purpose of this Plan (MPP)

This MPP establishes the framework for managing the Twin Cities Metro Area's (TCMA) solid waste for the next 20 years (2023-2043). It was prepared in accordance with the requirements of Minn. Stat. § 473.149. It will guide the development and activities of solid waste management and must be followed by the counties in the TCMA. In addition to the counties, the MPCA, solid waste facilities, haulers, businesses, and residents all have a role in implementing the MPP. The MPP supports the goals of the WMA hierarchy, improving public health, reducing the reliance on landfills, conserving energy and natural resources, and reducing pollution and greenhouse gas emissions (GHGe).

The TCMA includes Anoka, Carver, Dakota, Hennepin, Ramsey, Scott, and Washington counties. Excluded cities from the TCMA are Northfield, Hanover, Rockford, and New Prague.

Participants in the process

The MPCA staff held several meetings with stakeholders in advance of the release of the draft MPP. Several public meetings were also held after the release of the draft MPP to gather input from other MPP stakeholders, including members of the recycling and waste industry, counties, non-governmental organizations (NGOs), and members of the public.

Figure 1. TCMA County map



How the MPP will be used by stakeholders

The MPP will guide all stakeholders in their roles to ensure that waste is managed to the highest and best use.

The MPP will:

1. Inform waste generators (residents, businesses, public entities) about their roles and responsibilities in waste management.
2. Educate generators about solid waste issues and services (both public and private) available to them.
3. Identify and direct state agencies and county governments that provide assistance.

The MPP will outline the responsibility of the waste industry in providing future solid waste facilities and services. For the purposes of this MPP, the “waste industry” includes all entities, public and private, that collect and/or manage solid waste in some form, including recyclables, household hazardous waste (HHW), and problem materials.

The MPP will rely upon organizations that support the reuse industry, including repair organizations and non-government organizations, such as thrift stores.

The MPP will:

1. Provide guidance to counties and regional governmental entities in developing county solid waste ordinances, work plans, and budgets.
2. Direct the MPCA oversight responsibilities, including administration of the Metropolitan Landfill Abatement Account program, CSWMP reviews, and the MPCA’s approval of solid waste facility permits and landfill certificates of need (CON).
3. Assist the MPCA in its regulatory, enforcement, and technical assistance functions that affect the TCMA.
4. Contribute to policy discussions regarding solid waste legislation affecting the TCMA.
5. Influence local jurisdictions in the planning and provision of services to residents and businesses.
6. Manage waste in a way that minimizes adverse impacts on the environment including, but not limited to, GHG reduction, resource conservation, and long-term legacy impacts as a result of land disposal.

Current system status

The TCMA solid waste system is the result of planning and development that began with the 1980 WMA. Since 1980, much has been accomplished.

- The TCMA recycles 45.2% of the MMSW generated. The recent improvement is largely due to advances in organics collection for food to people, food to livestock, source separated organics (SSO) management, and yard waste composting.
- Reuse and recycling activities contribute significantly to the economy of the region.
- Resource recovery facilities that serve the TCMA are now operating at full capacity.
- Resource recovery facilities manage 28% of the MMSW generated.
- Land disposal has decreased by 18% since 2008.
- Problem materials such as major appliances, mercury-containing products, and electronic waste are banned from the MMSW stream, and infectious wastes are separately managed.
- A system to collect and manage HHW is available to all residents, and all seven counties participate in an arrangement of shared reciprocity.
As a region, we should be proud of the advances we have made because of the efforts from product producers, waste generators, waste industry, residents, and government.

What challenges still exist?

The Minnesota solid waste system has faced several challenges over the past six years. A few large issues have indirectly affected the solid waste system in a negative way. These have slowed progress toward the objectives in the previous MPP. To meet our environmental goals, the following challenges will need to be further addressed.

The COVID-19 pandemic significantly disrupted all systems in Minnesota in 2020 and 2021. Transmission of the virus among solid waste workers was a safety concern, and outbreaks among staff at materials recovery facilities (MRFs) resulted in operational shutdowns. MRFs excelled at maintaining operations to the extent possible. However, requests for disposal allowances were yielded during this time.

The TCMA experienced social unrest following the murder of George Floyd. Some of the large Minneapolis MRFs shut down temporarily as a precautionary measure. Limited capacity exists in the region to absorb the material processed at those facilities. This led to a request to dispose of recyclable material. Permission was granted for the one-time disposal of 59.7 tons of recyclables, which represents .000006% of the 1,000,000 tons of recyclables generated in the TCMA in 2020.

These events highlighted the lack of contingency plans the TCMA has for recyclable, reusable, and compostable materials. Maintaining and developing new end markets will continue to be important for

A new name for this plan

The MPCA expects the fair treatment and meaningful involvement of communities of color, Indigenous communities, and low-income communities in agency actions and decisions that affect them. As the state takes initial steps to acknowledge its role in systemic racism, we recognize the power of language. Current Minnesota statute refers to the solid waste plans that metro counties develop as “master” plans. The term “master”, which is often defined as commanding control or being eminently skilled, has been identified as a word to remove in certain contexts due to its connection with the history of masters and slavery in the United States. While this statute remains unchanged as of the release of this plan, where possible, this plan uses the name “county solid waste plan” in place of “county master solid waste plan”. A noted exception is the use of “county master plan” in Appendix D, to remain consistent with current statute language. An additional benefit to using the term “county solid waste plan” is that it harmonizes the language with the term used for Greater Minnesota counties.

Minnesota's long-term success. A recent example of this is WestRock's unexpected closing of its corrugated cardboard line, resulting in a reduction of 600 tons of daily capacity, creating a major impact to local MRFs and haulers.

Success creates challenges, too. For example, an increase in organics collection programs throughout the TCMA point to the need for more planned programs in the coming years. Despite anticipated increases in feedstock, there is not a corresponding increase in organics processing capacity in the region. To meet our organics objectives, additional capacity to process organics will be necessary.

Minnesota's changing climate is creating stresses for the solid waste system, as severe weather events increase in frequency. Structural damage from flooding, tornados, and strong hail-producing thunderstorms generates large amounts of solid waste. Downed trees put pressure on the yard waste and composting facilities. The rise of EAB and other tree diseases compounds this issue as trees in Minnesota are dying at an increasing rate. The wood from the trees affected by EAB cannot be transported out of quarantine zones, leaving local entities to handle large volumes of wood waste without perpetuating the spread of the EAB. The TCMA will need to identify ways to manage the onslaught of wood waste over the coming years. Management solutions are needed to handle generated wood safely and efficiently.

Per- and polyfluoroalkyl substances (PFAS) are a significant challenge. Invented in the 1930s, PFAS are still commonly used for their water- and grease-resistant properties in many industrial applications and consumer products such as carpeting, waterproof clothing, upholstery, food paper wrappings, cookware, personal care products, fire-fighting foams, and metal plating. PFAS are persistent and can bioaccumulate, meaning the amount builds up in the body over time. When landfilled, PFAS migrates into the leachate, which is treated at a wastewater treatment facility. With no existing removal systems installed at landfills or wastewater plants to remove PFAS, the treated wastewater is discharged into surface water. It is not clear if waste-to-energy (WTE) facilities maintain the high temperatures required to destroy PFAS. The waste industry is in the process of identifying ways to address this unusual class of chemicals. As the solid waste system continues to evolve, adaptations are needed to safely manage new materials.

Establishing reuse and recycling markets for new additional materials is imperative to meet reuse and recycling goals and other objectives in the MPP. Market development is a complicated task requiring considerable lead time. New materials that can be recycled must be generated with enough volume to justify and sustain a business model.

Finally, the closure of the Great River Energy (GRE) processing and WTE facility has resulted in more than 250,000 tons of waste going to landfill. This closure directly increased landfill expansions in the TCMA. In many ways, the GRE closure was the result of an intersection of waste and energy policy. Minnesota needs to figure out how to manage the policy nexus for these facilities. The energy created at these facilities is not cost competitive with wind and solar and is not universally viewed as a clean energy source. However, the important role they serve in solid waste management should not be underscored. Left unresolved, other resource recovery facilities may follow suit. Without achieving greater waste diversion and reduction rates, that will result in an increased amount of waste being land-disposed.

Part two: Framework for change

This section of the MPP lays out a framework for a regional vision, key themes, goals, and policies. This framework will guide all decisions of the MPCA, regional governing entities, metropolitan counties, solid waste facilities, haulers, and other stakeholders with respect to the TCMA solid waste system.

Vision

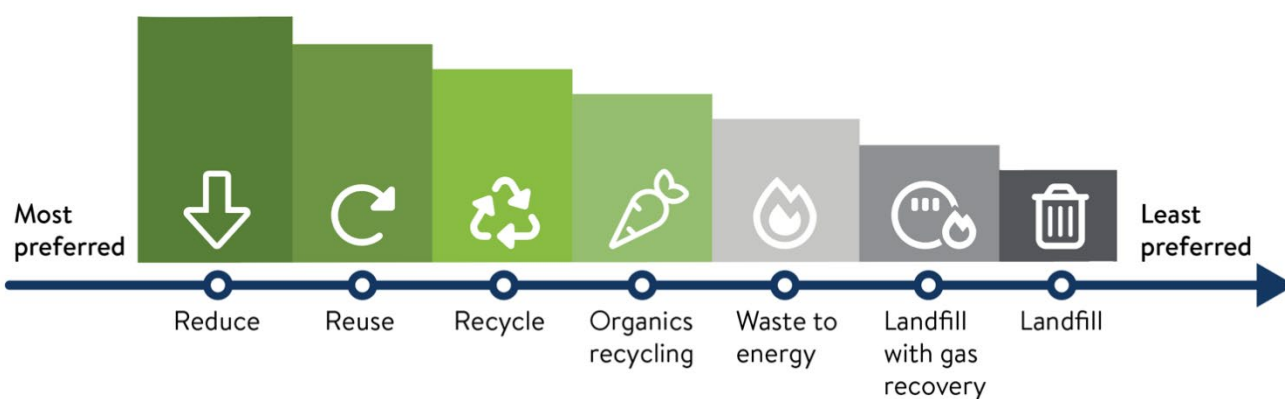
This MPP is designed to help stakeholders exceed the benchmarks established in state law. The vision is that the TCMA will put more emphasis on the following:

- Pollution prevention
- Sustainable materials management (SMM)
- Conservation of natural resources and energy
- Reduced reliance on landfills and WTE
- Reduced toxicity of waste
- Equitable improvement in public health for all residents
- Supporting the economy
- Reducing GHGe and the impacts of climate change

The MPP sets forth a vision of sustainability for the TCMA solid waste management system. The TCMA is a sustainable community that minimizes waste, prevents pollution, promotes efficiency, reduces GHGe and the impacts of climate change, saves energy, reduces toxicity, and develops resources to revitalize local economies. The integrated waste management system is an essential component of the infrastructure of a sustainable community.

Solid waste is managed according to the principles of SMM that support sustainable communities and environments. The benefits of sustainable and healthy communities are shared equally throughout the region by all residents. The solid waste management hierarchy is central to attaining the twin objectives of sustainability and proper solid waste management because it emphasizes the higher end management methods.

Figure 2. Minnesota's solid waste management hierarchy of preferred methods



Key themes

The following key themes underlie all elements of the MPP.

SMM offers a systematic approach to using and reusing materials more productively over their entire life cycles. SMM considers the environmental impact of the entire life cycle, not just disposal. This holistic approach emphasizes management methods at the top of the waste hierarchy as well as reducing toxicity. These methods have greater environmental benefits. For example, preventing food waste is more impactful than increasing glass recycling rates.

GHGe reductions can be found throughout the solid waste management system. There are potential reductions in GHGe to be found throughout the life cycle of products and in the waste management system. This is particularly true at the top of the hierarchy and the design phase of a product when GHGe can be avoided altogether. Other system changes can affect GHGe in other sectors. For example, organized collection reduces the number of heavy truck miles and emissions.

The benefits and burdens of the solid waste management system must flow equally to everyone. The MPCA is committed to ensuring that pollution does not have a disproportionate impact on any group of people. This is a principle of environmental justice. Decisions about siting solid waste facilities should include all stakeholders. Translating educational materials into the languages spoken in the TCMA is important, as is including people who have not traditionally had a voice in decisions that affect them.

EPR presents great opportunities for shifting the burden of management from the counties and cities to the producers. Product stewardship and extended producer responsibility (EPR) is a policy approach to extend the producer's responsibility to include environmental impacts from all stages of the product's life cycle. This includes incentives for durability, reusability, toxicity reduction, and finding the highest and best use of materials and waste. In current practice, product stewardship requires manufacturers to share in the physical and financial responsibility of collecting and recycling products at the end of their useful life.

Minnesota has several product stewardship laws for paint and electronics and has been a leader in product stewardship efforts. Other states such as Maine, Colorado, Oregon, and California have adopted extensive EPR programs from which we can learn.

Goals and policies

The following goals and policies provide the basis for improving solid waste management in the TCMA. For the purposes of this section, "goal" is defined as a desired result; "policy" is defined as a course of action adopted by a government, party, business, or individual.

Goal 1: Protect and conserve. Manage materials in a manner that will protect the environment and public health, reduce GHGe, conserve energy and natural resources, and reduce toxicity and exposure to toxics.

The goal of the WMA is to protect Minnesota's land, air, water, and other natural resources, and public health by improving waste management to serve the following purposes: reduce the amount and toxicity of waste generated; increase the separation and recovery of materials and energy from waste; and coordinate the statewide management of solid waste and the development and financial security of waste management facilities, including disposal facilities. This goal recognizes a prevention-based approach to waste management to reduce, to the extent feasible, adverse effects on human health and the environment.

Policy 1: Challenge current waste management practices to identify materials with opportunities for management methods that fall higher on the waste hierarchy.

Policy 2: Focus on reuse and prevention. Apply SMM framework to decision making to decrease the environmental impact. Hold manufacturers responsible to design for repair, reuse, and recyclability.

Policy 3: Support and strengthen reuse and recycling markets to increase demand for reusables and recyclables.

Policy 4: Ensure systems are in place that foster the growth of organics recovery.

Policy 5: Promote recovery of energy when disposing of waste through WTE.

Policy 6: Strengthen compliance with cornerstone environmental statutes.

Policy 7: Increase public participation in decisions that impact them with special emphasis on Environmental Justice.

Policy 8: Account for all phases of a material's life cycle, including environmental and economic impacts.

Policy 9: Reduce toxicity by working with manufacturers to eliminate the use of hazardous components in packaging and products.

Goal 2: Whether public or private, hold all members of the solid waste system accountable for meeting the goals of this MPP.

To achieve the aggressive goals established in this MPP and by the Legislature, all parties in the solid waste system must be held accountable, and the MPCA must provide oversight of the system. Cities and counties must ensure the systems are in place for the proper management of waste, emphasizing managing it higher on the hierarchy. Generators must use the tools provided to properly manage the waste they create and to reduce the amount of waste created. Haulers and facility operators must ensure that waste is managed properly upon collection and look for opportunities to shift materials up the hierarchy.

Policy 10: Support the collection of reliable data to ensure that all parties in the solid waste system accurately measure progress toward achieving the objectives of this MPP.

Policy 11: Ensure that demolition debris and industrial wastes are categorized and are managed according to the applicable Statutes and Rules. Measure more accurately the composition of non-MMSW generated in the TCMA and being landfilled in Minnesota.

Policy 12: Increase opportunities for cities to implement organized collection for recycling and MMSW.

Policy 13: Cities and counties hold haulers and businesses in their communities accountable for managing waste according to the MPP via their licensing agreements.

Policy 14: The MPCA provides oversight of the system by holding counties and private businesses accountable. The Legislature holds the MPCA accountable for meeting waste management goals.

Policy 15: Hold producers responsible for the treatment or disposal of post-consumer products.

Policy 16: Set goals and performance standards following consultation with stakeholders on product stewardship.

Goal 3: Systematically and steadily promote more regional cohesiveness and collaboration to foster a synergistic, regional approach.

To achieve our goals of reducing the amount of solid waste generated and recycling/composting 75% of our solid waste by 2030, it is imperative that the counties work in concert and avoid duplication of efforts. This includes consistent uniform ordinances, greater collaboration between staff and leaders in each of the seven metro counties, and planning for facilities through a regional lens.

Policy 17: Develop model ordinances that could be enacted by all counties.

Policy 18: Local governments work together to develop a consistent ordinance structure that allows private entities to smoothly operate across the region.

Policy 19: Promote efficiencies and cost effectiveness and reduce environmental costs in the delivery of integrated solid waste management services.

Policy 20: Assure elected county officials understand the importance of supporting and maintaining WTE facilities.

Part three: MPP 2022-2042

The MPP provides guidance to all stakeholders responsible for TCMA solid waste management and was developed in accordance with the requirements of Minn. Stat. § 473.149, subd. 2d. for a land disposal abatement plan. It describes broad regional system objectives, a landfill diversion goal, and the strategies necessary for solid waste programs and services to meet the region's needs for the next 20 years. The MPP recognizes the inter-county complexity of the TCMA solid waste system and the value of and need for regional approaches. Specific details associated with implementing the MPP on a local level will be refined in the CSWMPs and any regional plan developed by the metropolitan counties. The MPP identifies where specific stakeholder actions are necessary to implement the objectives and strategies.

The MPP:

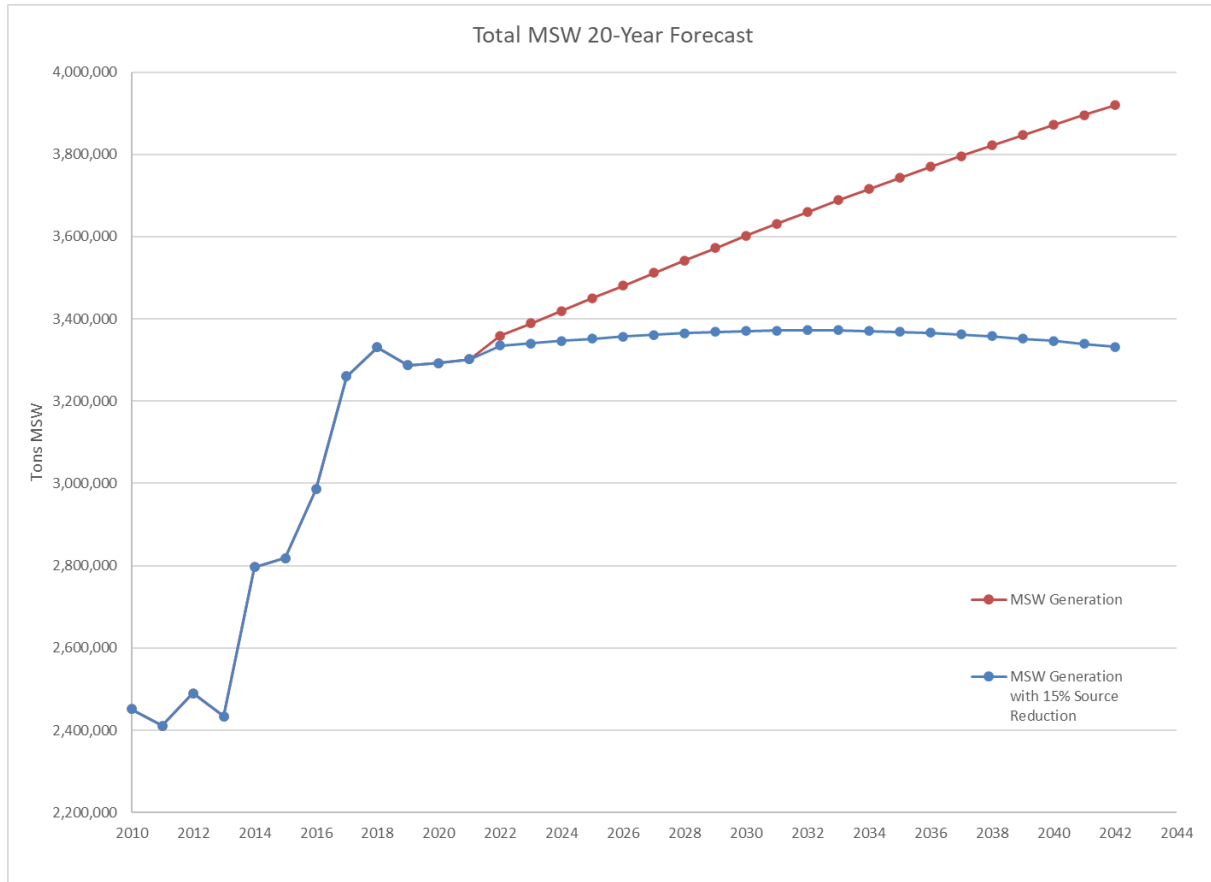
1. Places emphasis on the upper end of the hierarchy (waste reduction, reuse, recycling, and organics recovery).
2. Establishes objectives for each waste management method.
3. Achieves full use of resource recovery facility capacity and implements the Restriction on Disposal (ROD) of MMSW requirements.
4. Establishes a goal to minimize the amount of metro MMSW land disposal that will occur.

The MPP includes numerous strategies for reducing waste and increasing recycling and organics recovery. All stakeholders in the system have roles and responsibilities to ensure successful implementation of these strategies. A table that identifies each strategy is provided in Appendix G.

Regional waste generation forecast

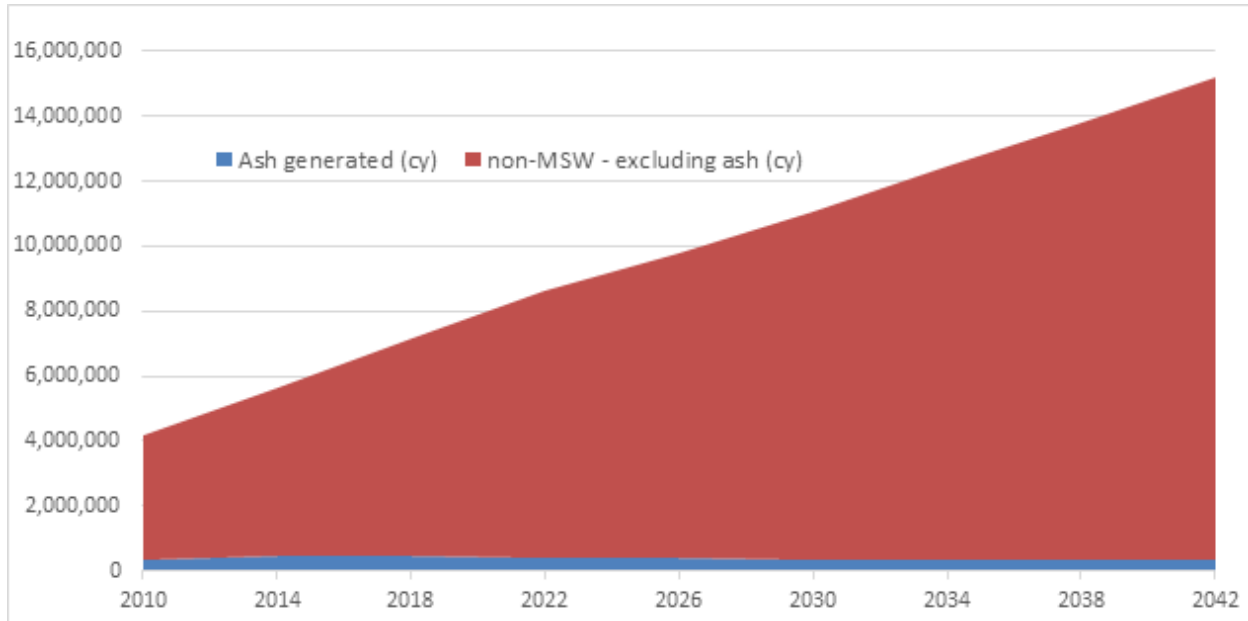
In 2021, the TCMA generated 3.3 million tons of MMSW. Metro MMSW generation is forecasted to grow to 3.92 million tons by 2042 (see Figure 3). The figure also includes the 15% reduction strategy to help visualize the intent of source reduction. Achieving a 15% reduction from the forecast amount will require waste generation to remain equal to the current generation going forward. This forecast does not include the non-MMSW waste stream (i.e., construction, demolition, and industrial wastes). The MMSW forecast was generated using waste generation amounts from 2010-2021. This period was chosen because the 2007-2009 recession created a new baseline.

Figure 3. Total MSW Generation Forecast with the 15% source reduction objective



Non-MSW like demolition debris, contaminated soil, and industrial waste continues to experience growth in generation of industrial and demolition debris (see Figure 4). It is forecasted that annual generation of non-MSW will increase by 6,000,000 cubic yards over the next 18 years. Reduction of non-MSW is vital to reach environmental goals in the future. Ash generation is forecasted to remain consistent over the next 20 years. Reducing or ceasing operations at Hennepin Energy Recovery Center could lower the amount of ash being land disposed but would greatly increase the need for MMSW disposal over the life of the plan.

Figure 4. Non-MSW and Ash Forecast



Sustainable Materials Management (SMM)

SMM overview

SMM identifies the best use and management of materials, considering the environmental impacts throughout the life cycle of materials. The major stages in a material's lifecycle are:

- Raw materials extraction
- Product manufacturing
- Product use
- Transportation
- End of life management

To protect the environment and human health, an understanding of “waste” must broaden. The impact of materials and waste include GHG emissions, pollution to land, air, and water, and resource depletion. These impacts happen throughout the entire life cycle of a product. All phases of that cycle must be considered, not simply end of life.

SMM includes traditional solid waste management. Management of the upstream impact of materials and the toxic chemicals used to manufacture those materials are also considered. The MPCA and EPA concede that an SMM approach seeks to:

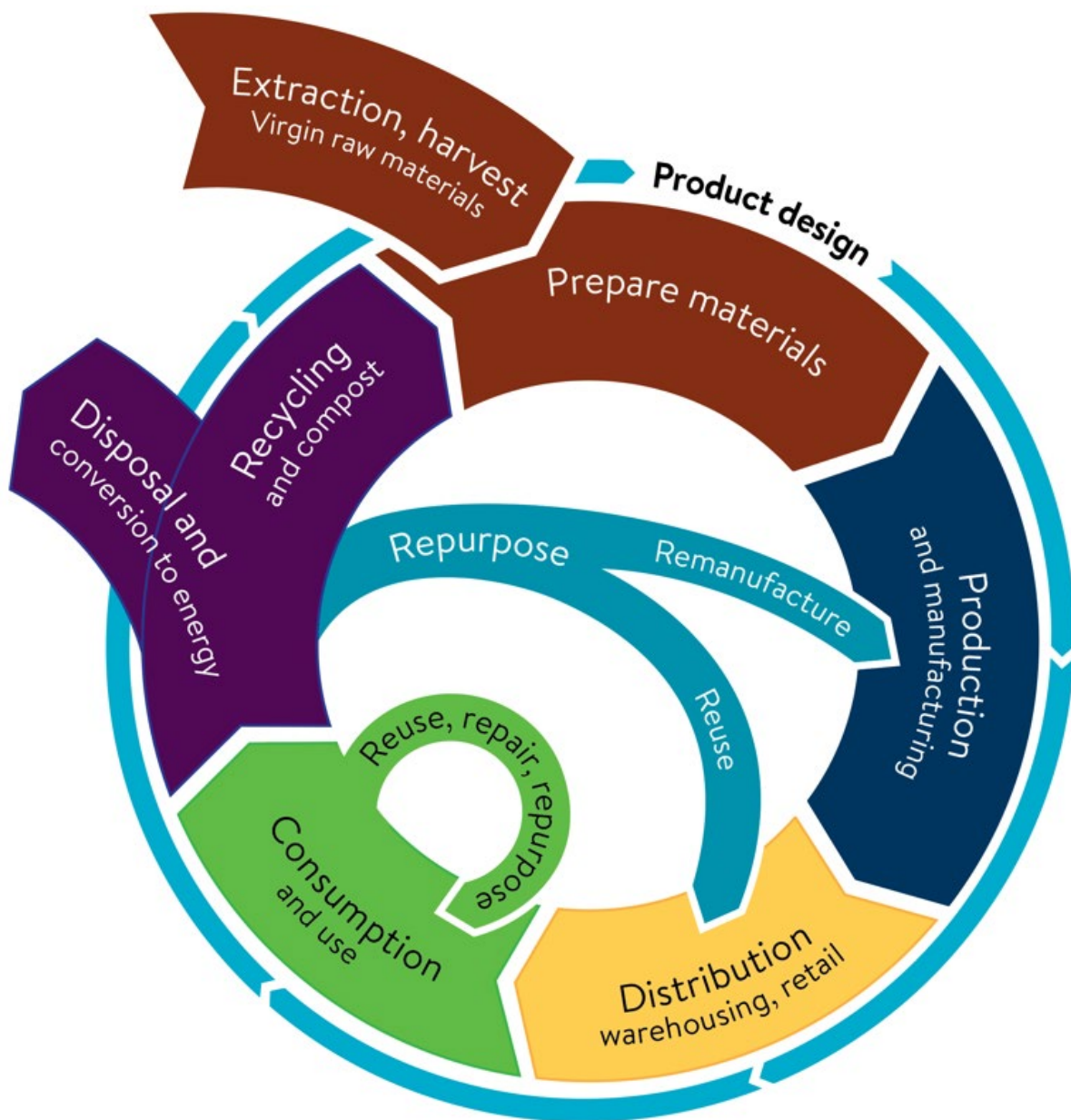
- Use materials in the most productive way with an emphasis on using less.
- Reduce toxic chemicals and environmental impacts throughout the material life cycle.
- Ensure we have sufficient resources to meet today’s needs and those of the future.

An SMM approach invites more interested parties involved throughout the life cycle of a product to provide perspective and provide a broader scope of impact. These potential partners include, but are not limited to, primary chemical formulators, academic researchers, brand owners, retailers, product designers, and consumers.

Life Cycle Assessment

SMM uses Life Cycle Assessment (LCA) to inform decision-making. LCA is a way to model the environmental impacts associated with a material or process from resource extraction through end-of-life management. This yields information on environmental impact indicators, such as GHGe, toxicity, and acidification. These metrics help policymakers focus efforts on high leverage opportunities. At this time, the most widely used environmental indicator is GHGe. According to the EPA, materials can account for up to 42% of GHGe in the U.S. Most of that impact happens in the production lifecycle phase. In alignment with the waste hierarchy, the least environmentally impact action is to produce and use less.

Figure 5. LCA: a methodology for modeling the environmental impacts of a material or product from raw material extraction through end-of-life management



LCA modeling can compare environmental impacts associated with one material versus another. LCA modeling can also compare the impact of different management methods of the same material. Designers and manufacturers can use LCA modeling to determine the life cycle phase(s) in their products' lifecycle with the greatest specific impacts (e.g., water, air, and human health). For instance, electronics manufacturers may find that the use phase impacts are the energy usage by the consumer. The manufacturer can design the product to use less energy. They could also design the product to last longer and be repairable by producing replacement parts.

The ability to track and report on the environmental impacts of our materials management system is critical. Measuring repair activities as a waste reduction activity will be important to support this activity.

SMM for recycling

If Minnesotans recycled and composted all waste, GHGe would be reduced by only 3%. Recycling is important but recycling alone is insufficient. Moreover, material attributes like recyclability do not necessarily correlate with the greatest reduced environmental impacts. It is important to keep in mind that if something is marketed as “compostable” or “recyclable” that does not necessarily mean that it provides the best environmental outcome. For example, a steel coffee can is recyclable, so it may seem like the best packaging choice. LCA modeling comparing steel cans to other coffee packaging types shows that is not the case. Foil pouches result in fewer GHGe, despite having no material end market. That said, recycling plays an important role in the waste management system. If light weight packaging brings the greater environmental benefit, we should support developing recycling markets for packaging like foil pouches. Volatile recycling markets require innovative solutions to remain relevant.

SMM tends to favor prevention and reuse yet also reaffirms the importance of recycling. Recycling is commonly lauded for its ability to decrease demand for landfilling. However, there is a greater demonstrated environmental benefit in recycling when the byproduct alleviates the need to extract virgin materials by mining. The environmental degradation from extraction, energy use during processing, and transportation often tip the scales in favor of recycling. Identifying the highest and best use for each material is the primary consideration under this framework.

SMM and toxicity

Using an SMM approach also sheds new light on the use of toxic chemicals in manufactured materials. The policy and purpose of the Waste Management Act calls for a reduction in the toxicity of waste generated. Reducing toxics in the products we purchase reduces the overall toxicity of waste generated. In the past, the State of Minnesota Office of State Procurement prioritized recycled-content products on merit of recycled content alone. For example, a problem with the statewide flooring contract emerged when the vinyl flooring with recycled content was found to contain legacy heavy metals. The contract now restricts recycled content containing resilient flooring products unless they are third-party certified to conform with NSF/ANSI Standard 332: Sustainable Assessment of Resilient Floor Covering. This highlights the need to look at all material properties, not just recyclability.

Solid waste abatement objectives

Tables 1 and 2 set specific quantifiable objectives for abating the need for and practice of land disposal for the TCMA region over the next 20 years, pursuant to Minn. Stat. § 473.149, subd. 2d. Landfill abatement is best achieved through an integrated solid waste management and SMM approach. Therefore, the statute requires “objectives for waste reduction and measurable objectives for local abatement of solid waste through resource recovery, recycling, and source separation programs.”

Table 1 defines the waste reduction objectives by percentage and tons reduced from forecast expectations. The forecasted trend in waste generation accounts for much of the reduction that

currently is occurring such as light weighting of materials. This plan calls for a 15% improvement on that trend-line following many comments that state that the waste reduction goal needs to be much more aggressive.

Table 2 defines the objectives by percentages of waste generated, and Table 3 defines the objectives in tons. Table 3 shows the objectives in tons based on the current waste forecast in this MPP and is subject to change if the forecast is updated. Several factors were considered when setting the objectives, including:

- Current statutory goals
- The regional waste forecast highlighted at the beginning of Section 3.
- Metro counties will achieve the 75% recycling rate as laid out in Minn. Stat. § 115A.551 by 2030.
- Total compliance with Restriction on Disposal (ROD) is assumed.
 - Additional capacity at any given WTE facility will be used regardless of originating county for MMSW.
- Landfilling is assumed to be a minimum of 5% given the need to manage non-processible waste, bulky items at WTE facilities, and residuals and rejects from recycling and composting facilities.
- Baseline is the last year of observable data (2021) since the latest year of data represent the best data available to the counties and their current education and diversion practices.

Currently, Hennepin County is the sole provider of MMSW to the Hennepin Energy Recovery Center (HERC) facility while Ramsey and Washington split the capacity of the Ramsey-Washington Energy Center. Each of these facilities is assumed to be at capacity due to ROD compliance. Dakota County will continue to send MMSW to the Red Wing processing facility, estimating 10,000 tons in 2020 and 13,000 tons in all subsequent years.

Meeting the objectives will reduce GHGe, conserve resources, reduce land disposal, and recover energy. The goals for recycling, organics, WTE, and landfilling do not change after 2030. The 75% recycling goal will be difficult to reach, so it will remain a relevant target beyond 2030. To continuing making progress, it is prudent to widen our regional focus to include waste reduction, given that the greatest environmental gains occur through reducing waste. Reduced upstream impacts contribute to a common goal with the recycling rate. The Hennepin County Board recently issued a resolution to create a plan for closing the Hennepin Energy Recovery Center sometime between 2028 and 2040. Due to the uncertain timeline, the MPCA is not revising the assumptions in the objective tables. However, history shows that the closure of a WTE facility leads to increased landfilling. MPCA expects that currently projected waste going to HERC would go to landfills if the facility closes. A robust plan to divert additional material and an influx of resources to improve programs and infrastructure may reduce the volume of waste that would be landfilled if HERC is closed. Without aggressive programs to replace HERC an additional 365,000 tons of material would be landfilled per year, which is equivalent to the largest landfill in Minnesota.

Table 1. Waste reduction system objectives in percentages and tons (2021-2042)

Management method	Current system (2021)	2025	2030	2036	2042
Waste Reduction	0%	2.9%	6.4%	10.7%	15.0%
Waste Reduction Tons	0	98,577	231,557	403,919	587,984

Table 2. MMSW management system objectives in percentages (2021-2042)

Management method	Current system (2021)	2025	2030	2036	2042
Recycling	28.6%	36.9%	47.4%	47.4%	47.4%
Organics	16.6%	21.5%	27.6%	27.6%	27.6%
WTE	21.4%	24.0%	20.0%	20.0%	20.0%
Landfill	33.4%	17.6%	5.0%	5.0%	5.0%

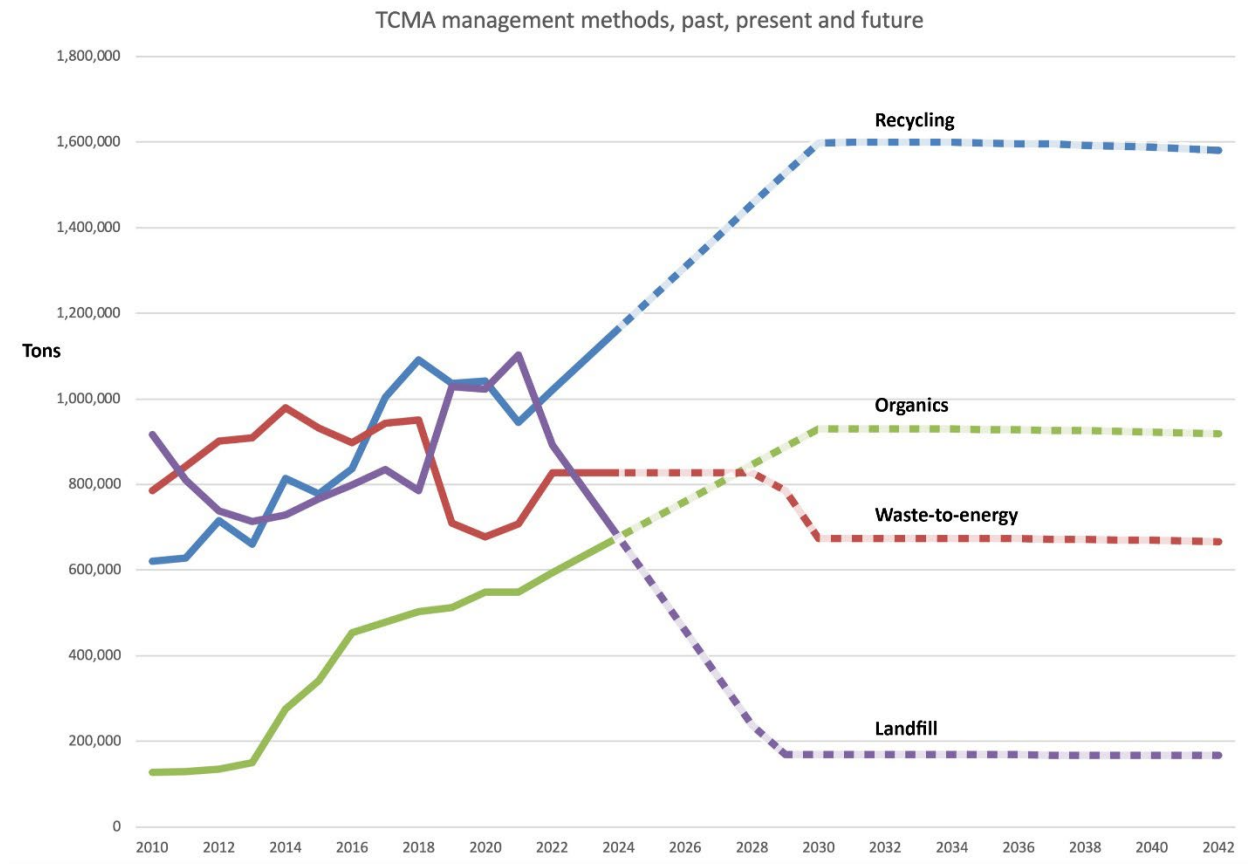
The table above shows the percentages of how waste is managed currently and projections for future years. The data under 2021 is from the latest SCORE report. Projections are based on the assumptions found in Appendix F.

Table 3. MMSW management system tonnages (Based on objectives in Table 2 in thousands of tons [2010-2030])

Management method	Current system (2021)	2025	2030	2036	2042
Recycling	944,968	1,237,436	1,598,496	1,596,691	1,580,830
Organics	547,931	719,166	929,331	927,801	918,102
WTE	707,268	828,000	674,087	673,198	666,382
Landfill	1,102,165	567,014	168,522	168,299	166,595
Total	3,302,332	3,351,615	3,370,437	3,368,899	3,331,909

The table above shows the same data and projections in thousands of tons to give context to the percentages in Table 3 and illustrates the amount of waste that needs to be managed in the TCMA.

Figure 6. TCMA MMSW management methods: past, present, and projection (SCORE and Certification Reports)



Evaluation of the system objectives

The MPCA will evaluate progress toward achieving all the system objectives through the [annual SCORE Report](#) submitted by the counties every April. The MPCA recognizes the challenges associated with measuring progress and measurement in general. Measuring waste reduction has posed challenges for years. See the [Environmental impact target section](#) for a discourse on a more robust way to measure environmental impact. Using data the counties currently provide, the MPCA has begun to calculate the environmental impact in the annual SCORE report. MPCA intends to continue to improve those efforts to better quantify the impacts of county programs on the environment. The environmental impact target does not require the counties to submit additional information to the MPCA. The MPCA will continue to work with local governments, haulers, and others to assure the data collected is necessary and relevant and will continue to collect data on a statewide and regional basis. The MPCA has historically used the SCORE Report as the method of tracking annual progress toward the objectives and has used the Solid Waste Policy Report to recommend needed policy changes to the legislature.

Emphasis on the upper end of the hierarchy

Handling materials using methods on the upper end of the hierarchy should be measured and reported. This includes an emphasis on waste reduction and reuse. There has been an emphasis on the legislative recycling goals, and while recycling plays an important role in the waste management system, measurement of success should be based on all impactful efforts. Reduction and prevention need to be organized and implemented through the TCMA.

Aggressive objectives for waste reduction and reuse, recycling, and organics recovery

All stakeholders, including the MPCA, will be held accountable for meeting these objectives. The MPCA believes the objectives are achievable, but to reach them, the TCMA will need new tools, enhanced infrastructure, and increases in funding. The current rate of increases in recycling and compost will not get the TCMA to the 75% recycling objective. New approaches to meeting the goal and other objectives in the MPP are needed for environmental protection.

Waste reduction and reuse

According to the EPA, waste prevention is the most environmentally preferred strategy to reduce impacts. Waste reduction and reuse methods are the most effective waste prevention strategies. Meeting waste reduction and reuse objectives will reduce the amount of MMSW that needs to be managed. Forecasting the projected MMSW generation for each county will deduct the tons of material reduced or reused.

Benefits of achieving success

In 2021, the TCMA achieved a 45.2% combined rate for traditional recycling and organics diversion. Minnesota would benefit from exploring additional methods to achieve the intended environmental and human health outcomes of the 75% recycling goal. Environmental and human health impacts of management methods should be considered. Minnesota needs to modernize data collection, measurement, and reporting. Other priorities should include identifying the highest return on investments in how staff time is allocated, introducing the most impactful policy changes, and investing in strategic infrastructure needs.

Oftentimes, waste reduction and reuse efforts can be cheaper than handling the same materials as waste. Incentivizing and tracking waste reduction and reuse separately ensures that county partners receive recognition for those efforts. Some counties have reported prevention and reuse in their CSWMPs and programming. Historically, reuse activities have counted towards the recycling rate via SCORE reporting.

An analysis of the 2018 SCORE report “recycling” data for accuracy revealed that, statewide, 79 of 87 counties reported reuse activities. This illustrates the need for counties to be recognized for investing in reuse. In response, the MPCA modified the 2021 SCORE reporting form to track reuse activities. Prevention and reuse programming result in fewer emissions. They are not and should not be treated as equal to recycling. The state should transition to a reporting structure that documents the increased climate and other pollution reductions from handling materials using methods higher on the waste management hierarchy.

Environmental impact target

To prioritize waste reduction and solid waste management with environmental and human health benefits, MPCA is setting an environmental impact target for TCMA counties based on full LCA. Under this environmental impact target, weight-based accounting for waste reduction, reuse, recycling, WTE, and landfill disposal is translated into GHGe generated or avoided. In this way, counties still report and work to meet their 75% recycling rate goal, but the environmental impact target documents overall changes in GHGe based on all county efforts and programming. By tracking progress with GHGe (currently the most accessible proxy for environmental impact), in addition to the recycling rate,

counties can invest in upstream activities, report on those efforts, and reach their environmental impact target through waste reduction and reuse programming as well.

The environmental impact target is defined by calculating the emissions avoided if the county were to reach the materials management goals set forth in the Metro Policy Plan by 2030. This means totaling the emissions associated with:

- Achieving a 15% waste reduction goal.
- Achieving a 75% recycling rate goal as established by the Minnesota Legislature.
- Achieving complete compliance with Restriction on Disposal, resulting in WTE facilities capturing most of the remaining materials.
- A minimum of 5% of material sent to landfill.

The value of setting a comprehensive environmental impact target that counts emissions reduction from the entire materials management system as all strategies become opportunities for meeting the target. This means a county can choose to do more waste reduction or reuse to reduce their GHGe more significantly and progress further on meeting their environmental impact, than solely focusing on recycling to achieve their 75% recycling rate. If a county is already meeting or exceeding their environmental target, the MPCA would recommend adjusting their target to be more ambitious and support continued work on reducing impacts from materials being handled. County-specific calculations will be made using 2021 SCORE data.

Each county will be able to work with their MPCA Planner to review their current progress and identify options for meeting their environmental impact target, determining which programs will have the greatest benefit. For example, counties will be able to see how the amount of emissions reduction achievable by focusing on food rescue versus composting. The target will not replace the 75% recycling goal already in statute.

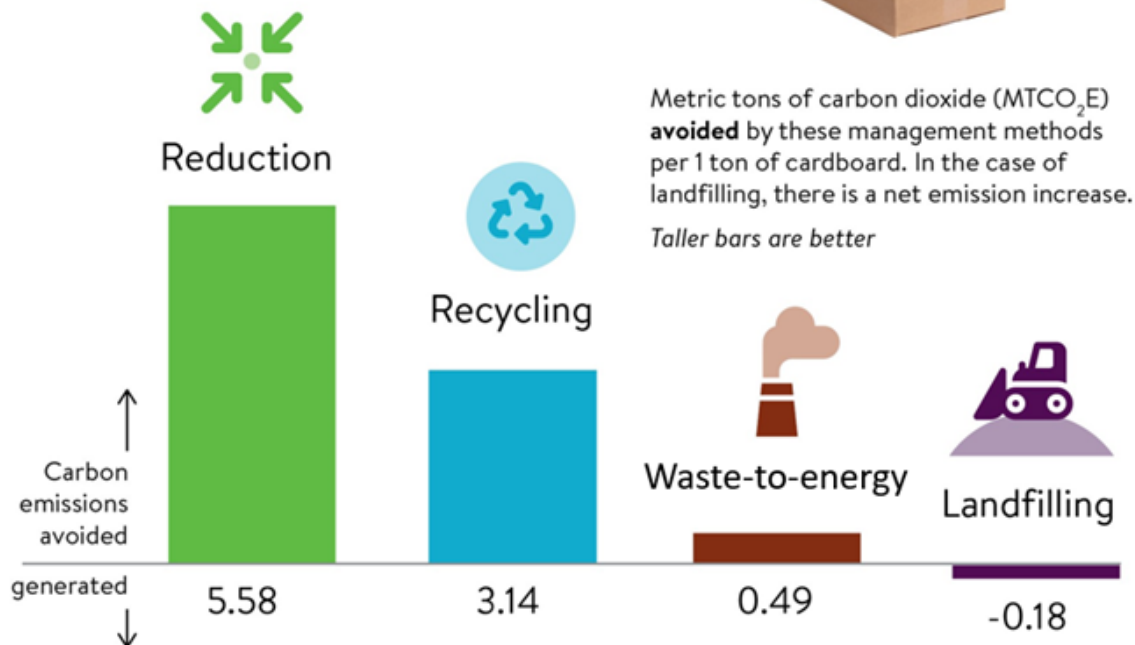
The following example, using data from Scott County, illustrates how the environmental impact target will be implemented and shows two potential scenarios. In the first scenario, Scott County meets the 75% recycling rate goal by 2030 as required by the Minnesota Legislature. The rest of their materials are handled business-as-usual, meaning the county didn't implement additional waste reduction, reuse, or WTE strategies. The total GHGe savings is 234,037 metric tons of carbon dioxide equivalent (mtCO_{2e}).

In the second scenario Scott County maintains their current 55% recycling rate until 2030. However, they invest in waste reduction strategies and reduce materials by 10%. The county accomplished this by focusing on preventing food from going to waste, reducing paper use, and eliminating a small number of single-use items and replacing them with durable reusable systems. The total GHGe savings is 224,060 mtCO_{2e}. In the second scenario, only 10% of the waste is being source reduced. Yet, compared to a 20% increase in recycling in the first scenario, the amount of GHGe is very similar. How materials are managed makes a big difference. Scott County can achieve nearly twice the environmental and human health benefit by reducing materials than recycling in this scenario. This affirms the waste management hierarchy and emphasizes the importance of first reducing, then reusing, and then continuing to manage materials down the hierarchy as needed if the first two strategies are not feasible.

The MPCA staff will work with counties to assess their options for meeting the environmental impact target using an interactive tool based on EPA's WARM. The MPCA will be able to model county-specific scenarios for materials management using data that the counties currently provide. The MPCA will not be requesting additional information from the counties to track this new goal.

Figure 7. Carbon emissions impact of different management types

Example: Recycling one ton of cardboard has a significant **carbon emission** benefit compared to incineration or landfilling. Reducing cardboard use (i.e making the box lighter or replacing it with a reusable system) has an even greater benefit.



Strategies and best management practices to achieve the objectives of the MPP

There are various approaches to meet the system objectives of this MPP. The TCMA waste management system is governed by multiple public and private entities, and a variety of strategies provide the flexibility to meet the needs of each program or situation. The state, counties, cities, businesses, nonprofits, communities, and residents all have specific roles and responsibilities for improving solid waste management. To minimize conflicts and inefficiencies, it is important to select strategies that align public and private objectives, to work together to identify necessary changes to existing strategies, and to indicate where new strategies are needed. Counties can proposal alternative strategies if they see fit. Proposals must achieve comparable objectives and will be subject to agency approval. The point value of alternative optional strategies will be determined by the MPCA. Many of these strategies will require investment and additional funding. The MPCA will advocate for additional funding for the system when appropriate and asks the counties to do the same.

County solid waste plan evaluation point structure

Each topic below includes key strategies that will be instrumental to reaching the objectives of this MPP. Certain strategies are required to be incorporated into CSWMP. Optional strategies are assigned a point value. The counties will pick from any of the optional strategies to reach a minimum of 75 points.

The strategies are weighted by difficulty and by management strategy in accordance with the Waste Management Hierarchy. This places an incentive on environmental and human health outcomes while

allowing counties the flexibility to design and adapt their solid waste programs. The various optional strategies are worth 4-9 points. The optional strategy point total is 194 points, and the counties must have a minimum of 75 points for their CSWMP to be approved. Appendix G houses a strategy spreadsheet for counties to use in designing their solid waste plan.

Costs implications of strategies should be estimated by county staff when considering feasibility of implementation. The MPCA is committed to achieving the objectives established in this MPP and intends to assist with strategy implementation as noted below.

Improving the reliability of the data

The MPCA strategic plan calls for the Agency to “accelerate the availability of data and information in a self-service format.” From a solid waste perspective, one of the best ways to accomplish this is to ensure that data is consistently collected through the most reliable sources and that all waste and waste reduction be tracked. The MPCA and the counties have historically focused on only MMSW. Little attention has been directed toward the measurement of demolition debris and industrial waste (ISW).

The SCORE program created a strong framework for tracking progress toward the goals and objectives of the WMA. Over the past 30 years, there have been some problems identified with traditional measurement methods. Like the MPCA and counties, SCORE historically focused on only MMSW, with no data on ISW reported or requested. In addition, the success of county programs has been measured through a weight-based system that treats all material tons equally.

Our improved ability to understand the environmental and human health impact of different material types has exposed the limitations of weight-based measures. Weight-based measures are important but have limitations. Data analysis can be enhanced by collecting additional data in addition to the weight-based measures. A moving target of what counts as recycling has added to inconsistencies. In recent years, yard waste and compost have been added to the recycling side of the ledger.

Ultimately, a large focus has been placed on recycling in county programs to the detriment of waste reduction and reuse. As discussed above, the greatest environmental and human health benefits are not realized through recycling. Improved reporting provides the information needed to understand how to achieve better environmental and human health outcomes. The added reuse component to the SCORE report captures the reuse activities within counties. The intended outcome is to fill a data gap that has existed since the inception of the program in the early 1990s. Hauler reporting requirements were added in 2016, but inconsistent compliance from the haulers, inconsistent support from counties, and staffing issues at the MPCA have led to lax enforcement and limited follow-up.

As previously mentioned, SCORE is only focused on MMSW, with no requirements to track other waste streams. Landfills report amounts of demolition debris and industrial waste annually. Yet, there is limited data regarding recycling rates of those two material streams. We also have limited data about non-MMSW landfill diversion such as recycling. To improve the management of non-MMSW materials, it is critical to have a better reporting for this waste sector. Despite these challenges, there are several strategies that can be pursued that will improve the management of data in the TCMA.

Required strategy:

The strategy listed below is required to be incorporated into the CSWMP because it is relatively simple or has significant environmental benefit.

1. **Increase compliance with hauler reporting per Minn. Stat. § 115A.93.** Compliance with hauler reporting in metro counties has been mediocre. In 2021, these compliance rates were between 45% and 68%, within the TCMA. There are several challenges regarding the compliance numbers. Some

haulers may be misreporting to counties. In these cases, counties should hold haulers accountable for completing their reporting accurately. Reliable hauler reporting provides a benchmark for the objectives of this MPP. Hauler reporting is a shared responsibility for the state and county. Cooperation from counties to maintain accurate license lists will allow the MPCA to trust the information collected. Both the state and counties benefit from the collection of this data. Sharing in the responsibility ensures accuracy and efficiency. Best practices in the promotion of compliance with hauler reporting include:

- Sending quarterly reminders to all licensed haulers
- Reviewing submitted data in ReTRAC
- Active communication and follow-up regarding incorrect or missing hauler data
- Requiring proof of data submittal prior to license renewal
- Cleaning up the regional license data to ensure that haulers are truly operating in the counties

Improved compliance and data integrity would facilitate the mapping of waste flow in the TCMA from origin point to end destination. We need to understand the breakdown of residential and commercial tonnage and the scope of material exports. Dakota County demonstrates that improving compliance with the haulers is possible when county staff are persistent. Compliance rates for haulers in Dakota County is 68%, compared to 45-55% in other counties in the metro.

2. **Provide required county reporting.** Ensure the MPCA receives all data in the state-issued format. Counties should collaborate on creating best data practices for soliciting data from organizations. The MPCA and counties shall standardize waste composition sorts for consistency. SCORE, certification, and the metro county annual reports are also targeted in this strategy.
3. **Require waste composition study at least once every 5 years at all landfills that are located within your county.** Waste composition study data helps identify important trends on waste types and quantities. Landfill information will help policy, planning, and implementation, such as assessing capture rates. Counties with landfills receiving TCMA waste should introduce an ordinance to reinforce this requirement. Waste composition studies shall include MMSW, ISW, and demolition debris disposal streams. The MPCA seeks to assure all landfills receiving metro waste operate with equal requirements. Dakota County ordinance no. 110 establishes a requirement for waste composition studies to be performed every five years at all land disposal solid waste facilities. Performing waste composition studies on a regular schedule will help determine generation rates, aid in capture rates, and provide material type breakdown.

Optional strategy:

The following strategy is optional and may be incorporated into a CSWMP. Each strategy has been assigned a point value, which is added to the total amount of points the county must achieve for approval of their CSWMP by the MPCA.

4. **Improve recycling data collection at businesses within the county.**

Point Value: 7

Commercial buildings required to recycle in Minn. Stat. § 115A.151 should report their recycling tonnages to the county in which business is conducted. Exempted businesses can provide documentation of their licensed hauler's reports to the MPCA. Develop an ordinance that requires businesses to assign a recycling manager. The recycling manager shall report weight, material type, and management method for self-hauling. Self-hauling shall include contracted services outside of licensed haulers. Alternative to development of an ordinance would be developing a surveying approach. Create a survey method resulting in a statistically significant number of annual responses.

Review and analyze to assure reliable commercial data are being collected. Carver County conducts an annual survey of businesses to collect data from generators who self-haul. Replicating this approach would fulfill this strategy.

State-led strategies:

The following strategies are the responsibility of the MPCA and will support the efforts by the counties.

5. **Require waste composition study at all landfills.** Understanding the composition of MMSW, demolition debris, and ISW streams is critical to perform GHG calculations and to quantify other environmental impacts. Resource recovery facilities are currently required to conduct waste composition studies every five years. This requirement should be extended to all disposal facilities for consistency and equal treatment, and to have comparable information from the data. Waste composition study data provides important trend information on waste types and quantities. The addition of landfill information will help policy, planning, and implementation efforts, such as assessing capture rates. The State will work to require waste compositions across the state with the express purpose of obtaining better data.
6. **Develop appropriate and consistent waste reporting systems to measure all waste.** Measuring and reporting all waste (including MMSW, demolition debris, and ISW) through annual reporting is necessary for the state and counties to effectively manage waste to its highest and best use. Alternative measures to weight-based reporting that encompass the environmental impacts of a material should be researched and considered. This could include using SMM tools such as capture rates and human health impact data that focus more on the impact of a material throughout its life cycle. The MPCA will continue to build on initial efforts to report on the environmental and human health impacts utilizing the data that counties currently submit. High quality data will result in the development of strong statewide policy. Developing a system will support evidence-based decision making for future laws, policies, rules, and program planning. Commonly recovered materials from demolition sites are concrete, shingles, wallboard, carpet, and lumber. A robust system for evaluating these materials will help counties and the state prioritize our efforts.
7. **Continue to explore options for growing the agency's LCA data, modeling, and resources to better support counties in measuring and tracking environmental and human health impacts.** This includes translating county solid waste measures from weight-based measures to GHGe and other environmental and human health impacts and periodically updating the state's consumption-based emissions inventory to complement the current in-boundary emissions inventory. It also includes incorporating environmental impact data across agency materials management and solid waste management programs to identify priority materials and strategies to target the highest-impact categories.
8. **Continue to engage with counties in the development of an environmental target that better accounts for and incentivizes programming and actions higher on the hierarchy.** The recycling rate serves a specific purpose and there is an opportunity for the MPCA to evaluate and develop an approach to represent county SMM efforts more holistically.

Regional solutions

The TCMA counties do not have a formal regional waste management district. Yet, it is practical to implement certain strategies at the regional level. Collaboratively designing and modernizing a materials management system will benefit all TCMA counties.

Required strategies:

The strategies listed below are required to be incorporated into the CSWMP because they are relatively simple or have significant environmental benefit.

9. **Participate in an annual joint commissioner/staff meeting on solid waste.** This annual or semi-annual meeting will provide an opportunity to get a county commissioner and lead staff from all seven counties together to discuss relevant waste topics. The purpose of this strategy is to help ensure that all seven county boards understand the challenges that each county faces, learn from the CSWMP of other counties, and examine places to collaborate to meet the regions solid waste goals. MPCA will take the lead in organizing this meeting at the inception.
10. **Commit to standardized outreach and education.** The seven counties in the TCMA must coordinate on their recycling messaging to avoid confusion among residents. To coordinate, each county should attend the Recycling Education Committee (REC) meetings and use REC communications calendars. If a deviation is made from the REC materials, the TCMA counties all must agree. Counties should utilize or adapt the MPCA-designed library exhibits on food storage tips and the impacts of food choices to educate residents on preventing food waste. To create regional consistency, counties should acknowledge organics recycling and food scraps are both in use in different areas of the TCMA. Counties should coordinate to reduce confusion associated with the use of different terminology within the region. Outreach and education efforts should include how to handle materials not accepted in curbside collection bins. These materials should include lithium-ion batteries, scrap metal, and other materials accepted by environmental centers and household hazardous waste drop-off sites.
11. **Engage in efficient and value-added infrastructure planning.** TCMA counties should seek to eliminate system redundancy by sharing and co-developing CSWMP for managing all material types. This collaboration includes the use of emerging technologies that have the potential to reduce or manage waste higher on the waste hierarchy and that have the potential to impact materials and processes that have a greater environmental impact. TCMA counties should foster a space for counties and private partners to work cooperatively and not competitively to build system resiliency. More processing capacity to assure materials with useful life are routed appropriately is imperative. Food-derived composting and food rescue are high priorities for infrastructure planning. MRFs face pressing issues such as overflow of materials and a need for fire suppression.
12. **Develop plans for large facility closures to reduce landfill reliance.** The plans must include:
 - Develop a plan that identifies alternatives that can manage the waste currently managed at the facility. This plan must include landfills, transfer station infrastructure, recycling and composting infrastructure and other logistical solutions to manage MMSW.
 - Identify a plan to push waste up the hierarchy including an effort to prioritize reduction.
 - Issue a letter assuring waste to one or more of the alternative locations suitable as part of the CON process for landfill expansions when necessary.
 - Include in the plan acknowledgement of liability associated with increased landfilling including the understanding that at some point in the future the county may be identified as a responsible party for a superfund clean-up investigation.
 - Identify and evaluate potential locations within the county or region for a disposal facility that can be developed within the timeline of the facility closure.
 - Any new facilities that are sited should take clear and effective measure to ensure that they are not located in environmental justice areas.
 - A list of policy, program, infrastructure changes needed to eliminate reliance on WTE and/or landfilling.
 - Consideration of where money saved by closing the facility could be reinvested to benefit the region.

Waste reduction

In accordance with Rule 9215.0580 and Minn. Stat. § 115A.02, counties are responsible for advancing prevention and reuse along with other solid waste management strategies. Waste reduction means not generating any materials that require further recycling, composting, disposal, or other management. Waste reduction includes reducing the amount and toxicity of materials generated. It is at the top of the hierarchy, because it is the best option for the environment. Using an SMM framework, counties can design programs that direct limited resources toward waste reduction programming and infrastructure to have the greatest impact on their communities. To quantify this impact, counties can now report their waste reduction activities by material type to the MPCA. Related GHGe savings can be found in the SCORE report.

Waste reduction is the most effective way to lessen the need for resource extraction, reducing pollution at the source and conserving materials for future generations. Measuring waste reduction requires setting a baseline of consumption and comparing all future consumption to that baseline. One example of doing this on a broad scale is represented in the SCORE report.

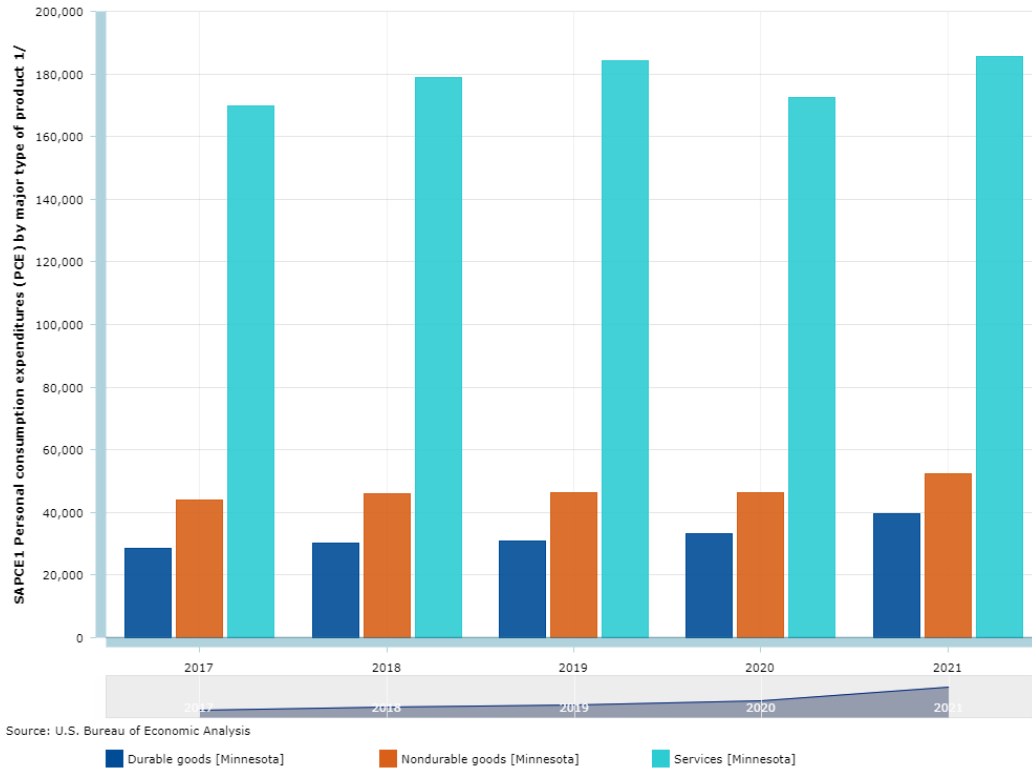
Based on statewide waste generation data, starting in 2008, Minnesotans are generating less waste than expected based on projections using the 1997 rate. There was a dip in the actual waste generated during the national 2008 recession that extends into 2010, mirroring the economic recovery period. There has since been a steady upward trend in waste generation. In 2020, however, expected waste generation sharply declined while actual waste generation continued to increase. This anomaly in expected waste generation is primarily due to a large drop in per capita expenditures in the “Services” consumption category, including food services and accommodations, recreation services, and transportation services. Spending in both the consumption categories of “Durable Goods” and “Nondurable Goods” remained consistent with the trends from previous years. This can be explained by changes in purchasing due to the COVID-19 pandemic, in which the service industry was most affected by periods of lockdown and residents spent more time at home. However, because “Durable Goods” and “Nondurable Goods” did not see the same decline, resulting waste generation will continue to increase in future years as those purchased items in 2020 are disposed of at the end of their useful life.

Waste reduction in real life



MN Waste Wise utilizes the Leanpath Food Waste Prevention Platform. This an online software helps staff identify and dramatically reduce food waste and operate a more sustainable facility. The results were determined by measuring and tracking purchasing of food items throughout several months. Overall, three restaurants reduced their food waste by 29% in value, totaling \$40,110. Additionally, the offered solutions allowed the participating restaurants to decrease their waste bills.

Figure 8. Personal consumption expenditures



Increase and document prevention of wasted food and food rescue

Up to 40% of the food in the United States goes uneaten, according to a Natural Resources Defense Council (NRDC) report. At the same time, one in thirteen Minnesotans face hunger. The greatest environmental benefit—in terms of reductions in energy use and GHGe—is made when we can prevent food from being wasted rather than managing or disposing food waste.

The MPCA recently conducted a sort of food in the MMSW stream. The waste sort uncovered that almost half of the food Minnesotans threw in the trash could have been eaten. There is a significant opportunity for counties to work with residents and businesses on systems improvements and behavior changes that promote the prevention of wasted food.

Wasted food wastes the resources used to produce it, such as agricultural land, water, and energy, and generates significant environmental impacts, such as GHGe contributing to climate change, consumption and degradation of freshwater, degradation of soil quality, and degradation of air quality. According to EPA’s 2021 report, “From Farm to Kitchen: The Environmental Impacts of U.S. Food Waste,” uneaten food in the United States annually embodies:

- 140 million acres of agricultural land – an area the size of California and New York combined
- 5.9 trillion gallons of fresh water – equal to annual water use of 50 million American homes
- 778 million pounds of pesticides
- 14 billion pounds of fertilizer – enough to grow all the plant-based foods produced each year in the United States for domestic consumption
- 664 billion kWh of energy – enough to power more than 50 million U.S. homes for a year
- 170 million MTCO₂e GHG emissions (excluding landfill emissions) – equal to the annual CO₂ emissions of 42 coal-fired power plants

Reducing one ton of food saves about twenty times more GHGe than composting that same amount of food waste. Households are the biggest contributor to this waste. Preventing wasted food is one of the more impactful ways that everyday Minnesotans can mitigate climate change. Addressing this issue would impact not only the environment but has the potential to support the needs of TCMA residents experiencing food insecurity. According to the NRDC, redirecting one-third of the food currently being thrown out would be more than enough to cover unmet food needs across the country. Nearly 1 in 10 households in Minnesota experience food insecurity, as reported by the Minnesota Department of Health.

Purchasing

Minnesota's Sustainable Procurement Program is a partnership between the MPCA and the Department of Administration. The Sustainable Purchasing Program currently prioritizes 19 state contracts for the inclusion of sustainability requirements. As of fiscal year 2020, 53% of priority contracts are considered "100% sustainable." Allocating funds toward sustainable materials is key to ensuring support for sustainable, non-toxic, and closed-loop markets. Sustainable purchasing considers environmental, social, and economic factors by considering the lifecycle impacts of a product — from raw material extraction through end-of-life management. This approach allows buyers to decrease the impact of their purchases more strategically and effectively. Local governments can save money and identify where the greatest reductions in impacts. Purchasing from the 19 priority state contracts available through the Cooperative Purchasing Venture (CPV) program allows counties to easily expand the impact of the state's sustainability efforts.

Environmental product declarations (EPDs) are another tool to influence purchasing power at the state level. An EPD provides transparency about the environmental life cycle impacts of a product. EPDs are increasingly being used to account for the full scope of impact for building materials.

Required strategies:

The strategy listed below is required to be incorporated into the CSWMPs. It is required because it is relatively simple or has significant environmental benefit.

13. **Provide grants for or access to software that can track food waste.** By 2025, implement county programs that prevent wasted food to businesses and institutions that produce food waste. According to the EPA, one-third of all food in the United States goes uneaten, of which a majority ends up in landfills or WTE facilities. Food waste tracking software can aggregate data that can be easily reported as a reduction in SCORE. Most software can also provide environmental metrics, which could be used to further determine impacts. These metrics can be shared with customers and users to educate them based on real-time results, which can have impacts on the users' behavior outside of these facilities. Hennepin County has previously provided some limited grant funding for businesses to utilize software for preventing food waste. Additionally, Minnesota Waste Wise has assisted businesses with implementing programs that rely on food waste tracking software.
14. **Establish partnerships between food rescue organizations and restaurants/stores to increase food rescue.** Developing reliable networks between institutions with excess food and institutions that can rescue the food is imperative to the success of these programs. Established organizations such as Second Harvest Heartland can assist with [food rescue efforts](#). This could be accomplished by assigning county staff or a GreenCorps member to build these networks. MPCA can be contacted to learn more about how to host a GreenCorps member to help with these types of efforts.
15. **Launch bi-annual sustainable consumption challenges for residents.** These challenges should focus on reducing waste produced by residents. Organize and run these challenges for residents that encourage them to reduce their own waste in various areas. Examples include Zero Waste

Challenge, [EPA Get Smart Challenge](#), and [Track Food Waste at Home – Hennepin County](#). The campaigns should also incorporate messages that encourage buying more durable products and repairing these items to extend their useful life (including textiles, electronics, and furniture.). These products may cost more, so it is important to frame these campaigns in a way that acknowledges how the cost can be a barrier.

16. **Implement a formal county sustainable purchasing policy using [MPCA guidance](#).** Sustainable purchasing policies shows a commitment to reducing environmental, social, and economic impacts. The policy should increase county purchases of goods that are reused, remanufactured, and designed for durability and repairability. Identify purchases that are not necessary and eliminate them. County-wide spending should be analyzed for redundancies. Those redundancies should be eliminated. Procurement professionals should collaborate and forecast purchases whenever possible.
17. **Participate in Responsible Public Purchasing Council meetings.** This bi-annual meeting connects county, city, township, and other Cooperative Purchasing Venture member organization purchasers. The purpose of this group is to support purchasing leaders to be good stewards of public dollars and to share information about sustainable criteria developments throughout purchasing sectors. Each county shall plan and host two Responsible Public Purchasing Council meetings by 2030 and send a representative to attend each meeting.

Optional strategy:

The following strategy is optional and may be incorporated into a CSWMP. Each strategy has been assigned a point value, which is added to the total amount of points the county must achieve for approval of their CSWMP by the MPCA.

18. **Work with health inspectors to educate restaurants and other establishments that have excess prepared food to donate.**

Point Value: 7

There is widespread concern over the liability of donating prepared food. Enlisting county and city health inspectors to help willing restaurant operators navigate the laws, statutes, and ordinances for food donation can help to support the growth of additional sources for donations. This strategy prevents wasted food and proposes a solution to food insecurity, which is something 1 in 17 Minnesotans face (according to Feeding America). Partner with the health inspectors in your county to distribute information on food donation and food waste avoidance.

Reuse

Reuse is a waste reduction strategy as it extends the useful life of items or materials. This keeps materials in use and decreases the demand for new production. Compared to recycling, reuse further reduces environmental harms. It accounts for embodied emissions and impacts from the upstream manufacturing of materials and products. Recycling still requires energy and resource inputs to convert an existing product into a material stock. Only then can it be incorporated into new production. This generates additional environmental impacts and wastes that are not created when a product is reused.

The state of Minnesota also benefits economically and socially from reuse. According to a [report](#) published by Reuse Minnesota, the reuse economy generates between \$3.1 and \$4.7 billion in revenue each year. At the time of the report publication, there were more than 13,000 reuse businesses, accounting for more than 45,000 jobs. Reuse jobs are usually not outsourced because they handle existing products within a community or region, making reuse inherently local. The report estimates that reuse contributes \$2.4 billion in social value (i.e., benefits such as taxes, wages, and shareholder profits). Resale, rental, repair, and sharing also expand access to items that may otherwise be unaffordable or

impractical to individually own. Reuse training, skills development, and local events contribute to a strong sense of community. A thriving reuse economy often depends on established networks. It subsequently bolsters collaboration between businesses, educational institutions, organizations, and residents.

For these reasons, it is critical that reuse strategies and programming be a higher priority and receive significant investment at the state and local levels. Recycling and composting strategies are more familiar and comfortable in most systems. Without distinct reuse targets, guidance, and goals, it is often the default to fall back on end-of-life management and primarily direct resources and infrastructure investment towards recycling and composting.

Some of the most successful and impactful reuse strategies are not new, innovative, or expensive technologies. Revitalizing these strategies, determining the requirements or incentives that best support them, and raising awareness or comfort with them is an important path forward for TCMA counties. When proposing these strategies, take the time to engage across the community. This ensures they are developed in an inclusive way so that implementation does not disproportionately impact certain businesses or neighborhoods and participation increases. Particularly when passing policies that require new actions or fees for specific entities, allow time for outreach and create support systems that aid in that transition.

Required strategy:

The strategy listed below is required to be incorporated into the CSWMP because it is relatively simple or has significant environmental benefit.

19. Offer grants or rebates for organizations to transition to reusable food and beverage service ware.

Reusable service ware is any product designed to be used for serving, consuming, or transporting prepared food and raw food, including but not limited to reusable plates, bowls, trays, wrappers or wrapping, platters, cartons, condiment containers, cups or drink ware, or any container in or on which prepared foods and raw foods are placed or packaged for consumption. Reducing or removing the barrier of the cost of investment for reusable service ware can help institutions to make this change. Assistance should cover both the cost of materials and building modifications to support the cleaning, storage and maintenance of reusable food and beverage service ware.

20. Offer grants for waste reduction, reuse, and repair. Shifting more funding into this focus area can support the goal to minimize the need for disposal or recycling. Consider broad eligibility including public, private, and non-profit entities. Do not specify that projects need to be innovative as organizations may already be contributing positively with their current reuse and repair offerings and simply need the additional funding to support or expand their existing operations. Consider expanding support offerings for grant applications and documentation as many reuse and repair organizations may be smaller operations that have limited capacity and staffing for grant administration.

21. Implement a green meeting policy. A "green" meeting is one that is organized and implemented in such a way as to minimize negative impacts on the environment and promote a positive social impact for the host community.

Optional strategies:

The following strategies are optional and may be incorporated into a CSWMP. Each strategy has been assigned a point value which is added to the total amount of points the county must achieve for approval of their CSWMP by the MPCA.

22. Implement a county policy encouraging the use of reusable food and beverage service ware.

Point Value: 6

This can be done as a “green event policy” or as a part of a sustainable government purchasing requirement. This policy should include tracking and reporting to ensure it is being implemented. This should be required of all county events and meetings.

23. Adopt an ordinance with a mandatory consumer charge or ban for single-use items.

Point Value: 9

The “Bring Your Own Bag” ordinance in Minneapolis can serve as an example of how to roll out an ordinance to set a fee for single-use items. A set fee for each container type should be determined by the ordinance. The ordinance may allow BPI-certified compostable and recyclable take-out service ware. The fee will serve as an incentive for customers to participate in reuse behavior. Alternatively, the ordinance can ban certain single-use items.

24. Join and/or actively participate in a reuse network, like Reuse Minnesota, to provide county and city staff with learning opportunities to broaden their reuse expertise.

Point Value: 6

The most effective way to reduce waste is to not create it in the first place. As a result, reduction and reuse are the most effective ways you can save natural resources, protect the environment, and save money. County staff participation in this type of network also supports the development of statewide resources, helps develop county programs, improves advocacy, and strengthens connections for reuse organizations.

25. Establish a Repair Ambassador program, like the Recycler/Composters (RCAs) Ambassador programs.

Point Value: 7

Programs exist in several counties and can be a collection of connections between skilled individuals, for-profit and non-profit organizations, and a volunteer coordinator. Fix-It Clinics offer free, guided assistance from volunteers with repair skills to disassemble, troubleshoot, and potentially fix small household appliances, clothing, electronics, mobile devices, and more. Fix-It Clinics teach valuable troubleshooting and basic repair skills, build community connections, and reduce the number of repairable items that are thrown in the trash. These groups should have goals to grow the volunteer base and offer regular fixer trainings to support Fix-It Clinics or Repair Cafes.

26. Establish a reuse location for residential drop-off and pick-up.

Point Value: 7

Some items are not accepted by reuse businesses in the region because they don’t have significant resell value. Those items not desired by the reuse businesses in the region could be made available to the public for free (reuse warehouse at the drop-off/transfer locations) or donated to other non-profit thrift operations in the area. Items in poor condition would be managed through the existing county solid waste and recycling channels.

27. Establish a curbside set-out day to allow residents to set out used items for reuse.

Point Value: 7

Coordinate this day to occur 1-2 days prior to curbside, large item pick-up by haulers and with reuse businesses to pick-up unclaimed items. In 2021, the Bloomington City Council passed a plan to partner with Better Futures Minnesota for collection of reusables from curbside. The [pilot program](#) has been in place since November 2022.

State-led strategies:

During information-gathering sessions with MPCA staff, metro counties noted that two of the main barriers to working on waste reduction and reuse are lack of statewide legislation that support or

advance these strategies and lack of consistent and clear measurement, including both standardized methodology and access to environmental data. The following strategies address this input and are the responsibility of the MPCA.

28. **Develop standardized guidance and methodology for tracking waste reduction and reuse activities and their resulting benefits.** With the 2021 SCORE reporting, the MPCA added a reuse table for counties to enter data for material and product reuse by the county or by organizations/businesses in the county. These additional resources can be developed to further support and better acknowledge reuse programming that counties implement going forward.
29. **Research and pursue financial strategies to best incentivize waste reduction and reuse, such as grants and loans.** In the shorter term, the MPCA continues to explore opportunities for ongoing funding for reuse by expanding eligibility with current grant programs and pursuing the development of a reuse-specific program.

Collection best practices

A variety of methods are used to collect recyclables, organics, and trash. There is some room for diversity in methods used from one community to the next. However, implementing best management practices will increase the recycling rates in the region.

Required strategies:

The strategies listed below are required to be incorporated into the CSWMPs because they are relatively simple or have significant environmental benefit.

30. **Collect recyclables, organics, and trash on the same day.** Same day collection of recycling and trash makes it easier for residents to remember. Tracking different collection schedules can be challenging, especially if change occurs often. Implementing same-day collection for recycling and trash helps residents increase waste diversion. Counties should work with their cities to implement same day collection for recyclables and trash. Counties or cities can implement this through licensing or ordinance provisions.

Optional strategies:

The following strategies are optional and may be incorporated into a CSWMP. Each strategy has been assigned a point value, which is added to the total amount of points the county must achieve for approval of their CSWMP by the MPCA.

31. **Collect recycling weekly by 2030.**

Point value: 7

Recycling is collected bi-weekly in most cities with single stream recycling programs. Since recycling carts often reach capacity during the two-week interval between collections, some residents throw the extra recyclables into their garbage container. By offering weekly collection, the recycling carts are less likely to exceed capacity. Residents who miss a bi-weekly recycling collection find themselves with a month's worth of recyclable material to fit into a cart that many times is completely full after two weeks. If current driver shortages are affecting the ability to meet this practice, the county should collaborate with haulers to develop a solution until the driver shortage is resolved. Counties should work with their cities to implement weekly collection for recyclables. The county can require weekly collection, or make sure that cities require it in their respective ordinances or license provisions. Establishing a system that allows for free additional recycling bins could also fulfill the objective of this strategy if residents are likely to have space for additional containers and/or other local circumstances make weekly collection untenable.

32. Pair the option of bi-weekly trash collection with weekly recycling and organics collection.

Point value: 7

By pairing weekly recycling and organics collection with bi-weekly trash collection, communities can achieve greater recovery rates. Since most residential waste is recyclable or compostable, very little waste remains in the trash when curbside recycling and organics programs are provided. Organics collection removes the portion of the waste stream likely to decay, which causes bad trash odor, so trash does not need to be collected as frequently. Offering recycling and organics collection weekly allows for a transition to bi-weekly trash collection for residents that may want to, leading to potential cost savings for haulers and residents. Bi-weekly trash collection incentivizes residents to place all recyclable and compostable materials in the weekly containers and can result in greater recovery rates. Counties should work with their cities to have the option to pair bi-weekly trash collection with weekly recycling and organics collection.

33. Contract for residential recycling and organics by 2030.

Point Value: 7

Research has shown that organized recycling collection programs yield a higher recycling rate when compared to non-organized recycling programs (The Benefits of Organized Collection, MPCA, February 2012). Roughly 60% of communities in the TCMA offer organized recycling collection. However, many cities still rely on subscription service provided by licensed haulers. While some of these non-organized programs have been successful, the results from communities with organized recycling are consistently stronger. By 2030, cities in the TCMA should provide organized recycling collection for residents. To implement this strategy, counties may:

- Require that cities offer organized residential recycling collection to receive funding for recycling programs.
- Provide technical assistance to cities developing and implementing an organized recycling program.

The MPCA also plays a role in implementing this strategy and may provide technical assistance to cities developing and implementing a new, organized recycling program.

34. Contract for residential MMSW collection by 2030.

Point Value: 7

In the TCMA, 37% of cities currently contract for residential MMSW collection, compared with approximately 70% of cities nationwide. However, over the last few years, several communities followed the process required by Minn. Stat. § 115A.94 and successfully implemented organized MMSW collection programs for their residents. Although transitioning from an open MMSW collection system to an organized MMSW collection system is not simple, there are many environmental benefits of organized collection, and counties should work with cities to make this transition.

In addition to the environmental benefits associated with increasing recycling, creating efficiencies in waste collection can reduce both fuel consumption and emissions. Fuel consumption during collection activities in cities with open collection systems is typically much higher than that of cities with organized systems. The number of haulers and their market share can affect overall fuel consumption and emissions. In an open system, trucks from many haulers travel the same alleys or streets. In an organized system, there may be the same number of haulers, but only one truck travels down each alley or street, resulting in lower fuel use because fewer miles are traveled to collect the same amount of material. Simplifying the hauler routes leads to efficiencies that would lighten the driver shortage. Open cities with one hauler assigned to more than 60% of the market share (e.g., Eagan) would see a significant reduction in fuel use by switching to an organized system. A city with many haulers, each having a smaller market share, (for example, St. Paul) would realize

even greater savings. Fewer vehicle miles traveled also results in less air pollutant emissions from heavy duty waste/recycling collection vehicles. Public concern has increased regarding human health and environmental impacts of particulate matter and nitrogen oxides, which are emitted in large amounts from heavy duty vehicles. (Source: The Benefits of Organized Collection, MPCA, February 2012).

Organized MMSW collection programs are also often more cost-effective when compared to subscription programs. Data in Table 4 was derived from the City of Richfield which was the most recent city to organize trash collection. During its process, the city received bills from residents to be able to assess the cost of collection prior to implementation. The monthly cost for residential MMSW collection varies by container size. Although the cost for a 90-gallon cart is similar in both systems, the cost in organized collection systems is lower on average.

Table 4. Monthly cost of residential MMSW service in the Richfield before and after organized collection

Container size	35 gallon	65 gallon	95 gallon
Subscription average	\$16.33	\$17.99	\$18.85
Organized average	\$11.90	\$15.03	\$18.16

Recycling management

Regionally, it is important to apply SMM concepts to prioritize targeted materials that are the most recyclable materials over those with a more energy-intensive recovery process. It is also important to identify and focus efforts on larger generators of recyclables. A regional plan for temporary storage of recyclables will assure diverted materials are not managed at the lowest levels of the hierarchy. Additional space for recyclables as a contingency plan if interruptions in the system occur can avoid those materials potentially being landfilled or incinerated at WTE facilities. Preprocessing at WTE facilities and landfills will increase recycling rates.

Required strategies:

The strategies listed below are required to be incorporated into the CSWMP because they are relatively simple or have significant environmental benefit.

35. **Recruit a minimum of 12 commercial businesses a year to recycle at least three materials from their operations and promote the environmental and resource benefits.** The commercial recycling statute Minn. Stat. § 115A.151 requires businesses in the TCMA that contract for four cubic yards or more per week of solid waste to recycle at least three materials. The commercial recycling law is an opportunity for businesses to decrease their waste, reduce their taxes by increasing recycling, and support Minnesota’s recycling industry, which creates approximately 37,000 jobs in the state. There is no tax on recyclables or organics in Minnesota, but there is a 17% state solid waste management tax charged on all commercial trash. Many counties charge additional taxes or fees as high as 53% on trash, but not on recyclables or organics.
36. **Establish mandatory pre-processing of waste at resource recovery facilities and landfills by 2030.** Achievement of the 75% recycling goal will require major system changes. Upfront processing of waste to recover recyclables at transfer stations, resource recovery facilities, and landfills may help achieve that. Steel and aluminum are the easiest to recover from MSW, but other materials should be considered if possible. Processing methods should be evaluated prior to implementation to ensure optimal effectiveness.

37. Provide assistance to multi-family properties to improve recycling (4 or more units with shared walls). Some examples of activities that would achieve this strategy include:

- Education to residents and property managers on how to handle and route materials to their proper bins and how to recycle items not accepted in building provided collection
- Financial and/or technical assistance for infrastructure improvements and implementation of improvements
- Assure property manager plans and provides sufficient space for collecting recycling based on the number of residents
- Collaborate with cities to promote assistance resources, on-site education, and implementation of recycling improvements
- Conduct outreach to multi-family association networks (e.g., Minnesota Multi Housing Association) to promote resources

State-led strategies:

The following strategies are the responsibility of the MPCA to support the efforts of counties.

38. Assist with tracking commercial recycling self-hauling activities. In addition to establishing a baseline, identifying the large volume generators of recyclables is necessary to developing a targeted, effective commercial recycling program. The MPCA should review existing data from other states and the EPA on typical generators of large quantities of recyclables and work with counties to interpret this data for use in program implementation. If appropriate data is unavailable, the MPCA will work with the counties to develop a list of large volume generators, as well as a list of generators of the most impactful materials.

Recycling market development

Traditional recycling markets

Without end markets to use recyclable material, there is no recycling. Recycling market development (RMD) creates and maintains demand for recyclable materials. End markets buy these materials for further processing or to produce products. RMD looks at the highest and best use of post-consumer discards from the waste stream. Recycled material used as a commodity in a manufacturing process generates economic activity.

MRFs and haulers have invested in artificial intelligence technologies and sorting equipment. Domestic end markets have expanded in response to surplus of material. The COVID-19 pandemic and rise of online shopping has shifted the market for OCC and paper. Market demand for other materials has increased in the last 18 months.

Capacity in Minnesota's recycling economy is expanding. MyPlas, capable of processing 90 million pounds of film plastic annually, will soon open in Rogers. Minnesota is home to manufacturing plants in Paynesville, Worthington, and Garfield that produce plastic lumber from post-consumer materials. Plastic lumber is made into furniture in Duluth and Jordan. Minnesota's plastic lumber markets include marine, landscaping, and parks and recreation.

However, there have been worrisome losses of markets since 2018 with capacity also shrinking. WestRock in St. Paul processes 600 tons of mixed paper and cardboard per day, a reduction from the former daily capacity of 1,200 tons after the closure of the corrugated medium manufacturing operations in October 2022. Major closures in the TCMA since 2018 include:

- Gerdau Ameristeel Recycling Plant– recycled 560,000 tons of scrap steel annually
- Ball/Rexam– made 2 billion aluminum cans/year

- Brotex – no longer recycles 6,000 tons/year of carpet from Minnesota
- WestRock– recycled OCC (corrugated cardboard) 200,000 tons/year (portion of their plant) in addition to the reduced mixed paper capacity
- Verso Paper Mill in Duluth –recycled mostly industrial paper trimmings

Capacity is under attack in other ways. Overseas markets have forced MRFs and haulers to make expensive investments in infrastructure. Minnesota has one of the lowest residual rates in the country. Residuals are the fraction left over from processing recyclable materials. Yet with supply high and demand low, buyers can be picky. Cleaner material is of higher value and sells more easily.

Markets are cyclical. We must maintain investment in new technologies for sorting equipment to remain competitive. We need to focus on supporting our local businesses and economies and keeping jobs and tax dollars in Minnesota. We need to invest in new products produced with recycled materials. Investments in technology at MRFs helps make that possible.

State-led strategies:

The following strategies are the responsibility of the MPCA and will support counties.

39. Support and invest in new facilities and retain processors of recycled material for end markets.

Establish a directory of processors throughout the state. Dedicate staff resources to assisting and connecting local processors that prepare collected material for end markets to manufacturers. Processors need to maintain and upgrade equipment to be competitive. Investing in new and upgraded facilities is a benefit to the local recycling market and supports the economy.

Organics management

Organic materials account for approximately 25% of the waste thrown away by Minnesotans. Preventing wasted food and rescuing edible food are strategies that offer the greatest environmental benefit for managing organic materials. Based on EPA’s WARM calculations, preventing one ton of food waste results in 20 times fewer GHGe than composting one ton of food waste. Policies oriented to enhance those efforts are included in the waste reduction and reuse section of this MPP. However, composting and feeding food to livestock or backyard chickens are also important strategies for situations where prevention and rescue were unsuccessful. Counties are encouraged to collaborate with partners to develop and implement best practices to expand organics collections. Partnerships with organizations like the Minnesota Composting Council (MNCC), Food Rescue non-profits, waste haulers, Minnesota Waste Wise and others could lead to better program development and faster progress towards recovery goals.

Anaerobic digestion is covered in the emerging technology section of this MPP.

Anoka County Rice Creek Compost Site Organics Pilot Project

The Anoka County Rice Creek Compost Site, located in Lino Lakes, serves the eastern half of Anoka County. Accepted materials are yard and tree waste, as well as organics recycling. Visitors reported the site as difficult to navigate due to wet and muddy road conditions. Demand often exceeded capacity.

To address the issues, Anoka County acquired an adjacent property on higher ground in 2015 to make improvements. Site design, building removal, building construction, road construction, and surface improvements were completed in 2021 to improve site access, improve traffic flow and safety, expand capacity for processing of organics in the north metro, and allow for a greater number of visitors. Over the last three years, an average of nearly 7,000 vehicles visited annually.

Early in the planning process, one of the existing buildings on the new property was identified as a possible solution for processing organics collected at the organics transfer station. Anoka County and its site contractor, OTI, Inc. approached the MPCA with the possibility of composting organics within the covered enclosed barn as an adjacent facility to the yard waste facility. The county discussed the operation with the MPCA and then began operating a small-scale composting site. The site is managed in a manner consistent with MPCA rules that govern small compost sites. This resulted in the first-of-its-kind small-scale composting facility adjacent to a yard waste facility.

Organics are collected from the public at the organics drop-off on site, then brought into the barn and combined with tree and leaf waste from the yard waste site to be processed into compost. The pilot has completed, and the site is considered fully operational. The finished compost is available for purchase to residents during spring through mid-fall.



Required strategies:

The strategies listed below are required to be incorporated into the CSWMP because they are relatively simple or have significant environmental benefit.

40. **Make residential curbside organics collection available in cities with a population greater than 5,000 by 2030.** Drop sites collecting organics have been well received in the region. However, they appear to only be reaching the most enthusiastic residents. Like curbside recycling services, programs should be offered to all single-family dwellings, duplexes, and small multifamily properties. Programs that charge all eligible households must comply with Minn. Stat. § 115A.93, subd 3 (c). This means all haulers must charge and offer organics to everyone. If offered as a subscription service, the licensing authority must make sure that haulers are compliant with 115A.93 subd 3(c). Programs that charge all eligible households, comply with the statute, are cheaper per household and reduce barriers to participation. Additionally, programs with the lowest contamination are supported by robust education. Curbside collection requires proper and frequent education to be successful. It ensures programs are accessible and maximizes participation.
41. **Expand backyard composting outreach and resources for residents.** Provide resources needed to set up a simple yard waste compost pile and education to assure implementation is sustained. Establish a webpage with an explanation all available resources. Promote the program at least twice per year to residents. This will be especially important in areas experiencing hauler shortages for yard waste.
42. **Require management of organics from large commercial food generators by 2033.**
Commercial and industrial entities that generate large volumes of organics (e.g., restaurants, grocery stores, and food processors) must have an opportunity to reduce their environmental impacts. They often reduce their disposal costs by first preventing food from going to waste. They also rescue food and recycle food waste. As noted in the SMM section, the most impactful action is to reduce the amount of food waste created. Only then should focus shift to rescue of remaining edible food. Local policies should first require adoption of policies that support the prevention and rescue initiatives at large generators.

After the adoption of prevention and rescue initiatives, large generators must implement organics recycling programs. This serves to capture the remaining organic material they would otherwise discard. Many communities like Hennepin County and Western Lake Superior Sanitary District (WLSSD) have already adopted policies requiring large generators like grocers and restaurants to implement these types of programs. Large volumes of material are being captured and used to create compost or feed livestock.

Optional strategy:

The following strategy is optional and may be incorporated into a county CSWMP. Each strategy has been assigned a point value, which is added to the total amount of points the county must achieve for approval of their CSWMP by the MPCA.

43. **Establish additional organics recycling drop-off sites.**

Point Value: 7

Many counties offer organics drop-off sites, which have been successful at capturing food waste for households without curbside collection. Site selection should be in convenient, well-lit places. This strategy can be paired with multi-family recycling strategies to provide opt-in access to residents without curbside collection of organics recycling.

State-led strategies:

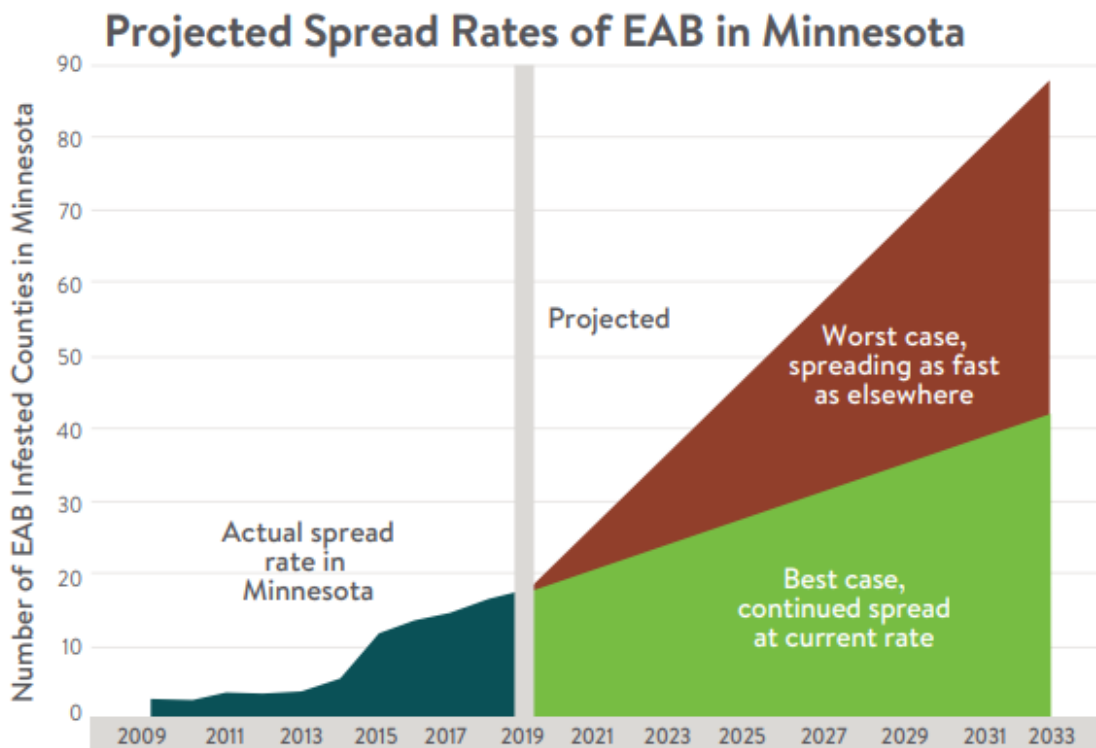
The following strategies are the responsibility of the MPCA to support counties.

44. **Standardize the role of compostable products in organics recycling programs by 2025.** Most of Minnesota’s composting programs have included compostable products as acceptable materials. Some metro cities have adopted ordinances requiring the use of compostable take-out containers. Compostable product advocates suggest they capture more food scraps and increase recycling rates; however, MPCA is not aware of any research that confirms this claim. A study from Oregon using life cycle analysis of compostable products has shown unfavorable results, even when compared to single use disposable items. Standardization of compostable materials will reduce resident confusion and reduce contamination for compost facilities.

Wood waste & EAB

The TCMA is heavily impacted by EAB, with an estimated 20% of community trees being ash. All seven metro counties are included in the Minnesota Department of Agriculture’s (MDA) EAB quarantine area, with infestation observed throughout the area. Additionally, climate change has increased the severity and frequency of storms that knock down trees and branches that must be quickly removed to preserve access to sidewalks and roads and to restore power. These factors have led to large volumes of wood waste. The trajectory of the EAB infestation suggests we are still five to ten years from peak volumes of wood waste in the TCMA (see Figure 9).

Figure 9. Projected county infestation impact in Minnesota due to EAB



Past and projected spread rates of EAB have been slower in Minnesota than the national average. In the worst-case scenario, all 87 counties will have EAB infestations by 2031, as calculated with the national average rate of spread. Under a best-case scenario, with EAB spreading no faster than it has in Minnesota to date, EAB will be present in 39 counties by the same date. Source: MDA

Currently, the St Paul Cogeneration (SPC) District Energy plant in St Paul manages approximately 250,000 tons of wood waste annually. The District Energy facility is a combined heat and power plant fueled by biomass. In recent years, the facility has accepted wood waste at no charge and relied upon the energy fees collected from its district heating customers and revenues from electricity sold to Xcel Energy to finance the plant. The Public Utilities Commission has indicated it no longer supports relying on just energy fees and electricity sale revenues to operate the facility and other revenue sources are needed, such as a tip fee for wood waste delivered to the plant. Other solid waste streams rely on tip fees to operate facilities to process the materials they receive. As such, it is a reasonable and credible path forward for wood waste generators to pay a tip fee to bring wood waste to the facility in order assist with a portion of the facility's expenses. It is also possible that the facility will cease operations if the facility is unable to fill the revenue shortfall.

With the District Energy facility, capacity for managing wood waste is already strained and being used to the maximum that the current contract allows. If the facility ceases operations, capacity to handle wood waste will be drastically reduced, likely triggering a massive increase in open burning piles. Open burning creates a large amount of small particulate matter that can cause problems for people with asthma. Even if District Energy operations continue, it is certain that additional markets are needed to ensure we direct wood waste to its highest and best use and have capacity to manage the anticipated rising tonnage of material.

Hierarchy of ash tree material management:

The MPCA partnered with the Environmental Quality Board (EQB), the Department of Natural Resources (DNR) and the Department of Agriculture (MDA) to release a report on EAB in 2019. [The report](#) details the scope of the problems caused by EAB and suggests strategies for meeting the challenges. The report also includes a hierarchy of ash tree materials management that seeks to prevent wood waste and to utilize wood for its highest and best use. The hierarchy should guide county planning efforts to minimize the environmental impact of managing wood in their communities. Other tree species are facing similar infestations and diseases. Counties are encouraged to address emerging tree diseases and pests with prevention efforts, when possible, to avoid the generation of wood waste.

The following strategies are needed to meet the challenges of managing wood waste throughout the TCMA during the upcoming planning cycle. The strategies will flatten the curve of waste trees generated, support existing markets for wood waste, and develop new markets to help relieve the pressure on current markets to handle the material.

Required strategies:

The strategies listed below are required to be incorporated into the CSWMP because they are relatively simple or have significant environmental benefit.

45. Develop plans to prevent and manage wood waste in each county and throughout the region.

Plans should assume that biomass plants, including SPC's District Energy, will have tip fees to ensure long-term economic viability. Plans should also not assume the Legislature will provide appropriate funds to biomass plants to allow for their continued operations without a tip fee. Plans should be modified to collect data to improve understanding of the wood waste challenges—at a minimum the amount of wood waste being generated and processed at wood yards. This means that plans should include an ordinance requiring wood yards to register with the county and report volumes of wood waste collected, managed, stored, and disposed. Additional data should be collected on tree inventories and on facilities and industries (biomass, compost sites, mulch producers, tree care companies, etc.) that can participate in discussions about wood waste management. Plans should consider setting goals, especially for wood waste management options that offer the greatest

environmental benefits. Plans should include strategies to educate the public about EAB, tree treatment and preservation, and responsible wood waste management.

46. **Promote existing programs that use EAB-affected wood for furniture, home goods, flooring, and other purposes.** While the volume of wood waste managed via these industries in these areas is not enormous, these industries do play an important role in the system by using wood to produce products, thus preventing waste. Additionally, these industries frequently educate the public about EAB, and they provide important economic benefits through the jobs they create and support. Ensure that these organizations are successful and continue to be available. Develop county purchasing requirements to utilize urban wood when available and encourage residents to purchase products made from urban trees. Consider financial support when appropriate.
47. **Composting and mulching operations must continue to be supported.** These industries provide an important outlet for wood waste management. Additionally, they serve as important infrastructure to help manage additional types of organic waste (i.e., yard waste and food scraps). Support that would meet this requirement could include grants or financial assistance to compost facilities, contracts that commit certain volumes of material to sites over a multi-year term, assistance with siting and/or meeting local permitting or land use requirements and promoting the use of the sites to the public and/or alternate strategies that ensure the long-term viability of composting capacity in the region.

Optional strategies:

The following strategies are optional and may be incorporated into a CSWMP. Each strategy has been assigned a point value, which is added to the total amount of points the county must achieve for approval of their CSWMP by the MPCA.

48. Update ordinances that address wood burning.

Point Value: 4

Update ordinances defining rules for burning wood, including restrictions on commercial and municipal burning. Establish requirements that minimize the environmental and human health impact. Open burning is the least preferable management method. Expanding other management methods is the best way to avoid open burning.

49. Develop and distribute EAB tree care education programs for privately owned land.

Point Value: 8

Education through digital marketing and paper mailers should include an explanation of the risks to ash trees, why a mature tree canopy is important, and focus on the benefits and cost savings of treatment versus removal.

50. Incentivize tree treatment as a cost-effective strategy to extend the life of ash trees and to reduce the volume of wood waste generated over the next 20 years.

Point Value: 8

Counties are encouraged to incentivize treatment of private and public trees and to develop financial incentives and/or provide support for treatment and tree preservation. It is much less expensive to treat trees and keep them living than to remove and replace them.

51. Allow assessments on property taxes to spread the cost of tree care over a multi-year timeframe.

Point Value: 9

Some communities have used tax assessments to fund tree care services even on private property. This would allow homeowners to defer costs to make tree care services available and affordable.

52. Expand composting and mulching capacity beyond existing markets.

Point Value: 5

Counties and/or cities can contribute to expanded capacity by offering commitments to deliver organics or wood waste at stable tip fees, purchasing compost and mulch, assisting sites in coming online and/or offering other financial, policy or technical support. This could be accomplished by developing the capacity for biochar or other new technologies. Biochar is a carbon-rich soil amendment and agricultural byproduct. It generates energy from biomass in the absence of oxygen. Biochar operations are in early stages in the TCMA but may use wood waste in a beneficial way. The City of Minneapolis collaborated with Hennepin County to begin using biochar for landscaping in 2019. Counties and cities can develop additional capacity by providing financial support and siting assistance and adopting policies that support capacity development.

53. Support development of systems that use wood fuel.

Point Value: 4

Incentivize retrofits through financial or policy initiatives for heating with efficient, low-emissions wood burning appliances. Encourage use of [Environmental Initiative's Project Stove Swap](#). Burning wood in retrofitted stoves is preferable to open burning. This strategy also reduces reliance on fossil fuels for home heating.

State-led strategies:

The following strategies are the responsibility of the MPCA to support counties.

- 54. MPCA will continue state agency coordination to address wood waste.** MPCA works with Minnesota Department of Natural Resources and Minnesota Department of Agriculture on wood waste issues. Some of the topics needing state level coordination include, but are not limited to, open burning permits, grants for tree management to local governments, and developing educational resources for local government and residents.

Organics market development

The MPCA, along with many municipalities in the TCMA, is working to bring organics collections to curbside containers, drop off sites, sports facilities, and commercial businesses. Opportunities to reduce wasted food and rescue food are most impactful. Food waste that cannot first be prevented or donated should be composted, fed to livestock, or rendered. There are well-identified market expansions for compost.

Use of compost in roadside and other construction projects has many benefits. Compost helps amend soils, so they are better equipped to support plant growth, aerate compacted soils, prevent erosion, and infiltrate runoff to prevent pollutants from entering lakes and streams.

Required strategy:

The strategy listed below is required to be incorporated into the CSWMP because it is relatively simple or has significant environmental benefit.

55. Require food-derived compost in county construction and landscaping projects.

Several communities have established practices to incorporate the use of compost into routine operations. Implementing compost specifications into Minnesota's county construction efforts would help expand markets for compost and ensure that those projects are conducted in a way that better protects Minnesota's lakes, rivers, and streams. In revising their specifications for compost, MnDOT updated the 3890 specifications to include compost products that are derived from food scraps in Grade 2 compost. Counties should specify in ordinances the use of a percentage of Grade 2 compost in roadside construction and landscaping projects, in keeping with the MPCA stormwater

manual. Several communities are establishing such requirements. For example, Denver Colorado has a Soil Amendment Program that requires new residential, commercial, industrial, and government properties to use compost. Eagan also has an ordinance requiring organic matter (Grade 2 compost) be used at no less than 5% at sites with greater than 10,000 square feet of land disturbance. Counties should partner with their public works departments to develop an ordinance that makes incorporating food-derived compost a default purchase.

Optional strategy:

The following strategy is optional and may be incorporated into a CSWMP. Each strategy has been assigned a point value, which is added to the total amount of points the county must achieve for approval of their CSWMP by the MPCA.

56. Find new outlets to increase food to animal operations.

Point Value: 7

For food that cannot be prevented or donated, counties may work with the Board of Animal Health (BAH) to promote and expand food-to-animals programs. A county may solicit new partners to receive a garbage feeder permit, which must be obtained from BAH. An existing list of approved food-to-animal garbage feeders can be found on BAH's website:

<https://www.bah.state.mn.us/swine/>. Support for the new outlets will help assure their long-term viability. The CSWMP must include a plan for addressing food to animal opportunities within the county.

Emerging technology

The solid waste system is evolving. Waste materials change and the technology to separate materials continues to improve. These changes improve our ability to divert more material from land disposal. Yet, the environmental impacts of some of these new technologies are not well known, creating challenges because the new technologies do not fit neatly into current rules and the Solid Waste Management hierarchy. As a result, MPCA and others need more time to understand the new technologies to determine what permits they may need and how they may fit into the Solid Waste Management hierarchy. An example is whether new technologies meet the technical requirements for recycling. If they do, this brings the benefit of tax-exemption status for facilities. Processed materials could also count toward county recycling goals. If they do not, waste is being handled lower on the waste hierarchy.

Anaerobic digestion of food has been a focus of several metro counties, to keep food out of landfills. Stakeholders note the need for more clarity surrounding anaerobic digestion. In response, a review of the solid waste management hierarchy and definitions under Chapter 115A was conducted to provide direction as to when anaerobic digestion could count towards county recycling goals. It was determined that organic materials going to an anaerobic digestion facility do not automatically count toward county recycling goals.

The MPCA must consider on a case-by-case basis whether activities at an anaerobic digestion facility meet existing definitions of recycling, for purposes of meeting the recycling goals found in Minn. Stat. § 115A.551 and/or the definition of recycling in Minn. Stat. § 115A.03, subd. 25b. Please note:

- Anaerobic digestion facilities that accept source-separated compostable materials (SSCM) and then compost the digestate can count this material towards a county recycling goal if they

demonstrate the process used aligns with the requirements included in Minn. Stat. § 115A.03 subd. 32a¹³.

- Other types of organic materials may also count towards a county recycling goal if a county can demonstrate that digestate from the anaerobic digestion process is used “in manufacturing processes that do not cause the destruction of recyclable materials in a manner that precludes further use.”²³⁴⁵
- Use of digestate for alternative daily landfill cover is not considered recycling because this application precludes further use and because landfilling is not recycling. The MPCA holds a long-established position that alternative daily landfill cover is not recycling⁴⁶.
- Anaerobic digestion processes that capture biogas but do not produce a useable digestate may be considered resource recovery, but not recycling.

A hypothetical example of an anaerobic digestion facility that would potentially satisfy existing definitions is one that receives source-separated organic materials, uses the anaerobic digestion process to capture biogas to create energy for use, and produces a digestate that is composted and produces a class I or class II compost. In view of the variety of materials and designs for anaerobic digestion facilities, the MPCA looks forward to discussing proposals with stakeholders for purposes of meeting recycling goals and solid waste planning. Stakeholders are encouraged to reach out to agency staff to initiate conversations about specific scenarios for further clarity on classification of materials sent to anaerobic digesters.

Additionally, it is important to note that the EPA’s food hierarchy describes anaerobic digestion as a process that produces both biogas and a soil amendment⁵. The MPCA is continuously engaging with EPA on this topic to ensure consistency and accounting for the best available information. The agency is also pursuing LCA research to provide Minnesota-based environmental analysis for the anaerobic digestion of food waste.

Gasification and plastics-to-oil technology have been proposed and even temporarily in business in the state. The long-term viability of these technologies is unknown as Rational Energies in Plymouth went out of business when it was unable to sell its fuel. The MPCA views them as similar to WTE operations rather than recycling. As such, the MPCA does not allow for these types of facilities to take source separated plastics or other recyclables in their operations.

State-led strategies:

The following strategies are the responsibility of the MPCA to support counties.

57. Develop a process for gathering the information necessary to make timelier and consistent policy decisions. The MPCA should evaluate the various levels of the hierarchy using a life cycle perspective to determine future policy decisions around new technologies. The evaluation should include:

- Use of existing life cycle analysis, such as the Municipal Solid Waste Decision Support Tool

¹ <https://www.revisor.mn.gov/statutes/cite/115A.03#stat.115A.03.32a>

² <https://www.revisor.mn.gov/statutes/cite/115A.551#stat.115A.551.1>

³ <https://www.revisor.mn.gov/statutes/cite/115A.03#stat.115A.03.25a>

⁴ <https://www.pca.state.mn.us/sites/default/files/w-sw-1-31.pdf>

⁵ Per EPA’s Anaerobic Digestion section of their Food Recovery Hierarchy: <https://www.epa.gov/sustainable-management-food/industrial-uses-wasted-food>

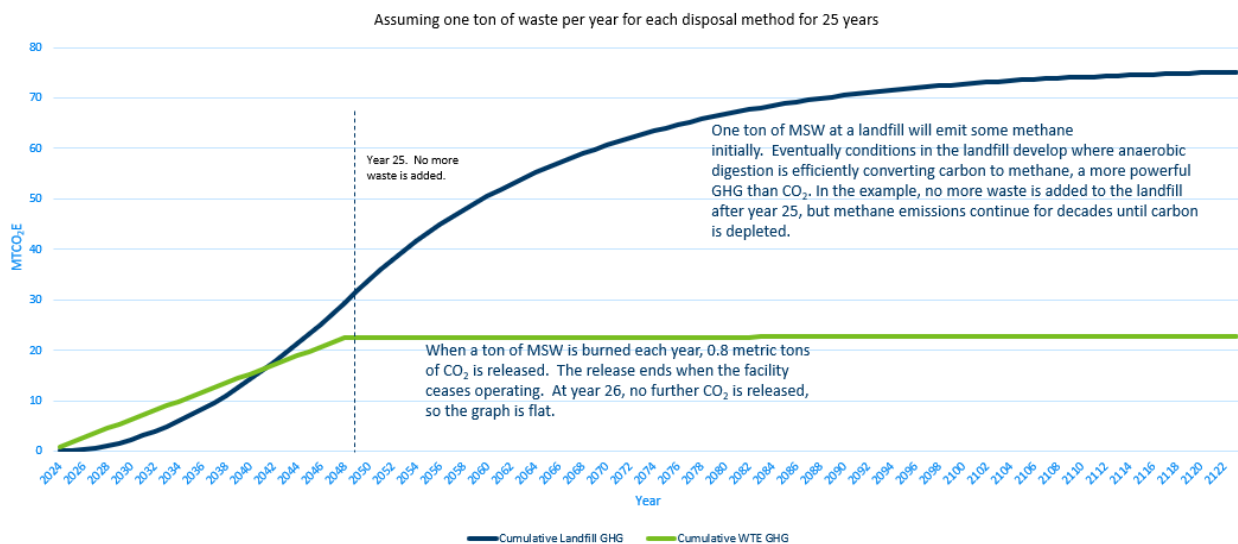
- Research waste management methods including, but not limited to, land disposal, resource recovery, composting, anaerobic digestion, plastics to oil, recycling, and food to livestock
- Identification of gaps in life cycle analysis data and research funds needed to fill those gaps
- Development of solid waste life-cycle policy recommendations
- When needed update state rules for new technology such as anaerobic digestion once sufficient data is in place to inform the process
- Develop a framework for preferred technology

Waste-to-energy

The Waste Management Act identifies a hierarchy that the MPCA is bound by statute to follow, which outlines WTE is preferred over landfills. The following items support this preference for WTE over landfills as a method for waste disposal.

WTE has a significantly smaller climate impact. Landfills produce over three times the amount of GHGe compared to WTE. While operational, the GHGe are similar from WTE and landfills. There is a stark difference at end-of-life. Landfills continue to generate GHGe for decades after closure, while WTE facilities only emit GHGe while operational.

Figure 10. Total GHG generated by landfill and WTE from start of disposal through closure and beyond



After closure, landfills continue to create pollution. Beyond the creation of GHGe, landfills continue to create leachate with contaminants in it. Unless properly managed, leachate can seep into groundwater. Leachate that goes to wastewater treatment plant in part ends up in surface waters due to lack of treatment technologies for many of the contaminants.

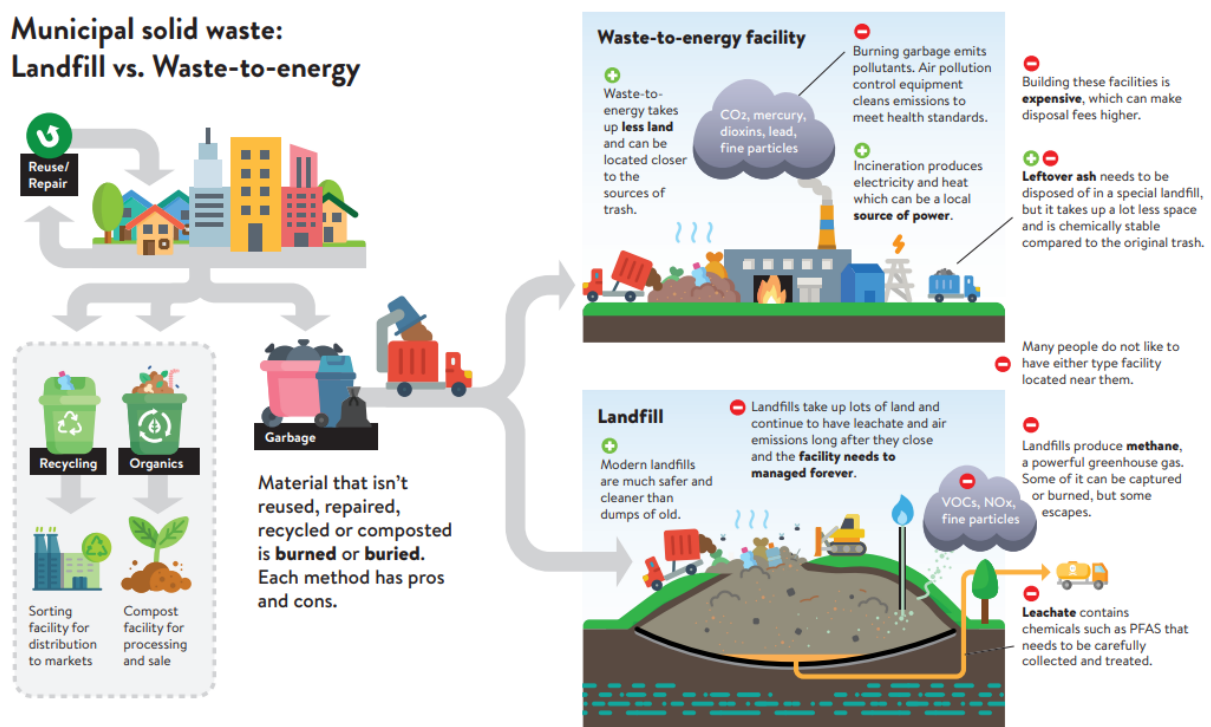
WTE recovers more materials and energy compared to landfills. A portion of the MMSW delivered to resource recovery facilities is diverted to be recycled or recovered for organics management, which is counted as recycled in the objectives in Table 2 and Table 3 (see table footnotes). WTE generates heat and power that contributes to the power grid across the state. Without WTE facilities, additional heat and power must be generated through other methods, which can include burning natural gas or coal to make up the difference.

WTE provides other useful services. WTE facilities are used to destroy pharmaceuticals and drugs for law enforcement departments. Disposal of pharmaceuticals in landfills leads to additional contaminants in leachate, that are not treated.

While WTE has benefits compared to landfilling, the waste hierarchy prioritizes waste reduction, reuse, recycling, and composting over WTE.

Air emissions from WTE and landfills, while meeting state and federal standards, contribute to the overall impacts experienced by neighboring communities. Landfills and WTE facilities located in or near environmental justice areas have a negative impact on communities already overburdened by pollution. WTE facilities in general produce more dioxins, furans, lead, and NOx (nitric oxide), while landfills create more fine particulate matter (PM₁₀ and PM_{2.5}), CO (carbon monoxide), methane, and VOCs (volatile organic compounds).

Figure 11. Municipal Solid Waste: Landfill vs. WTE



The MPCA acknowledges the impacts to residents near WTE facilities and landfills that the past siting of facilities disproportionately impacted disadvantaged communities. Reducing our reliance on WTE facilities and landfills through waste reduction and increased reuse, recycling, and organics recovery is the best way to avoid shifting pollution from one environmental justice area to another. Only then would it be appropriate to set a timeline for taking facilities off-line.

The MPCA supports managing waste as high on the waste hierarchy as possible, as is evident from the strategies in this plan. The solid waste system of the TCMA is not prepared for closing WTE facilities without development of needed infrastructure, programming, and education. The closure of the Elk River WTE facility resulted in increased landfilling, rather than increasing recycling and composting.

On October 24, 2023, the Hennepin County Board passed a board action resolution that instructs county staff to develop a plan for the closure of HERC between 2028 and 2040. Considering the Board's

decision, MPCA expects Hennepin County to develop a contingency plan consistent with the expectations under strategy 12. Ensure there are contingency plans in place if for large facility closures in order to reduce the likelihood of landfill reliance. Changes in management strategies involving large volumes of waste will have regional and potentially statewide impacts. Planning and resource investments are needed to ensure subsequent waste management systems minimize environmental impacts, are cost effective and do not result in increased burdens in communities already experiencing environmental justice concerns.

Table 5. Existing resource recovery facility capacity serving the TCMA

MMSW processing facility	Permitted capacity	Greater Minnesota-forecast tons per year	TCMA- forecast tons per year	Total - forecast tons per year
HERC	365,000	0	365,000	365,000
REC	450,000	0	450,000	450,000
City of Red Wing	36,000	23,000	13,000	36,000

Interested parties in the public and private sector need to work collaboratively to improve processing of collected materials in a way that will capture more recyclables and assess the efficacy of policies.

The MPCA has regulatory authority to ensure implementation of ROD (Minn. Stat. § 473.848) and public entity requirements (Minn. Stat. § 115A.471), both of which require processing of MMSW. Hennepin County and jointly Ramsey and Washington counties have successfully directed waste to their own processing facilities. Designation in Goodhue County has stabilized the base amount that Red Wing receives with tonnage being supplemented with contract waste from two cities in Dakota County. These efforts have allowed the three facilities to operate at full capacity. If there are delivery shortages of waste at the resource recovery facilities listed above, the landfills are obligated to fill the shortage or stop accepting waste. The MPCA expects that operational WTE facilities will continue to run at full capacity going forward.

Required strategy:

The strategy listed below is required to be incorporated into the CSWMP because it is relatively simple or has significant environmental benefit.

- 58. Counties must continue to support the implementation of Minn. Stat. § 473.848 Restriction on Disposal.** Operating resource recovery facilities at full capacity is important. Continue to require delivery of county waste to WTE facilities, if available. Submit timely ROD reports. Continue to actively participate in the quarterly certification process. Facilitate communication between facilities.

Landfilling

The system objectives strive to reduce land disposal to 5% of MMSW generation within the next ten years, recognizing that some MMSW is not processible. Some disposal options will always be necessary. If the MMSW cannot be prevented, reduced, reused, recycled, or composted, it should first go to a resource recovery facility. Only then, if the waste is not processible, should it be landfilled.

Optional strategies:

The following strategies are optional and may be incorporated into a CSWMP. Each strategy has been assigned a point value, which is added to the total amount of points the county must achieve for approval of their CSWMP by the MPCA.

59. Implement additional fees to better account for the externalities of land disposal.

Point Value: 4

Landfilling is the least expensive option at the point of disposal, but the externalities like operating the closed landfill program, groundwater monitoring, and managing vapor intrusion, make it more expensive in the long run. Closed landfills must be monitored and managed in perpetuity to protect the environment and human health. They produce contaminated fluids (leachate) and gases that must be managed properly to avoid polluting groundwater or affecting nearby structures. Finding solutions to minimize land disposal and move waste up the hierarchy will save taxpayers money in the long term. Ramsey County's environmental charge on MMSW is a good example of a possible strategy to better reflect the true costs associated with disposal. Placing a county fee on every ton of MMSW delivered to landfills can provide revenue for preferable waste management programs and can contribute to prices for residents and businesses that reflect actual, long term disposal costs.

Product stewardship

Managing waste in Minnesota is a challenge that requires consistent innovation. One evolving concept pertains to who should be responsible for managing waste. The beverage industry's shift from reusable containers to disposable resulted in an increased amount of waste. In the 1970s, other states began to introduce "bottle bills," also known as container deposit return laws, to address these concerns. This introduced the concept of industry managed product return programs.

Product stewardship was introduced in the 1990s. Product stewardship aims to shift responsibility for negative impacts to the economy, environment, public health, and worker safety to designers, manufacturers, retailers, and users of consumer products. Product stewardship should focus on the impacts of a product and its packaging throughout all lifecycle stages. This includes the material type, toxicity, raw materials, design, and recyclability.

Minnesota was a product stewardship leader in the early 1990s. Lawmakers introduced Minn. Stat. § 325E.125, subd. 3, requiring manufacturers to collect and recycle rechargeable batteries. Since then, more than 30 states have adopted product stewardship laws, including 25 states with e-waste laws. The manufacturer takes responsibility by paying to collect and recycle the products covered under law, with the products covered varying widely from state to state.

Manufacturers have continued to produce without planning for the end-of-life (EOL) management of products and by-products. Updates to the law are needed to address the full scope of the lithium battery issue. When manufacturers are responsible for end-of-life costs, it incentivizes toxicity reduction, consideration of processing costs, and recovery yields. First Solar's take-back program is a great example of EPR. The company recovers materials from retired solar panels to create new panels. The cost of this service is passed on to the owners of the solar panels.

States have been introducing product stewardship laws that focus on materials such as solar panels, carpet, mattresses, and packaging. Studying the development of product stewardship adaptation in other areas of the country provides many benefits. It gives Minnesota an opportunity to avoid pitfalls and focus on proven strategies.

Required strategy:

The strategy listed below is required to be incorporated into the CSWMP because it is relatively simple or has significant environmental benefit.

60. Participate with the Product Stewardship Committee under the Solid Waste Administrators Association (SWAA). SWAA provides peer-to-peer networking opportunities, and the Product Stewardship Committee allows for targeted information sharing. Consistency in product stewardship goals between the metro counties is imperative for planning how to handle post-consumer materials. Strong county coordination and support of product stewardship approaches by the counties can help enact legislation and programs at the state level to move the state forward. State policy and actions can help lead to regional and national initiatives.

Household Hazardous Waste (HHW)

HHW facilities play an important role in capturing products or wastes that are not amenable to management at other waste facilities. They reduce the toxicity of the solid waste stream by providing households with an opportunity to bring pesticides, drain cleaners, mercury thermometers, stains, or varnishes, and other such products to drop-off sites. This prevents exposure and operational problems at other solid waste facilities from common HHW.

HHW collection programs are statutorily mandated to remove hazardous materials from the solid waste stream. Each of the metropolitan counties has at least one year-round site for the collection of HHW. A Reciprocal Use Agreement allows residents to use any of the HHW collection sites located in Anoka, Carver, Dakota, Hennepin, Ramsey, and Washington.

Required strategy:

The strategy listed below is required to be incorporated into the CSWMP because it is relatively simple or has significant environmental benefit.

61. Encourage retailers to increase consumer awareness of responsible end-of-life handling for products containing lithium-ion batteries. It is illegal to discard rechargeable batteries in the trash. It is important to manage batteries properly to avoid creating serious safety hazards. HHW sites are safely collecting these, but consumers are not always aware that products they purchase contain lithium-ion batteries. This strategy can be accomplished by sending a letter to all licensed tobacco retailers in your county with information such as how to request signage about HHW drop-off locations and the risks associated with improper disposal of lithium-ion batteries.

62. Continue participation in the reciprocal use agreement for HHW collection sites. This agreement allows residents of all seven metro counties to use any collection site located in the TCMA. The MPCA values the convenience provided to TCMA residents with the reciprocity agreement. The agreement should continue to be in place into the future to continue providing this service to area residents.

63. Partner with cities to increase participation in HHW collection.

Traditional methods of HHW collection capture some of this waste, but there are households that do not participate for a variety of reasons. Private companies providing specialized HHW services, retailers, cities, and other counties should collaborate to increase the number of households effectively diverting their HHW from their trash. Expanding methods of collection could increase the amount of HHW collected.

Optional strategies:

The following strategies are optional and may be incorporated into a CSWMP. Each strategy has been assigned a point value, which is added to the total amount of points the county must achieve for approval of their CSWMP by the MPCA.

64. Host monthly drop-off sites in locations other than a permanent HHW site.

Point Value: 8

The focus can be on a particular type of material, like lawn and garden chemicals in the fall, or a general collection of HHW. Ramsey County has a mobile site for general HHW collection that moves to a new location each month.

Sustainable Building and Deconstruction

Construction, renovation, and demolition of buildings, roads, and bridges produces demolition debris. Traditional demolition is wasteful and destroys usable, valuable materials. Demolition activities usually involve destruction of building materials, which are then mixed and placed in a dumpster. Once materials are mixed, it is difficult to separate them. Mixed materials may be sent for recycling, but at that stage the amount that can be recovered is minimal.

Most of the mixed materials end up going to a landfill. Better handling and preservation of existing materials would reduce unnecessary waste. Materials like concrete, wood, and metals could be diverted for reuse or recycling. In 2021, an estimated 4,842,000 tons of ISW and demolition debris was land disposed. Current ISW designation has resulted in inexpensive land disposal. While it is not the intended use, ISW designation can be used for demolition debris. The result has been growth in non-MMSW (demolition debris and ISW combined) since 2009. By comparison, MMSW experienced modest growth.

Construction and demolition waste landfills in Minnesota are governed by laws promulgated in the late 1980s, which do not require these landfills to be lined. Groundwater monitoring from these landfills found heavy metals at amounts that exceed levels safe for human health. The presence of contaminants of emerging concern were also detected.

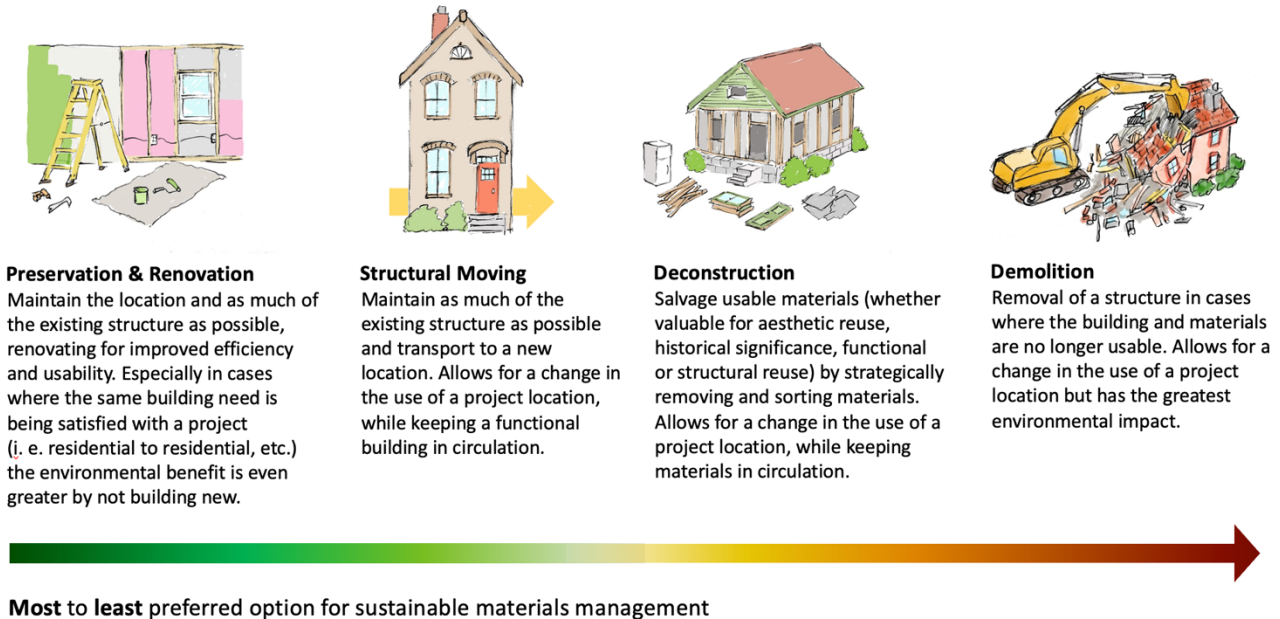
Table 6. 2021 disposal in facilities that accept TCMA waste

Waste type	Landfill type	Quantity
Industrial Solid Waste (ISW)	MMSW landfills, ISW Landfills, Class III Demo landfills or to ISW cells at MMSW landfills	3.41 million tons
Construction/Demolition Debris	MMSW landfills, ISW landfills, all types of Demolition Landfills	1.43 million tons
Mixed Municipal Solid Waste (MMSW)	MMSW Landfills	1.10 million tons

Industry has opportunities to improve sustainability in earlier stages of material design and manufacturing. The production of building sector contributes significant GHGe. Building design, maintenance, preservation, and removal also provide opportunities to address sustainability. TCMA counties must consider the broader climate impacts of buildings, beyond end-of-life management.

The greatest environmental benefits are driven by prevention, achieved by reusing existing structures and materials. For example, reuse of buildings with average energy performance provides a greater GHGe reduction when compared to energy efficient new construction. Building preservation and reuse provide the greatest opportunity to avoid GHGe. Furthermore, reused building materials are also diverted from landfills. The TCMA has a low recycling rate for construction and demolition material. While increasing the recycling rate could have benefits, prevention will be the most impactful. Preservation maintains the location and as much of the existing structure as possible. Renovation can provide improved efficiency and usability. Structural moving keeps a functional building in circulation.

Figure 12. Sustainable Building SMM Guidance from most to least preferred management methods



Required strategies:

The strategy listed below is required to be incorporated into the CSWMP because it is relatively simple or has significant environmental benefit.

65. Implement the use of a Building Material Management Plan. Also commonly known as Material Conservation and Waste Management Plan, this tool is for buildings going through renovation or deconstruction to document the destination of materials in building/unbuilding projects during and after project completion.

Require that a building material management plan be used for specific non-government projects or for all publicly owned buildings being modified or removed within the jurisdiction. Jurisdictions must document the type and quantity of materials that get reused, recycled, or landfilled/incinerated for all publicly owned buildings being modified or removed. Consider using the MPCA’s Building Material Management Plan Template. It is provided as a customizable Microsoft (MS) Excel spreadsheet so cities, counties, and other organizations can gather building material data to support their programs and convey important information regarding construction, renovation, deconstruction, and demolition goals or requirements within their jurisdiction.

Optional strategies:

The following strategies are optional and may be incorporated into a CSWMP. Each strategy has been assigned a point value, which is added to the total amount of points the county must achieve for approval of their CSWMP by the MPCA.

66. Prior to demolition of county-owned buildings, require that SMM strategies are considered.

Point Value: 7

For greatest impact, consider implementing these approaches in the order they are listed. Reassign the building for other government purposes. Sell the building to be used as-is or with renovations. If it is not feasible to use the building, deconstruct with all useful materials diverted from the waste stream. Divert a minimum of 75% of materials from disposal and at least 10% of materials reused. Recycle if/when deconstruction is not an option. Consider requiring publicly owned buildings

applying for a demolition permit to provide a feasibility study for deconstruction before a permit is granted.

67. Host a building material collection event or swap.

Point Value: 8

Partner with supporting cities within the county and with resale non-profits to accept used items in good condition for reuse. Promotional opportunities could include postcards, city newsletters, social media, and email. Promotional outreach should include education on the climate and other environmental and human health impacts of the lifecycle of building materials, guidelines, and lists of what is/is not accepted.

68. Provide financial assistance to offset the additional cost of building deconstruction, used building material installation, and/or structural moving.

Point Value: 8

Offer grants for building deconstruction, structural moving, and building material reuse to reduce the amount of wasted building materials and the need to manufacture new items, as well as to effectively divert materials otherwise bound for landfill. Partner with organizations that have strong relationships with lower income communities where single-family homes, multi-family units, businesses, and community centers would benefit from funding and assistance to update (ensuring repairs are done in a way that also support energy efficiency). Consider adding a step in the permitting process where the contractor is introduced to these programs.

For example, Hennepin County began offering deconstruction grants for residents in 2020. Owners of 2–4-unit housing are now offered up to \$5,000 (\$2 per square foot) to use deconstruction techniques. This grant expanded in 2022 for projects that incorporate used building materials. Ramsey County began offering grants for homeowners and developers in 2021, offering the same funding as Hennepin County for residential properties. Commercial properties are eligible for up to \$10,000. Washington County followed suit in 2022.

69. Provide deconstruction training.

Point Value: 8

To support the “unbuilding” of buildings that have reusable materials, contractors will need deconstruction training. Arrange virtual and in-person courses. Aim to develop a workforce ready to provide deconstruction services within your county. Collaborate with other counties to provide trainings, if desired.

70. Annually host or aid with home and building repair and refurbishment trainings.

Point Value: 8

These training should encourage extending the life of products and materials over replacement. Many of these types of classes are already offered through community education or building preservation organizations. Sponsoring these courses to provide free or reduced cost enrollment would fulfill this strategy. This should also be paired with EPA’s Renovator Training to avoid lead exposure.

71. Use purchasing guidelines to require environmental product declaration (EPD) for concrete.

Point Value: 7

Select products with the lowest carbon concrete for all new buildings, sidewalks, and roadways. An EPD is a comprehensive report that includes a life-cycle analysis that provides specific environmental information on a product in a common format. EPDs provide clear information on the environmental benefits of products like energy efficiency. Requiring EPDs for building materials can provide institutions with the information they need to meet specific environmental goals and report on impacts.

State-led strategies:

The following strategies are the responsibility of the MPCA to support counties.

72. **Study waste classification practices.** The MPCA should evaluate the meaning and application of statutory and rule definitions of MMSW, industrial solid waste, and industrial waste. The MPCA will analyze the solid waste system for equity opportunities. Once the evaluation is complete, the MPCA will make recommendations and changes to ensure that all parties within the system understand how to properly classify MMSW, ISW, and demolition debris.
73. **Propose changes to B3 guidelines to strengthen deconstruction requirements.** The sustainable building guideline used by the state is Buildings, Benchmarks & Beyond (B3). B3 studies building performance and develops standards to advance strategies for measuring and increasing performance of buildings receiving state funds. Most buildings participating in the B3 program are state-owned. Yet some buildings developed by local governments, including housing, have participated. The B3 Guidelines (B3-MNBSG) are a series of required and recommended performance standards. Among them are energy and waste efficiency standards (SB 2030).
74. **Incentivize deconstruction over landfilling MMSW and demolition debris.** The MPCA has been working with stakeholders connected to sustainable building material management. The goal is to support and incentivize the deconstruction and reuse of demolition debris materials, since the cost of disposal is so low. The MPCA will focus on direct deconstruction incentives.
75. **Lead Sustainable Building Group (SBG) developments.** The MPCA will serve as a technical expert for various built environment conferences, host working groups and meetings, develop legislative proposals to advance waste reduction regulations, and provide guidance for B3 and GreenStep Cities. The stakeholders in this group established a list of final recommendations, which would establish training, grants, ordinance templates, and other incentive programs to encourage reuse in construction and deconstruction.

See [Appendix G](#) for the full strategy table.

Appendix A: Overview of the current Twin Cities Metropolitan Area solid waste management system

We cannot solve on the backend the problems that are created upstream. Consumption directly leads to waste and there is little the solid waste industry can do to mitigate the issues caused by overconsumption. In 2020, the TCMA generated an estimated 3.29 million tons of MMSW. Approximately 8.6 cubic yards of non-MMSW was reported in 2021. This waste includes demolition debris, industrial, and medical waste. Non-MMSW is sent to demolition debris and/or industrial waste landfills. The TCMA solid waste infrastructure is comprised of private and public entities. Materials generated by homes, businesses, and institutions are first collected then transported, recycled, recovered, incinerated, or land disposed.

Description of the system

Minn. Stat. § 115A

The goal of this section is to protect the state's land, air, water, and other natural resources and the public health by improving waste management in the state to serve the following purposes:

1. Reduction in the amount and toxicity of waste generated
2. Separation and recovery of materials and energy from waste
3. Reduction in indiscriminate dependence on disposal of waste
4. Coordination of solid waste management among political subdivisions
5. Orderly and deliberate development and financial security of waste facilities including disposal facilities

Minn. Stat. § 473.803 requires metropolitan counties to plan and manage an integrated solid waste system. A recycling implementation strategy for meeting the goal of 75% by 2030 is mandated. The recycling rate includes both traditional recyclables, yard waste, and source-separated compostable materials. If current trends continue, we cannot expect the recycling rate to exceed an average of 61% by 2030. The MMSW recycling rate as of 2021 is 45.2 %, which has grown by almost 20% over the past 10 years.

Collection

Approximately 200 waste hauling businesses are licensed in the TCMA via a regional joint powers agreement to collect and transport MMMSW. State law requires waste haulers to provide volume-based service. TCMA communities have two types of agreements with waste haulers: open collection and organized collection. Open collection allows residents and businesses to choose their waste hauler. Cities that contract with haulers on behalf of communities have systems referred to as organized collection. About 38% of communities in the TCMA have organized trash collection and about 59% have organized recycling collection. Yard waste, organics recycling, and recycling drop-off sites serve many communities.

Toxicity reduction

Waste that is hazardous as defined by federal and state laws and local ordinances poses environmental and public health and safety risks. Toxicity reduction is an effort to manage the risks associated with the hazardous character of waste.

The TCMA addresses the hazardous character or toxicity of waste in two ways. The first, aimed at residents, encourages reduction of wastes with hazardous character, coupled with a network of HHW programs operated by counties. The second, aimed at commercial generators of hazardous waste, includes regulating under the federal Resource Conservation and Recovery Act standards for businesses in the TCMA.

HHW collection programs are imperative for removing toxic materials from the waste stream. Year-round operation of an HHW site is present in each metropolitan county. Efforts to capture HHW also include seasonal, temporary, satellite, or special one-day collections. TCMA residents may use any of the HHW collection sites located in TCMA counties due to an effective reciprocity program among the metro counties.

Chemicals in the environment are a growing concern. Their presence indicates that there are opportunities for reducing exposure to toxic chemicals through pollution prevention. Apart from lead and perhaps mercury, none of these chemicals would have been found in people 70 years ago. Air, water, and soil sampling also document the unintended presence of many toxic chemicals due to human activity.

The MPCA is conducting a PFAS source evaluation and reduction initiative with the goal of supporting operators of PFAS conduits to the environment, such as landfills. Solid waste facilities perform an essential function in society of managing waste while minimizing environmental and human health impacts. Unlike industrial facilities using or producing PFAS products, landfills have limited options for managing PFAS inputs into their facilities, and PFAS levels will reflect a composite of historic and ongoing levels in disposed materials. The MPCA regulates solid and hazardous waste in Minnesota to support an integrated waste management system and to ensure protection of public health and Minnesota's land, air, and water resources.

Recycling

Residential recycling programs consist of curbside collection and drop-off sites. Curbside recycling programs contract with a municipality or operate through subscription service. Most counties provide some funding for municipal programs. There are public drop-off locations for recyclables in five counties. Many businesses have active recycling programs, and commercial recycling accounts for a considerable part of the recycling in the region. The success of the region's recycling program is not only a result of county and city efforts, but also of the significant contribution the private sector has made through the development of markets, provision of drop-off locations, and the many elements needed for the recycling infrastructure.

Recyclables collected are taken directly to a recycling market, a recycling broker, or to an MRF. Materials commonly recovered for recycling include:

- Steel & aluminum cans
- Newspaper and magazines
- Office paper and mail
- Cardboard
- Boxes: food, beverage, toiletries
- Glass jars and bottles

- Plastic bottles, containers, jugs (#1, #2, & #5)
- Cartons

Presently, eight businesses operate MRFs that manage residential recyclable materials generated in the TCMA: Republic in Inver Grove Heights, Republic in Minneapolis, DemCon in Shakopee, Dick’s Sanitation (Recycle Minnesota) in Lakeville, Eureka Recycling in Minneapolis, Republic Services in Delano, Tennis Sanitation in Saint Paul Park, and Waste Management in Minneapolis. In 2021, the materials recycled came from these sources: 65.5% from commercial and 34.5% from residential. Historically, 20 to 25% of the residential waste and about 50% of CII waste is recycled.

Lithium-ion batteries should be disposed of via e-waste streams. However, some are disposed of in unsuitable places. Dangerous fires in garbage trucks, at transfer stations, MRFs, and landfills have resulted. Uncontrolled burning of waste is a threat to human health and the environment. Fires cause structural damage that require repairs, increased insurance costs, and require the organizations to spend funds on repairs. Insurers offering coverage to waste facilities may reasonably estimate a high risk of a severe fire breaking out, leading them to pass the financial burden of that danger to their customers. Not only are prices increasing, but also insurers are leaving the market, making it more difficult for MRFs to get insurance. The industry, which had almost 50 insurance options as little as three years ago, now has fewer than 10.

Yard waste

Under state law, yard waste should be separated from MMSW and is banned from land disposal. A few cities offer the collection of yard waste mixed with other organics for composting. Yard waste is managed through county, municipal, and private programs. Yard waste collection sites located throughout TCMA operate year-round or seasonally. They are operated by counties, cities, or private firms. Curbside collection of yard waste occurs in many areas using separate collection vehicles.

Documented yard waste volumes are reported to the MPCA; in 2020, 424,762 tons of yard waste was reported in the TCMA. The capture rate for yard waste in TCMA is 88.8%.

Invasive earthworms known as jumping worms are an emerging issue in Minnesota, with confirmed presence in Hennepin and Ramsey counties dating back to 2007. Tree diseases and invasive insects will continue to be an issue, despite efforts to diversify the tree canopy.

EAB is now identified in 30 Minnesota counties and continues to spread, which leads to the creation of wood waste. District Energy’s Saint Paul Cogeneration (SPC) facility is the only outlet at this time to manage the hundreds of thousands of tons of wood waste generated each year via biomass.

The PUC regulates energy production activities at SPC, as the facility is a source of energy production. SPC currently processes about 250 tons of wood waste annually. WTE facilities play a strong role in waste management and SPC is increasingly important in dealing with wood waste. EAB projections suggest this will continue to be a pervasive issue, with greater spread and impact.

SPC provides an important service that is environmentally preferable. If SPC were to discontinue services, it would leave the TCMA without a biomass energy resource and would lead to intentional open burning or spontaneous fires. Uncontrolled burning of wood contributes to air pollution by releasing PM2.5, benzene, formaldehyde, acetaldehyde, acrolein, and polycyclic aromatic hydrocarbons (PAHs). Extensive scientific evidence demonstrates short-term exposure to PM2.5 causes cardiovascular health effects. In 2020, reported emissions at SPC were 77,200 tons of CO₂e and a combined total of 0.34 tons of PM₁₀ and PM_{2.5}, 20.5 tons VOC and 255 tons NO_x. Control equipment at SPC greatly reduces other pollutants like lead, ammonia, and sulfur dioxide.

Organic waste management

Organics recovery programs include food rescue, food-to-livestock, and composting. Each management method can capture different mixtures of feedstock. Waste reduction opportunities to reduce organic materials diverted to trash should take priority. Further reducing or recovering organic materials from the trash can be accomplished through different diversion strategies. The MPCA is assessing the newly released EPA Wasted Food Scale to determine how it applies to operations and activities throughout Minnesota. The Food Scale was developed by EPA’s assessment of various common pathways for managing food and prioritizes them based on their environmental impacts and potential contributions to a circular economy.

Figure 13. EPA Wasted Food Scale preferred management methods



Organic materials account for a large portion of the MMSW sent to landfills and resource recovery facilities. The Burnsville Sanitary Landfill conducted a waste characterization study in 2019, which identified organics made up 49.13% of waste sorted. Hennepin Energy Recovery Center conducted a similar study in 2017, which identified organics accounting for 28.8% of total composition of waste. The

nearly 20% difference between facilities could be explained by Hennepin county's early adaption of curbside collection of organics.

Each management method has different requirements regarding what materials are acceptable, but it is clear there is substantial opportunity to reduce or recover organic materials that are currently ending up in the trash.

Access to organics collection has improved and increased in the last six years. Ramsey and Washington will roll out a joint effort for curbside collection to residents by late 2023. These counties are also looking to add anaerobic digestion as an additional method for processing organic waste, as is Hennepin County. Hennepin requires residential collection of organics. Dakota County has passed an ordinance that sets tiered effective dates to require commercial collection for different types of businesses to divert and collect food scraps from their back-of-house operations. Individuals willing to self-haul their organics have access to drop sites in every metro county.

Curbside collection primarily utilizes one of three methods:

1. Collecting organics curbside in a cart – including only food scraps, non-recyclable paper, and compostable plastics, in a compostable bag
2. Co-collecting organics with yard waste
3. Co-collecting organics, in a durable compostable bag, with MMSW (sorting facilities to remove compostable bags are required with this model)

The TCMA is currently served by several food rescue organizations, four food-to-livestock operations with garbage feeder permits (able to accept meat and vegetative food scraps), three large scale composting operations that are permitted to accept SSO, and many yard waste composting facilities. With the introduction of new programs, capacity is now a challenge. Transfer capacity, route density, and access to hauling service also remain a challenge.

In 2020 and 2022, the Legislature increased SCORE funding for the state by \$500,000 and \$700,000 respectively. The Waste Management Act includes language that requires metro counties to spend half of any increase in funding as compared to a base year of 2014 on organics (i.e., food rescue, composting, food-to-livestock, anaerobic digestion). The counties' obligations for organics spending are listed in Table 7. Metro counties detail how funding is spent as part of the annual reporting process. Their reports have confirmed compliance with this requirement and frequently show spending on organics far exceeds their obligation.

Table 7. Organics obligation by county for FY2020-2023

Metro county	FY2020 Organics obligation	FY2021 Organics obligation	FY2022 Organics obligation	FY2023 Organics obligation
Anoka	\$104,192.00	\$105,832.50	\$125,626.00	\$126,377.50
Carver	\$38,311.00	\$38,496.00	\$43,430.00	\$45,238.00
Dakota	\$123,311.50	\$123,854.50	\$154,999.50	\$156,174.00
Hennepin	\$375,199.00	\$383,780.50	\$449,543.50	\$448,556.50
Ramsey	\$163,542.50	\$164,105.00	\$183,106.00	\$178,877.50
Scott	\$47,606.50	\$48,828.00	\$59,816.00	\$61,625.50
Washington	\$79,516.50	\$77,492.00	\$97,598.00	\$99,625.50
Metro total	\$931,679.00	\$942,388.50	\$1,114,119.00	\$1,116,503.50

TCMA counties reported collecting a total of 549,135 tons of organics in calendar year 2020. Table 9 provides the total amount of organics recovery reported, by type, in the 2021 SCORE report for the TCMA counties.

Table 8. Organics recovered in 2021 (in tons) (data from the 2021 SCORE report)

Material type	Tons collected	Change from 2020
Food to livestock	107,133	-0.8%
Food to people	23,585	34.7%
Other materials	1,944	198%
Source-separated organic materials	79,891	103.7%
Yard Waste	335,379	-12.6%

The yard waste stream is primarily coming from residential sources. The food-to-livestock and food-to-people figures come from commercial sources. The 2020 data showed disparities among metro counties for organics diversion. The metro average decreased from 2019 to 2020 by nearly 20%, while some counties, like Washington, experienced growth year-on-year of nearly 80%.

It is also worth noting that the items included in the organics calculation now include yard waste composting. That policy change took effect in 2013 and now counties include documented yard waste in their annual reports to the MPCA. This change in reporting process resulted in a significant increase in the combined organics/recycling rate. Further increase in the organics recovery rate will likely be more challenging to achieve in future years.

Resource recovery

Three MMSW resource recovery facilities serve the TCMA. The Elk River Resource Recovery Project (GRE-Elk River) was an RDF processing plant owned by Great River Energy (GRE). The site became a WTE facility in 1989 and closed in 2019. GRE-Elk River's operational capacity was about 250,000 tons per year, all of which is now diverted to landfills.

Table 9. Existing resource recovery facility capacity serving the TCMA

MMSW Processing Facility	Permitted capacity	Greater Minnesota-forecast tons per year	Forecast tons per year - TCMA	Forecast tons per year - Total
HERC	365,000	0	365,000	365,000
REC	450,000	0	450,000	450,000
City of Red Wing	36,000	23,000	13,000	36,000

The HERC facility in Minneapolis uses a mass-burn technology, producing energy for district heating and electricity. The facility also recovers ferrous metal for recycling from the ash. HERC managed 361,502 tons of waste in 2021.

The Ramsey/Washington County Resource Recovery Facility (Recycling and Energy Center) is a refuse-derived fuel (RDF) facility owned by Ramsey and Washington counties. The facility was purchased by the two counties in 2016. Mixed waste is sorted into processible and non-processible waste on the tipping floor, processed, and separated into three waste streams: RDF, recyclable metal, and residue. The RDF is transported for combustion to Xcel Energy power plants in Red Wing and Mankato, where it is burned to generate electricity. The facility recovers ferrous and non-ferrous metals for recycling, and unprocessable waste and residue from processing is delivered to landfills. Recycling and Energy Center’s permitted capacity is 450,000 tons per year.

The city of Red Wing (City) operates an RDF processing plant in Red Wing. Mixed waste is sorted into processible and non-processible waste on the tipping floor, processed, and separated into three waste streams: RDF, recyclable metal, and residue. The RDF is transported for combustion to Xcel Energy’s power plant in Red Wing. The facility recovers a variety of recyclable materials including paper, plastics, and ferrous and non-ferrous metals for recycling. Unprocessable waste and residue from processing is delivered to a landfill. Red Wing’s permitted capacity is 16,000 tons per year for metro and surrounding counties and 20,000 tons for Goodhue County.

The three resource recovery facilities have a combined operating processing capacity of 802,627 tons per year, down from the over 1.15 million tons capacity the metro had before GRE-Elk River closed. In addition, there is available unpermitted, but installed capacity, of 40,000 tons per year at HERC. In 2021, PCA prevailed in court on ROD. Since that time, processing capacity has been fully utilized at the three remaining facilities. There is currently no additional capacity, which has increased use of land disposal.

Landfills

In 2021, 33% of the TCMA MMSW was land disposed. Nine landfills received 1,102,177 tons of TCMA MMSW, with 15% destined for landfills located out of state. Figure A-2 shows total amounts of TCMA MMSW that the landfills received in 2021, with 93% of total waste headed to landfill classified as unprocessed MMSW. Four Minnesota landfills receive the majority of TCMA MMSW, with collective remaining permitted MMSW capacity of approximately 10.2 million cubic yards. If these facilities continue to receive waste at approximately the same rate in the future, the permitted capacity will range from 4.9 to 14 years. Notwithstanding, this does not consider the additional design capacity that could potentially be permitted or practices that move materials up the waste management hierarchy.

Table 10. Landfill locations accepting TCMA waste

State	Landfill name	Owner	Total tons
Minnesota	Elk River Landfill SW-74	Waste Management	255,741
Minnesota	Pine Bend Sanitary Landfill SW-45	Republic Services	474,508
Minnesota	Burnsville Sanitary Landfill SW-56	Waste Management	160,481
Minnesota	Spruce Ridge Resource Management Facility SW-6	Waste Management	44,830
Minnesota	Nobles County Landfill Inc SW-11	Waste Connections	2,038
Minnesota	N/A	N/A	736
Wisconsin	Lake Area Landfill	Republic Services	43,606
Wisconsin	Rice Lake Landfill	Allied Waste Services	1,225
Wisconsin	Seven Mile Creek Landfill	GFL Environmental Inc.	27,859
Iowa	Central Disposal Landfill	Waste Management	91,153
MN Total			938,334
Out of State total			163,843
Grand total			1,102,177

Of note, Seven Mile Creek Landfill was acquired by a Wisconsin-based hauler, and it no longer accepts TCMA waste. If TCMA landfills are not allowed to expand, Twin Cities residents could end up with no facility to send their waste. In January 2021, four landfills applied for additional capacity. The agency has made determinations of how TCMA waste would be allocated to the four applicant facilities that requested additional capacity:

- Burnsville Sanitary Landfill – 1,692,893 tons
- Dem-Con Landfill – 627,244 tons
- Pine Bend Sanitary Landfill – 2,398,746 tons
- Rich Valley Landfill – 893,889 tons

Permitting capacity is in flux because two of these facilities have not submitted permit applications to accept MMSW.

Expanding landfill capacity in TCMA is a direct result of the closure of GRE. Minnesota has four MMSW landfills. The TCMA currently houses two, both located in Dakota County. The Burnsville Sanitary Landfill, located in Burnsville, is owned by Waste Management Inc. (WMI). The Pine Bend Sanitary Landfill, located in Inver Grove Heights, is owned by Republic Waste. Both landfills operate methane gas-to-energy systems that capture methane gas generated by the decaying waste. Two other Minnesota landfills that receive significant amounts of TCMA MMSW are the WMI Spruce Ridge Landfill in McLeod County and the WMI Elk River Landfill in Sherburne County. These also operate methane gas-to-energy systems. For the four Minnesota landfills that receive the majority of TCMA MMSW, while the efficiency of the gas collection systems has not been established, it is estimated that an average of 75% of the methane that is captured is used to produce electricity, and the remaining captured methane is flared.

Two out-of-state landfills received TCMA MMSW in 2021, including the Republic Services Lake Area Landfill in Sarona, Wisconsin, and the Rice Lake Landfill in Rice Lake, Wisconsin.

Non-MMSW management

In 2021, an estimated 4,841,899 tons of non-MMSW waste was land disposed. The TCMA is served by nine landfills that accept industrial wastes and/or demolition debris, or non-MMSW. These landfills have approximately 25 million cubic yards of remaining capacity. Non-MMSW includes nonhazardous industrial waste, demolition debris, materials banned from disposal with MMSW, problem materials, infectious waste, and other waste streams that are not MMSW or otherwise defined or regulated as hazardous waste.

Materials separated for recycling at some demolition debris transfer stations and landfills include concrete, bituminous asphalt, aluminum, copper, steel, brick, mattresses, appliances, and tires. Other materials have the potential to be separated and recycled from the demolition debris. Private businesses own and operate most of the TCMA facilities that manage non-MMSW. There is some public sector activity in managing certain non-MMSW materials in the TCMA, such as tree waste processing and crushing, and concrete or road base material recycling.

Table 11. Non-MMSW landfills accepting TCMA demolition debris

Facility name	Demolition debris tons	Industrial tons
Dawnway Demolition Landfill - SW-303	32,033	0
Dem-Con Landfill Hawick SW-629	14,556	0
Dem-Con Landfill, LLC - SW-290	315,033	141,264
DKV Demolition Landfill - SW-429	762	0
Elk River Landfill - SW-74	2	0
Ladd Demolition Landfill - SW-469	152	0
Pine Bend Landfill - SW-45	761	225,258
Rolling Hills Landfill, Inc - SW-60	0	2,399
Shamrock Landfill -SW-399	51	30
SKB Lansing Landfill - SW-514	316	1,739
SKB Rosemount Industrial Waste Facility – SW-383	885,460	2,775,210
Spruce Ridge Resource Management, Inc. – SW-6	2,924	39,727
Valley Demolition and Recycling, LLC – SW-527	2	0
Vonco II Becker - SW-580	182,708	221,512
Grand total	1,434,760	3,407,139

Appendix B: Environmental justice review

The MPCA defines environmental justice as the fair treatment and meaningful involvement of all people regardless of race, color, national origin, or income with respect to the development, implementation, and enforcement of environmental laws, regulations, and policies. This will be achieved when everyone benefits from the same degree of environmental protection and has equal access to the decision-making processes that contribute to a healthy environment. In May 2022, the MPCA released the [Environmental Justice Framework](#) which established the vision, strategies, and implementation actions for integrating environmental justice principles into the MPCA's work. This report includes a commitment to evaluate the environmental justice implications of program policies. The MPCA is developing an environmental justice review tool, which can be used broadly across all the agency's work, as well as detailed tools for specific program areas. The MPCA will share these tools and resources with counties once they are complete.

The following sections constitute the MPCA's environmental justice review of the MPP. Counties are required to complete an environmental justice review when developing their respective CSWMP.

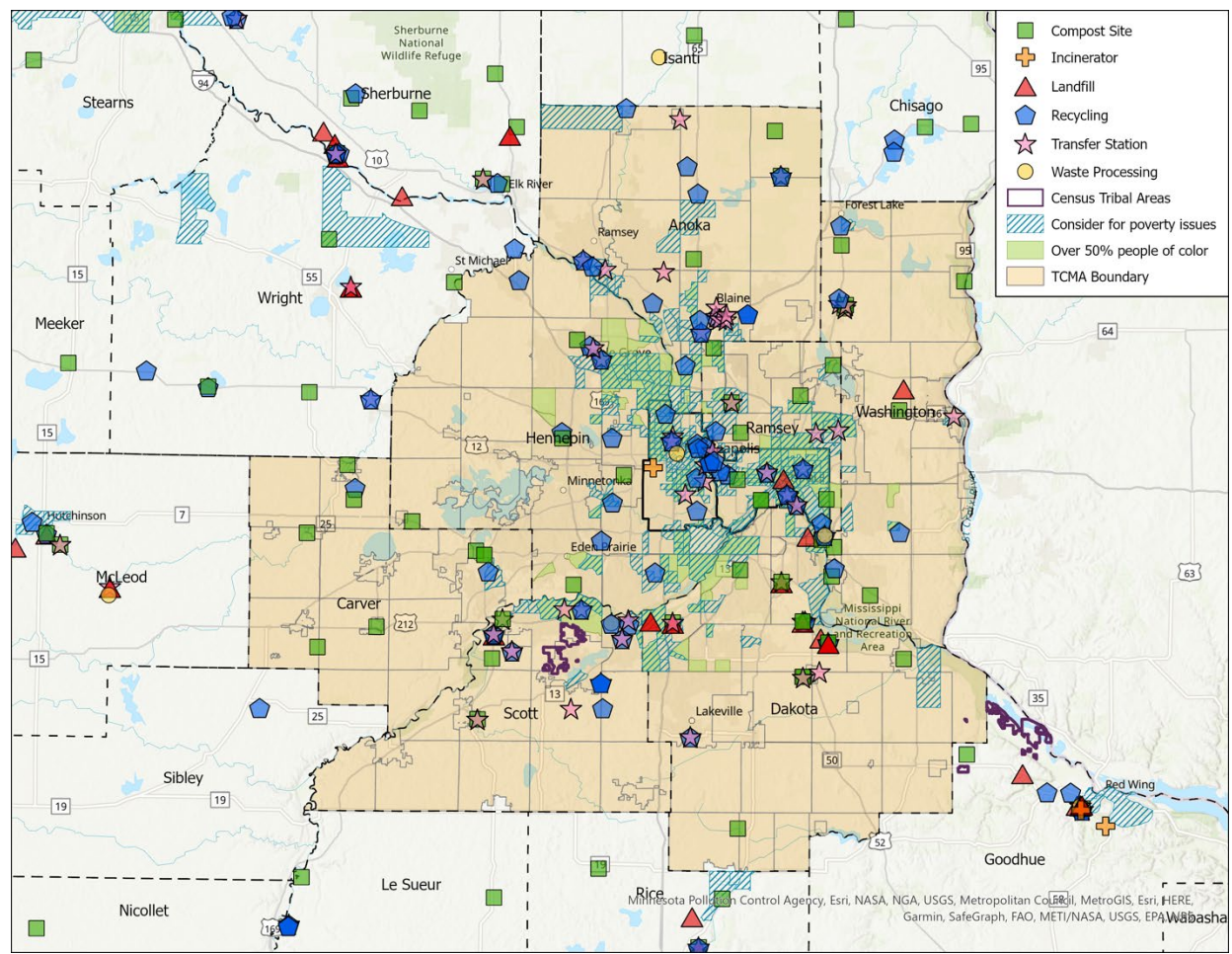
1. Identify potentially affected communities. Identify facilities that are in areas of concern for environmental justice. This is defined by the MPCA as census tracts using data from the U.S. Census and American Community Survey, meet one or both demographic criteria, and are consistent with the criteria established by the Metropolitan Council. These two criteria are defined as:
 - Total population of people of color greater than 50%
 - More than 40% of the population with income less than 185% of the federal poverty level
2. Identify who is likely to be affected by the proposed policy. What are the impacts of the proposed policy on communities of concern for environmental justice? Will it create disproportionate impacts or increase existing disproportionate impacts on minority or low-income populations? Examples include impacts on health, quality of life (from noise or visual impacts, etc.), personal finances, etc.
3. Review for impact. What are the opportunities for action? If the proposed policy would result in negative environmental or socio-economic impacts, or would add to cumulative impacts to people of color and low-income populations, what steps could be taken to avoid or mitigate these impacts? Additionally, does the proposed policy present opportunities to address existing disproportionate impacts on people of color, low income, or indigenous populations? Develop a list of likely impacts and actions to ensure that negative impacts are mitigated, and positive impacts are enhanced.
4. Assess engagement. How have you involved community members and stakeholders? What specific measures have been taken to engage community members in areas of concern for environmental justice?
5. CSWMP must include description of how the county has engaged with disadvantaged communities during the development of the CSWMP. Solid waste facilities must also engage with disadvantaged communities in their area when appropriate. Counties and facilities must always consider the impact to residents, particularly the disadvantaged communities that are more difficult to hear from, when making decisions about solid waste management.

Our models show low-income communities and areas of higher concentrations of people of color are at a greater risk from air pollution. Residents in 46% of lower income areas and 91% of communities of color experience air pollution risk above health guidelines (compared to only 32% of communities statewide). For this reason, the MPCA uses these criteria, as well as tribal boundaries, as a preliminary screening to identify areas where additional review or action is needed or desired. Additional information on variables such as language, education, and housing are considered and factored into

decisions and actions for areas where the preliminary screening has indicated a need to take a closer look.

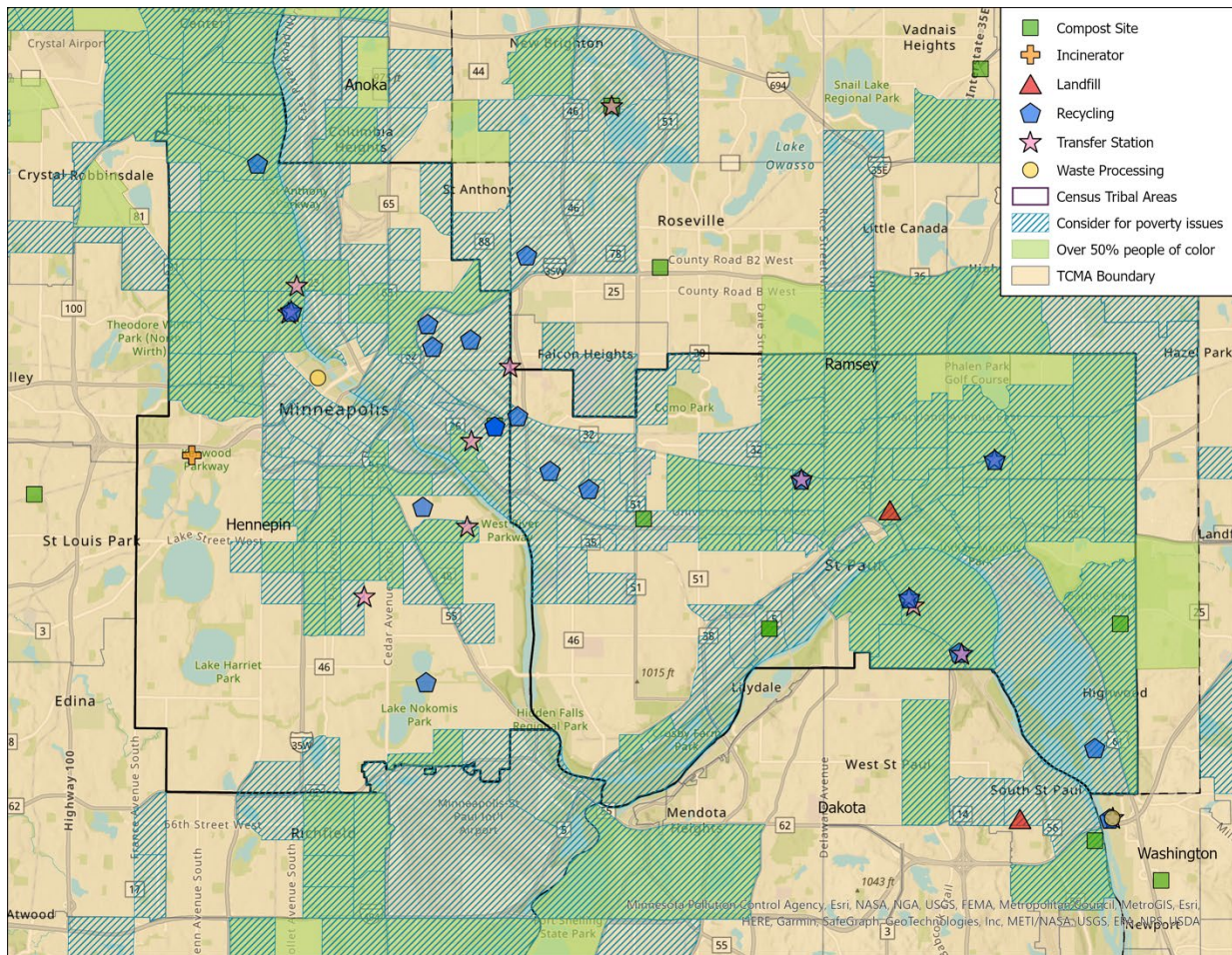
Figures 10 and 11 show solid waste facility locations and census tracts that are considered areas of concern for environmental justice. Areas marked with purple lines are census tracts with more than 40% of the population earning income less than 185% of the federal poverty level. As of 2022, this is an annual income of \$51,338 for a family of four.

Figure 14. Map of solid waste facilities and EJ boundaries located within the TCMA



Areas shaded in green are census tracts with greater than 50% people of color.

Figure 15. Map of solid waste facilities and EJ boundaries located within Minneapolis and Saint Paul



The first priority of the MPP is to ensure the proper management of waste to protect human health and the environment. The MPP also supports reducing waste and increasing recycling. The policies and strategies proposed in the MPP are intended to reduce the environmental impacts associated with waste, because reduction in environmental impacts is beneficial to all Minnesotans.

The TCMA is home to several waste management facilities – out of 125 facilities, 42 of these are in areas of concern for environmental justice. Reducing waste generation would mean less material would need to be managed by these facilities. Meeting the landfill diversion goals established in the MPP would likely divert material from landfills to regional recycling, organics recovery, and resource recovery facilities, including the facilities located within areas of concern for environmental justice. The potential impacts include increases in traffic and noise, as well as potential impacts to air quality due to increased vehicular traffic and facility emissions.

If the objectives in the MPP are attained, the region may need more recycling and organics recovery facilities. These facilities would be subject to the standard process for new facility development, outlined in Appendix D. In addition, as described in the MPCA’s environmental justice framework when considering permit applications for new facilities and during renewal of existing permits for facilities located in areas of concern for environmental justice, the MPCA will:

- Identify facility and permit types that warrant additional actions based on the potential for adverse effects.

- Identify and evaluate additional measures, beyond meeting established permit limits, to avoid and diminish impacts.
- Increase civic engagement, public participation, and outreach for community groups and residents.
- Foster increased community involvement and actions on the part of the entities that we regulate.
- Consider ways to prioritize work to enhance benefits to areas of concern for environmental justice.

A large role of the MPCA is ensuring that facilities are properly permitted to minimize human health and environmental harm. During permitting for facilities in areas of concern for environmental justice, the MPCA can identify and evaluate additional measures, beyond meeting established permit limits, to avoid and diminish impacts. This could include changing processes or procedures, installing additional pollution control equipment, or otherwise achieving a lower level of pollutant release than required by state or federal requirements. The MPCA can also work with the permittee to incorporate these measures into the permit or supplemental documents as possible.

Compliance and enforcement are other tools the MPCA can use to mitigate potential impacts. The MPCA could determine that more frequent inspections at facilities in areas of concern for environmental justice is needed to ensure the facilities are meeting applicable regulations and permit conditions.

Consistent with the WMA hierarchy, this MPP prefers resource recovery to landfilling. Communities of concern for environmental justice have indicated their concern about air emissions from resource recovery facilities located within their boundaries. To reduce reliance on resource recovery facilities and landfills, this MPP promotes best practices designed to reduce waste and increase recycling and organics recovery. While the MPCA recognizes that waste will continue to be processed at resource recovery facilities and disposed at landfills, the aggressive objectives established in this MPP encourage the TCMA to significantly reduce reliance on these less preferable management methods.

Certain strategies proposed in this MPP would directly benefit communities in areas of concern for environmental justice. For example, the MPP recommends implementing organized collection for MMSW. Organized collection is a more efficient method of managing trash and can lead to reductions in illegal dumping, a common concern in lower income communities. Lower mobile source emissions and reduced truck traffic are additional benefits of organized collection. The MPP also includes an environmental justice review in the permitting process – for new and existing facilities – to ensure that environmental justice concerns are addressed.

Appendix C: Predrafting notice

Statement of subjects expected to be covered by revisions to the Metropolitan Area Solid Waste Policy Plan

Introduction

The Minnesota Pollution Control Agency (MPCA) has started the process to prepare revisions to the TCMA Solid Waste Management Policy Plan (MPP). The current MPP can be viewed [online](#) or it can be provided by request. The current MPP was adopted by the MPCA on April 6, 2017. The new revised MPP will be adopted by the MPCA Commissioner by December 31, 2022.

Revisions to the MPP will be prepared in accordance with Minn. Stat. § 473.149. The MPP contains goals and policies for solid waste (i.e., all waste, except wastewater and other liquid wastes) management, including recycling and household hazardous waste management. The statute requires that the MPP contain objectives to decrease the landfilling of MMSW, what most of us consider garbage, and specific components of the solid waste stream, including residuals and ash. The MPP must be followed by entities who play a role in TCMA solid waste management.

The MPCA is required to prepare this pre-draft notice to solicit public comments on the anticipated revisions to the MPP. MPCA welcomes public comments. They will be carefully reviewed and taken into consideration when MPCA makes decisions regarding updates to the MPP. Public comments must be received within 45 days from the date of the publication in the State Register. Questions about the document or the process may be directed to Peder Sandhei at 651-757-2688 or 1-800-657-3864 (toll-free in Minnesota). Public meetings are currently scheduled for May 26, 2021, for MPCA staff to answer questions, and hear comments.

Written comments on the pre-draft notice should be sent to: peder.sandhei@state.mn.us

Comments must be received by the MPCA by 4:30 p.m., C.S.T., July 12, 2021. [Written correspondence may be sent to the following address: Peder Sandhei, Minnesota Pollution Control Agency, 520 Lafayette Rd. N., 2nd Floor, St. Paul, Minnesota 55155-4100]

If you wish to stay informed on the development of the MPP, please submit a comment on the pre-draft notice by the deadline indicated above. All comments will be published on the Agency's MPP website page and commenters will be added to a stakeholder list and be notified of any future MPP developments. If you do not submit a comment on the pre-draft notice but would like to be included on future MPP related distributions, please contact Mr. Sandhei.

Overall approach and philosophy

The MPP revisions will focus on:

- Reduction in the amount of waste generated
- Reduction in the toxicity of waste generated
- Recycling and composting
- Recovery of energy from waste
- Reduction in land disposal (landfilling)
- Coordination of solid waste management among cities, counties, townships, etc.
- Broadening participation and accountability for all parties involved in solid waste management

- Protection of public health and state’s air, land, water, and other natural resources
- Additional emphasis on SMM principles and environmental benefits that consider life cycle analysis, such as GHG impacts, rather than tons diverted from land disposal
- Environmental Justice

The MPP will continue to support: SMM principles, treating waste as a resource; minimizing the use of landfills; waste and toxicity reduction; the management of all solid waste; recycling and organics goals; region-wide waste processing; regional coordination; and minimizing environmental impacts. The MPP will continue to support policies aimed at preventing, reducing, and managing all wastes such as household solid waste, construction and demolition waste, industrial solid waste, and ash.

The MPP revisions will be developed consistent with the State policies and purposes expressed in Minn. Stat. § 115A.02 of the Minnesota Waste Management Act (WMA). The MPP will support the WMA hierarchy of preferred waste management methods.

The MPCA will consult with the seven metro counties, the public and private sector, and other interested stakeholders in the revision of the MPP.

Description of how the existing solid waste system serves the Twin Cities Metropolitan Area

The TCMA’s current solid waste infrastructure has developed extensively since the passage of the 1980 WMA. In 2019, 47% was recycled or composted, and additional 21.5% was processed for energy recovery, and 31% was landfilled.

The MPP will describe how the existing solid waste system benefits the TCMA, including the environmental benefits, and how the new MPP proposes to increase those benefits. The MPP will also identify the amount of waste and types of materials managed by the different solid waste management methods.

The MPP will show how a comprehensive waste prevention, reuse, recycling, composting, processing, and disposal system to manage solid waste (integrated solid waste system), consistent with the waste management hierarchy, protects public health, supports a vibrant economy, reduces emissions of air pollutants such as GHGs, conserves energy and resources, and produces energy. It will also discuss how the solid waste system can be improved through more effective governance, a more efficient collection system, broadened accountability, and additional landfill reduction.

Addressing obstacles in the metro solid waste system

The MPP will discuss some challenges that face the TCMA solid waste system, including, but not limited to:

- Local government responsibility over solid waste management
- Accountability throughout the system
- Collection of SMM accurate and meaningful data
- Expansion of SMM principles
- A need for effective recycling
- Recycling market development
- Opportunities to advance productive use and disposal of materials

Solid waste management facilities and programs

The MPP will include goals and policies for solid waste management, including recycling consistent with Minn. Stat. § 115A.551, and household hazardous waste management consistent with Minn. Stat. § 115A.96, subdivision 6, in the TCMA.

The MPP will include specific and quantifiable regional objectives for minimizing waste generation and reducing reliance on the practice of landfilling of MMSW and other components of the solid waste stream. The objectives will be stated for a period of at least 20 years. The MPP will also include objectives for waste reduction, reuse, and minimization of solid waste through recycling, organic waste composting, and resource recovery, for a period of at least 20 years.

The MPP will identify:

- Environmental and resource management benefits of waste processing (WTE)
- Quantities and geographic origin of waste requiring processing
- Available WTE facility capacity, and the inter-county regional opportunities for the development of future processing capacity and opportunities for inter-county sharing of waste

The MPP will evaluate the existing state and regional administration structure and make appropriate recommendations that best fulfill the needs of integrated solid waste management. The MPP also will explore issues beyond the TCMA jurisdiction that affect the regional solid waste system.

MPP implementation tools

The MPP will include procedures, standards, and criteria regarding the MPCA review of: CSWMP; annual waste certification reports; waste facility permits; certificates of need; waste designation, and solid waste supply contracts and processing agreements. The usefulness of these reviews will also be examined to determine if some of them should be eliminated, changed or if others are needed.

Finally, the MPP will include standards and criteria for the MPCA review of solid waste facility permits regarding the following matters: general location; capacity; waste supply; operation; processing techniques; environmental impact; effect on existing, planned, or proposed collection services and waste facilities; and economic viability.

Appendix D: Procedures, standards, and criteria

Minn. Stat. § 115A, 116 and 473 authorize the MPCA to formulate and set out procedures, standards, and criteria to implement the Metropolitan Solid Waste Management Policy Plan (MPP) 2023 to 2043 and facilitate the MPCA's review of:

- Solid waste facility permit applications
- Solid waste supply and processing contracts
- Waste district proposals
- Waste designation proposals
- Landfill certificates of need proposals
- County annual and waste certification reports
- County solid waste management plans (CSWMP)

The MPCA will implement the MPP when conducting these reviews. Public and private entities subject to review are encouraged to contact the MPCA before preparing and submitting approval requests. The MPCA will coordinate its review with other applicable state and local procedures.

Solid waste facility terms and definitions

The MPCA will administer the MPP using terms and definitions used in chapters 115A, 116, and 473 and related rules.

Solid waste facility permit applications

The MPCA review of solid waste facilities is governed primarily by Minn. Stat. § 473.823. Minn. Stat. § 473.823, subd. 3(b) provides that a permit may not be issued for the operation of a solid waste facility in the TCMA that is not “in accordance with the Metropolitan Policy Plan.” The statute also provides that in making this determination, *“the commissioner shall consider the areawide need and benefit of the applicant facility and the effectiveness of proposed buffer areas to adequately protect surrounding land uses in accordance with the Metropolitan Policy Plan, and may consider, without limitation, the effect of the applicant facility on existing and planned solid waste facilities.”* In this section of the MPP, the MPCA establishes the procedures that shall be applied for review of new and existing solid waste facility permit applications, including the information to be submitted in particular applications, when those applications will be requested, and how the MPCA will approve, disapprove, or conditionally approve such facilities.

Minn. Stat. § 473.823 is reproduced below

473.823 RULES AND PERMITS.

Subd. 3. Solid waste facilities; review procedures. (a) The agency shall request applicants for solid waste facility permits to submit all information deemed relevant by the commissioner for review, including without limitation information relating to the geographic areas and population served, the need, the effect on existing facilities and services, the effectiveness of proposed buffer areas to ensure, at a minimum, protection of surrounding land uses from adverse or incompatible impacts due to landfill operation and related activities, the anticipated public cost and benefit, the anticipated rates and charges, the manner of financing, the effect on metropolitan plans and development programs, the supply of waste,

anticipated markets for any product, and alternative means of disposal or energy production.

(b) A permit may not be issued for the operation of a solid waste facility in the metropolitan area which is not in accordance with the metropolitan policy plan. The commissioner shall determine whether a permit is in accordance with the policy plan. In making this determination, the commissioner shall consider the areawide need and benefit of the applicant facility and the effectiveness of proposed buffer areas to adequately protect surrounding land uses in accordance with the policy plan, and may consider, without limitation, the effect of the applicant facility on existing and planned solid waste facilities.

(c) If the commissioner determines that a permit is in accordance with the policy plan, the commissioner shall approve the permit. If the commissioner determines that a permit is not in accordance with the policy plan, the commissioner shall disapprove the permit. Approval of permits may be subject to conditions the commissioner determines are necessary to satisfy criteria and standards in the policy plan, including conditions respecting the type, character, and quantities of waste to be processed at a solid waste facility used primarily for resource recovery and the geographic territory from which a resource recovery facility or transfer station serving such a facility may draw its waste.

(d) A permit may not be issued in the metropolitan area for a solid waste facility used primarily for resource recovery or a transfer station serving the facility, if the facility or station is owned or operated by a public agency or if the acquisition or betterment of the facility or station is secured by public funds or obligations issued by a public agency, unless the commissioner finds and determines that adequate markets exist for the products recovered and that establishment of the facility is consistent with the criteria and standards in the metropolitan and county plans respecting the protection of existing resource recovery facilities and transfer stations serving such facilities.

Procedures for obtaining MPCA approval of solid waste facility permits

Coordination of MPCA review. For existing facilities, the MPCA will request information related to the solid waste facility and information required in the MPP before the MPCA completes review and reissues the permit. The MPCA may request additional information from solid waste facility permit applicants after the adoption of the MPP. The application will need to contain information related to the proposed solid waste facility and information required in the MPP.

Basic information required. To obtain MPCA approval solid waste facility permit applicants must include:

- Information relating to the geographic areas and population served, including highlighting areas of concern for environmental justice
- The need for the facility, including information that shows that new or expanded resource recovery and disposal facilities are consistent with MPCA most recent forecast of waste generation and waste management objectives
- The effect of the facility on existing facilities and services
- For public facilities: The effect of public facilities on existing comparable public and private facilities
- The effectiveness of proposed buffer areas to ensure, at a minimum, protection of surrounding land uses from adverse or incompatible impacts due to landfill operation and related activities
- The anticipated public costs and benefits of the facility
- The anticipated rates and charges
- The manner of financing

- The effect on metropolitan CSWMPs and development programs
- The supply of waste
- Solid waste supply contracts subject to Minn. Stat. § 473.813
- Anticipated markets for any product
- Alternative means of disposal or energy production
- Additional information required by the commissioner, including but not limited to, environmental justice review criteria (see Appendix B for more information)
 - All solid waste facilities located in environmental justice zones must:
 - Do an annual impact review. Identify how the facility is impacting the neighborhood in which it resides. Develop a list of impacts and benefits to the community. Examples of impacts could include air emissions such as particulate matter, traffic concerns due to trucks, odors, or others.
 - Develop a plan for mitigating the negative impacts and enhancing the benefits to the community including the process for community engagement.
 - Engage with the local community on an annual basis to make sure their concerns are addressed in the plan.
- The owner or operator of any landfill or waste combustor shall conduct a waste composition study. Waste composition analysis must include the following:
 - Sampling protocol must follow the most recent ASTM International Test Standard D 5231-92 or an alternative as approved by the MPCA.
 - Material waste type categories must be consistent with the most recent Statewide Waste Characterization or otherwise approved by MPCA prior to the sort occurring

Standards/criteria for approval of solid waste facility permits as consistent and in accordance with the MPP

Following receipt of a complete application, the commissioner shall determine whether a permit is consistent and in accordance with the MPP within 90 days. In making this determination, the commissioner shall consider:

- The area wide need and benefit of the applicant facility.
- The effectiveness of proposed buffer areas to adequately protect surrounding land uses in accordance with the MPP.
- The effect of the applicant facility on existing and planned solid waste facilities.
- The requirements of Restriction on Disposal in Minn. Stat. § 473.848.
- For a solid waste facility used primarily for resource recovery or a transfer station serving the facility and owned or operated by a public agency or if the acquisition or betterment of the facility or station is secured by public funds or obligations issued by a public agency (public facility), the owner must demonstrate that:
 - Adequate markets exist for the products recovered.
 - The public facility does not displace comparable private and public facilities already existing in the area unless the displacement is required in order to achieve the waste management objectives identified in the MPP.
 - The public facility is consistent with the applicable CSWMP.
 - The public facility is necessary to achieve the waste management objectives identified in the CSWMP.

- The public facility is consistent with state policy and purposes outlined in Minn. Stat. § 115a.02 and Minn. Stat. §§ 473.842 to 473.849.

Minn. Stat. § 473.149 provides that *“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 include additional criteria and standards to protect comparable private and public facilities already existing in the area from displacement unless the displacement is required in order to achieve the waste management objectives identified in the plan.”* For solid waste facilities owned or operated by public agencies or supported primarily by public funds or obligations issued by a public agency (public facility), the owner must demonstrate that the public facility:

- Does not displace comparable private and public facilities already existing in the area unless the displacement is required in order to achieve the waste management objectives identified in the CSWMP.
- Is consistent with the applicable CSWMP.
- Is necessary to achieve the waste management objectives identified in the CSWMP.
- Additional information required by the commissioner, including but not limited to, environmental justice review criteria (see Appendix B for more information)
- All solid waste facilities located in environmental justice zones must:
 - Do an annual impact review. Identify how the facility is impacting the neighborhood in which it resides. Develop a list of impacts and benefits to the community. Examples of impacts could include air emissions such as particulate matter, traffic concerns due to trucks, odors, or others.
 - Develop a plan for mitigating the negative impacts and enhancing the benefits to the community including the process for community engagement.
 - Engage with the local community on an annual basis to make sure their concerns are addressed in the CSWMP.
- The owner or operator of any landfill or waste combustor shall conduct a waste composition study every five years. Waste composition analysis must include the following:
 - Sampling protocol for waste composition studies must follow the most recent ASTM International Test Standard D 5231-92 or an alternative as approved by the MPCA.
 - Material waste type categories must be consistent with the 2013 Statewide Waste Characterization or otherwise approved by MPCA prior to the sort occurring
- Is consistent with state policy and purposes outlined in Minn. Stat. § 115A.02 and Minn. Stat. §§ 473.842 to 473.849.

If the commissioner determines that a permit is in accordance with the MPP, the commissioner shall approve the permit. If the commissioner determines that a permit is not in accordance with the MPP, the commissioner shall disapprove the permit.

Solid waste supply and processing contracts

Cities, counties, and towns in the TCMA can enter contracts for the delivery of solid waste to waste facilities and can enter into contracts for the processing of solid waste (Minn. Stat. § 473.813, subd. 1). Before a local unit of government enters into a waste management contract for a period of longer than five years in duration, they must get MPCA approval (Minn. Stat. § 473.813, subd. 2). The success of waste facilities often depends on long-term commitments for waste supplies and processing. It is anticipated that long-term supply and processing contracts may continue to be used as new or existing

contracts are renewed or renegotiated. Existing MPCA contract approvals will remain in effect unless (1) the contract term is extended; or (2) the contract is amended or revised during its term.

Minn. Stat. § 473.813 is reproduced below

473.813 CITIES, COUNTIES, TOWNS; SOLID WASTE CONTRACTS.

Subdivision 1. For up to 30 years. Notwithstanding any contrary provision of law or charter, and in addition to the powers or authority granted by any other law or charter, a city, county, or town in the metropolitan area may directly negotiate and enter into contracts, for a term not to exceed 30 years, for the delivery of solid waste to a waste facility and the processing of solid waste. Contracts made by direct negotiations shall be approved by resolution adopted by the governing body of the city, county, or town.

Subd. 2. Review by commissioner. Before a city, county, or town enters into any contract pursuant to subdivision 1 for a period of more than five years, the city, county, or town shall submit the proposed contract and a description of the proposed activities under the contract to the commissioner for review and approval. The commissioner shall approve the proposed contract if the commissioner determines that the contract is consistent with the metropolitan policy plan, permits issued under section 473.823, and county reports or approved master plans. The commissioner may consolidate the review of contracts submitted under this section with the review of related permit applications submitted under section 473.823 and for this purpose may delay the review required by this section.

Procedures for review of solid waste supply and processing contracts

- **Procedure:** Any city, county, or town entering into a contract for the delivery of solid waste to a waste facility and the processing of solid waste for a term longer than five years, shall submit that contract to the MPCA for review at least 90 days prior to the anticipated effective date of the contract. Contracts subject to this review include waste delivery agreements, organized collection contracts, host community fee agreements in lieu of fees authorized under Minn. Stat. §§ 115A.919 and 115A.921 if they include a waste delivery provision, and other agreements including waste delivery provisions.
- **Application of standards to contracts:** MPCA will approve contracts if the proposed contract is consistent with the MPP, permits issued under Minn. Stat. § 473.823, and county annual reports and approved CSWMP. A contract to deliver waste to a facility that is not specified in the applicable CSWMP will not be approved. To be approved, a contract to deliver waste must have a provision that terminates the contract in less than 30 years.
- **Timely MPCA contract review:** All contracts submitted to the MPCA for review will be reviewed and approved or not approved within 60 days. The MPCA will notify the city, county, or town of its decision, and if the contract is disapproved MPCA will notify the city, county, or town of the reasons for disapproval.
- **Consolidation of contract review with permit review:** MPCA may consolidate the review of contracts submitted under this section with the review of related permit applications submitted under Minn. Stat. § 473.823 and, for this purpose, may delay the review required by this section.
- **Contracts that are inconsistent with the MPP:** If MPCA determines that a contract is not consistent with the MPP, then MPCA may require that the parties to the contract revise its terms and re-submit the revised contract for MPCA approval.

Waste management districts

The procedure, standards, and review criteria for waste management districts is set out in Minn. Stat. §§ 115A.62 to 115A.72. Minnesota counties, including metropolitan counties, can form waste management districts. This authority enables counties to implement waste management practices they may not be able to conduct independently, or which can be more effectively performed jointly. The establishment of a waste management district must be approved by the MPCA. Specific conditions may be incorporated as part of the MPCA's approval. Minn. Stat. § 115A.63, subd. 3 provides that a waste management district formed by metropolitan counties must have the same procedural and substantive responsibilities and duties as a metropolitan county, including requirements for preparing a comprehensive solid waste management plan. The requirements for county solid waste planning are contained in Minn. Stat. § 473.803 and in the MPP.

Waste designation proposals

The Waste Management Act, Minn. Stat. §§ 115A.80 to 115A.893, allows county or waste district to designate a facility where all MMSW generated within its boundaries, or a service area thereof, is required to be delivered. Using designation to direct the waste to a particular destination is referred to as waste designation or waste assurance. The MPCA approval of waste designations is required for designation to take effect. Designation is authorized by the Minnesota Legislature to further state policies and purposes, as articulated in Minn. Stat. § 115A.02, and to advance the public purposes served by effective solid waste management. See Minn. Stat. § 115A.80.

The procedures, standards, and criteria for approval of waste designation are contained in Minn. Stat. §§ 115A.80 to 115A.893.

Landfill Certificate of Need

The Metropolitan Landfill Abatement Act, Minn. Stat. § 473.823, subd. 6, states that no new land disposal capacity for MMSW shall be permitted in the TCMA without a CON issued by the MPCA indicating that the additional disposal capacity is needed. The MPCA must certify need only to the extent that there are no feasible and prudent alternatives to land disposal. Alternatives that are speculative or conjectural cannot be deemed to be feasible and prudent. Economic considerations alone cannot justify the CON or the rejection of alternatives. Minn. Stat. § 473.823, subd. 6 requires the MPCA to include in the MPP the standards and procedures for certifying need. The standards and procedures must be based on the metropolitan disposal abatement plan and the solid waste disposal facilities development schedule, both included in the Metropolitan System Plan (Part 3), and with approved CSWMPs that are consistent with the abatement plan and development schedule.

Minn. Stat. § 473.823, subd. 6 is reproduced below

Certification of need. No new mixed municipal solid waste disposal facility or capacity shall be permitted in the metropolitan area without a certificate of need issued by the commissioner indicating a determination that the additional disposal capacity planned for the facility is needed in the metropolitan area. The commissioner shall amend the policy plan, adopted pursuant to section 473.149, to include standards and procedures for certifying need that conform to the certification standards stated in this subdivision. The standards and procedures shall be based on the metropolitan disposal abatement plan adopted pursuant to section 473.149, subdivision 2d, the solid waste disposal facilities development schedule adopted under section 473.149, subdivision 2e, and the provisions of any master plans of counties that have been approved under section 473.803, subdivision 2, and that are consistent with the abatement plan and development schedule. The

commissioner shall certify need only to the extent that there are no feasible and prudent alternatives to the disposal facility, including waste reduction, source separation and resource recovery which would minimize adverse impact upon natural resources. Alternatives that are speculative or conjectural shall not be deemed to be feasible and prudent. Economic considerations alone shall not justify the certification of need or the rejection of alternatives.

Procedures for obtaining MPCA CON for landfills in the Metropolitan Area

Scope: MPCA will apply these standards to applications for additional MMSW capacity for MMSW landfills located in the Metropolitan Area.

Timing of CON application: MPCA will notify landfills located in the Metropolitan Area and will issue a public communication of MPCA's intent to accept CON applications for additional MMSW land disposal capacity after the adoption of the MPP and after MPCA approval of all county solid waste management plans (CSWMP). If the facility does not currently have an approved permit to accept MMSW, the CON application must come in first, however, the CON determination cannot be finalized until environmental review and other permitting requirements are completed.

Process order:

1. MPCA issues notice of intent to accept CON applications
2. The facility must submit the documents within a 180-day application period following the notice of intent.
3. MPCA reviews applications for completeness after the closure of the 180-day application period. (90-day review period)
4. MPCA issues preliminary CON determinations
5. Must issue public notice to get comment on the preliminary determinations.
6. Facilities must submit a complete permit application within 18 months of receiving a preliminary determination if they do not currently have an MSW permit. If the 18-month deadline is not met, the preliminary capacity will be revoked and either, held until a future notice of intent to accept CON applications is issued, allocated to other Metro facilities that applied or will be held aside for Greater Minnesota facilities to apply for. How that capacity will be treated will be driven by county letters and existing waste flows. The applicant facility will have to wait until the next MPCA intent to accept CON to reapply. If existing preliminary determinations do not have facility permit applications submitted, the 18 months starts at the issuance date of this Plan.
7. Notify the facilities and the public of the preliminary determinations for facilities that need to complete environmental review
8. Final determinations are approved as each facility completes environmental review. The final approvals are not issued at the same time, but rather as each individual facility completes their respective permit processes.
9. The facility cannot use the additional CON until their permit is finalized or a minor modification is completed.

Submittal of CON applications: CON applications from MMSW landfills located in the Metropolitan Area must be submitted within a period of 180 days after MPCA's CON notification is published. A CON application must include the following:

- Annual solid waste estimates. The CON application shall include estimates of the amount (in tons) and type of solid waste to be managed annually at the facility during its design life.

- **Origin of waste.** The CON application shall include identification of the origin of the solid waste including estimates of the amount of solid waste to be received annually from each county or district of origin. Information about quantities of solid waste from counties or districts outside the metropolitan area shall be based on information in approved CSWMP. Information about quantities of solid waste from counties or districts within the metropolitan area shall be based on information in the MPP and approved CSWMP.
 - If an approved CSWMP does not state that solid waste from a county or district will be managed at the proposed facility, the application shall include a letter from the county or district board of the county or district generating the solid waste indicating that in the county's or district's best estimate the amount of solid waste in question is available for management at the proposed facility. The letter must be consistent with the approved greater Minnesota solid waste management plan (SWMP), the CSWMP, and any applicable CSWMP amendments. Counties shall provide the letter to the facility with projected annual amounts expected to go to the applicant facility. County letters must be specific to the facility or facilities considered in the metro application. New letters must be provided for separate CON requests that occur outside of the metro process. The letter must be signed by the county board or by an employee with documented board approved delegation.
- **Alternatives.** The CON application shall include an analysis of alternatives to the new or expanded disposal capacity if the new capacity has not been included in the approved Greater Minnesota county solid waste management, the MPP, or CSWMP.
- **Estimate errors.** If the amount of new capacity needed is greater than the amount identified in the approved CSWMP, SWMP, or the MPP due to assumptions concerning the amount of solid waste generated, the application must document the basis for calculating the amount of capacity.

Public informational meeting on CON application: The MPCA may hold a public informational meeting on its preliminary determination to approve or deny the application for a CON if the commissioner determines that a public informational meeting would help to clarify and resolve issues regarding the CON application.

Standard: No new MMSW disposal facility or capacity shall be permitted in the Metropolitan Area without a CON issued by the commissioner indicating a determination that the additional disposal capacity planned for the facility is needed in the Metropolitan Area. The MPCA will approve CON applications only if MPCA determines that no feasible and prudent available alternative MMSW management facilities, including existing permitted land disposal capacity, can substitute for the proposed capacity.

The MPCA will apply the following criteria to determine whether CON can be granted:

- **Restriction on disposal:** MPCA will not accept or review any application for additional land disposal capacity for a landfill located in the Metropolitan Area unless MMSW resource recovery facilities serving the TCMA are functioning at full capacity and waste has been certified as unprocessable by metro counties.
- **Orderly and deliberate development of facilities:** Pursuant to Minn. Stat. § 115A.02, the MPCA must ensure the orderly and deliberate development of facilities, including landfills. To avoid a situation where the TCMA is dependent on the services of a single disposal facility, MPCA will not grant all CON to one landfill.
- **Tonnage as basis of CON:** MPCA will grant CON in tons to a landfill instead of cubic yards or other volume units.

- **Alternatives:** MPCA will consider existing permitted capacity in the service area of the facility seeking the CON. The fact that a permit for a facility may expire during the expected service life of the facility seeking CON shall not be deemed to extinguish permitted capacity assuming that the existing permitted facility is likely to be re-permitted.
- **Plan consistency:** MPCA will not grant a CON unless the new landfill capacity is consistent with the MPP, with applicable CSWMP, applicable greater Minnesota comprehensive solid waste management plans, and applicable information from other solid waste management jurisdictions outside of the state of Minnesota.
- **Forecasting tons:** If the amount of new capacity needed is greater than the amount identified in the MPP, approved CSWMP or SWMP due to errors in forecasting MMSW generated, the application must document the basis for calculating the amount of capacity needed and provide an analysis of alternatives, including landfill abatement programs.
- **Least cost alternative:** MPCA will not approve a CON application based solely on a determination that it is the least-cost alternative.
- The agency shall revoke or revoke and reissue the certificate of need if the commissioner determines that the information contained in the certificate of need is no longer accurate or that the owner or operator of the disposal facility has not fulfilled all applicable state and federal requirements.

County annual report and waste certification reports

The TCMA counties are required to submit annual solid waste reports and certification reports to the MPCA for approval under Minn. Stat. §§ 473.803, subd. 3 and 473.848, subd 2. The MPCA will review these reports for consistency with the MPP and for consistency with the requirements of Minn. Stat. § 473.848, which states that no person shall dispose of unprocessable MMSW generated in the TCMA at a land disposal facility unless it is certified as unprocessable. Minn. Stat. § 473.848, subd. 4 states that the MPCA may adopt standards for determining when waste is unprocessable and procedures for expediting certification and reporting of unprocessed waste. The MPCA will use the information contained in the reports to enforce Minn. Stat. § 473.848 with respect to permitted waste facilities and public entities. MPCA permitted waste facilities, including MMSW resource recovery facilities and MMSW landfills, are required by state law to comply with Minn. Stat. § 473.848. The restriction on disposal in Minn. Stat. § 473.848, subd. 1 applies only to solid waste management and landfilling within Minnesota. Public entities that manage solid waste or contract for the management of solid waste are required by Minn. Stat. § 115A.46, subd. 5(b) to manage the waste consistent with the CSWMP.

The TCMA counties shall submit certification reports to the MPCA as a separate report before the deadline of April 1, of each year and include the certification report in the annual solid waste report. The TCMA counties may submit more frequent reports, such as quarterly certification reports, during each year to the MPCA to assist MPCA obtain compliance with Minn. Stat. § 473.848.

Minn. Stat. § 473.848 subd. 2 is reproduced below

Subdivision 1. Restriction. (a) For the purposes of implementing the waste management policies in section 115A.02 and metropolitan area goals related to landfill abatement established under this chapter, a person may not dispose of unprocessed mixed municipal solid waste generated in the metropolitan area at a waste disposal facility unless the waste disposal facility meets the standards in section 473.849 and:

- (1) the waste has been certified as unprocessable by a county under subdivision 2; or*
- (2)(i) the waste has been transferred to the disposal facility from a resource recovery facility;*

(ii) no other resource recovery facility serving the metropolitan area is capable of processing the waste; and

(iii) the waste has been certified as unprocessable by the operator of the resource recovery facility under subdivision 3.

(b) For purposes of this section, mixed municipal solid waste does not include street sweepings, construction debris, mining waste, foundry sand, and other materials, if they are not capable of being processed by resource recovery as determined by the council.

Subd. 2. County certification; office approval. (a) By April 1 of each year, each county shall submit an annual certification report to the office detailing:

(1) the quantity of waste generated in the county that was not processed prior to transfer to a disposal facility during the year preceding the report;

(2) the reasons the waste was not processed;

(3) a strategy for development of techniques to ensure processing of waste including a specific timeline for implementation of those techniques; and

(4) any progress made by the county in reducing the amount of unprocessed waste.

The report shall be included in the county report required by section 473.803, subdivision 3.

(b) The Pollution Control Agency shall approve a county's certification report if it determines that the county is reducing and will continue to reduce the amount of unprocessed waste, based on the report and the county's progress in development and implementation of techniques to reduce the amount of unprocessed waste transferred to disposal facilities. If the Pollution Control Agency does not approve a county's report, it shall negotiate with the county to develop and implement specific techniques to reduce unprocessed waste. If the Pollution Control Agency does not approve two or more consecutive reports from any one county, the Pollution Control Agency shall develop specific reduction techniques that are designed for the particular needs of the county. The county shall implement those techniques by specific dates to be determined by the Pollution Control Agency.

Standard for approval of county certification: The MPCA will approve a county's reports if it determines that the county is reducing and will continue to reduce the amount of unprocessed waste based on the report and the county's progress in development and implementation of techniques to reduce the amount of unprocessed waste transferred to disposal facilities.

Procedures

- **Required report:** MPCA will notify the TCMA counties that annual reports and certification reports are required to be submitted to the MPCA on or before April 1 each year. Additional quarterly certification reports, including the information required in Minn. Stat. § 473.848, subd. 2, paragraph (a), clauses 1, 2, 3, and 4, may be submitted on or before April 30, July 31, October 31, and January 31.
- **Content and Form:** MPCA will provide forms and instructions to the TCMA counties that outline the information and data required in the annual reports/certification reports.
- **MPCA review and approval:** MPCA will review and approve or disapprove a certification report if it determines that the county's certification shows the county is reducing and will continue to reduce the amount of unprocessed waste.

The MPCA will apply the following criteria to approval of county certification reports

- **Unprocessable waste:** The MPCA will not approve a county certification if it certifies waste as unprocessable when there is reasonably available capacity in the TCMA system that could be used to process solid waste generated in the county. In determining reasonably available capacity, the MPCA will give consideration to the specific geographic area that typically supports each of the processing facilities that serves the TCMA. The TCMA processing system is described in Appendix A, but this system could change periodically. The MPCA will annually provide a list

of processing facilities that serve the TCMA to the counties prior to the date the certification report is due. To be fully utilized, the processing facility must be operating at 100% of its operating capacity, taking into account outages for maintenance and repair.

- **Facility Provided ROD Reports:** The landfills and resource recovery facilities must fill out quarterly reports for submittal to the MPCA. These reports must include the following information:
 - Monthly data provided quarterly
 - County of origin of the waste (Transfer stations must provide to landfills)
 - Projected shortages and days affected
 - Date of notice and date of expected shortage
 - Amount sent to resource recovery on behalf of landfill to cover shortage
 - Other information as needed to determine compliance.
- As stated in the signed settlement agreement, “Landfill shall be entitled to rely on a presumption that each resource recovery facility is operating at full capacity except for any particular time period for which Landfill is notified at the specified email address by a particular resource recovery facility of an Anticipated Shortage 14 days in advance. If the Landfill takes the steps outlined in this Schedule of Compliance, MPCA will not bring an enforcement action and will advise the TCMA counties that the MMSW disposed of at the Landfill for that year will be considered and should be certified as unprocessable.”
- If there is a market change in the number of landfills serving the TCMA, then the landfills must agree to revise their compliance plans. The MPCA may facilitate the obligation discussion between facilities if needed. Once new obligations amounts are determined, the facilities must notify MPCA.
- Approval/disapproval
 - Annual reports must enumerate the actions the county is taking and the actions taken on behalf of the county to implement the goals and objectives of the MPP.
 - Annual reports must contain sufficient detail of programs so that the MPCA can determine if programs are effective and embody best practices for the management of waste.
 - Annual reports must show that the county is taking effective actions to ensure that no unprocessable MMSW goes to land disposal facilities in accordance with the requirement of Minn. Stat. § 473.848.
 - MPCA will approve annual reports if the reports describe and report on the specific barriers to implement the objectives and goals of the MPP, contain a description of the county programs that will be implemented to overcome the barriers, and contain recommendations to MPCA to assist in overcoming the barriers.

Regional and County Solid Waste Management Plans (CSWMP)

The Metropolitan counties are required by Minn. Stat. § 473.803 to prepare and submit CSWMP to the MPCA for approval. The MPCA will review the CSWMP in accordance with the requirements of Minn. Stat. §§ 473.149, 473.803, and 473.848. In accordance with Minn. Stat. § 473.803, subd. 2, the MPCA will review the CSWMP for consistency with the MPP. The general content requirements for CSWMP are contained in Minn. Stat. § 473.803. If the MPCA disapproves a CSWMP, the county must within 90 days submit a CSWMP to the MPCA for approval.

Minn. Stat. § 473.803 is reproduced below

473.803 METROPOLITAN COUNTY PLANNING.

Subdivision 1. County master plans; general requirements. Each metropolitan county, following adoption or revision of the metropolitan policy plan and in accordance with the dates specified therein, and after consultation with all affected local government units, shall prepare and submit to the commissioner for approval, a county solid waste master plan to implement the policy plan. The master plan shall be revised and resubmitted at such times as the metropolitan policy plan may require. The master plan shall describe county solid waste activities, functions, and facilities; the existing system of solid waste generation, collection, and processing, and disposal within the county; proposed mechanisms for complying with the recycling requirements of section 115A.551, and the household hazardous waste management requirements of section 115A.96, subdivision 6; existing and proposed county and municipal ordinances and license and permit requirements relating to solid waste facilities and solid waste generation, collection, and processing, and disposal; existing or proposed municipal, county, or private solid waste facilities and collection services within the county together with schedules of existing rates and charges to users and statements as to the extent to which such facilities and services will or may be used to implement the policy plan; and any solid waste facility which the county owns or plans to acquire, construct, or improve together with statements as to the planned method, estimated cost and time of acquisition, proposed procedures for operation and maintenance of each facility; an estimate of the annual cost of operation and maintenance of each facility; an estimate of the annual gross revenues which will be received from the operation of each facility; and a proposal for the use of each facility after it is no longer needed or usable as a waste facility. The master plan shall, to the extent practicable and consistent with the achievement of other public policies and purposes, 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 master plan shall contain criteria and standards to protect comparable private and public facilities already existing in the area from displacement unless the displacement is required in order to achieve the waste management objectives identified in the plan.

Subd. 1a. [Repealed, 1991 c 337 s 90]

Subd. 1b. [Repealed, 1995 c 247 art 1 s 67]

Subd. 1c. County abatement plan. Each county shall revise its master plan to include a land disposal abatement element to implement the metropolitan land disposal abatement plan adopted under section 473.149, subdivision 2d, and shall submit the revised master plan to the commissioner for review under subdivision 2 within nine months after the adoption of the metropolitan abatement plan. The county plan must implement the local abatement objectives for the county and cities within the county as stated in the metropolitan abatement plan. The county abatement plan must include specific and quantifiable county objectives, based on the objectives in the metropolitan abatement plan, for abating to the greatest feasible and prudent extent the need for and practice of land disposal of mixed municipal solid waste and of specific components of the solid waste stream generated in the county, stated in six-year increments for a period of at least 20 years from the date of metropolitan policy plan revisions. The plan must include measurable performance standards for local abatement of solid waste through resource recovery and waste reduction and separation programs and activities for the county as a whole and for statutory or home rule charter cities of the first, second, and third class, respectively, in the county, stated in six-year increments for a period of at least 20 years from the date of metropolitan policy plan revisions. The performance standards must implement the metropolitan and county

abatement objectives. The plan must include standards and procedures to be used by the county in determining annually under subdivision 3 whether a city within the county has implemented the plan and has satisfied the performance standards for local abatement. The master plan revision required by this subdivision must be prepared in consultation with the advisory committee established pursuant to subdivision 4.

Subd. 1d. Plans for required use of resource recovery facilities. Plans proposing designation of resource recovery facilities pursuant to section 473.811, subdivision 10, shall evaluate the benefits of the proposal, including the public purposes achieved by the conservation and recovery of resources, the furtherance of local, district, or regional waste management plans and policies, and the furtherance of the state policies and purposes expressed in section 115A.02, and also the costs of the proposal, including not only the direct capital and operating costs of the facility but also any indirect costs and adverse long-term effects of the designation. In particular the plan shall evaluate:

(a) whether the required use will result in the recovery of resources or energy from materials which would otherwise be wasted;

(b) whether the required use will lessen the demand for and use of land disposal;

(c) whether the required use is necessary for the financial support of the facility;

(d) whether less restrictive methods for ensuring an adequate solid waste supply are available;

(e) all other feasible and prudent waste processing alternatives for accomplishing the purposes of the proposed designation, the direct and indirect costs of the alternatives, including capital and operating costs, and the effects of the alternatives on the cost to generators.

Subd. 1e. [Repealed, 1995 c 247 art 1 s 67]

Subd. 2. Commissioner review. The commissioner shall review each master plan or revision thereof to determine whether it is consistent with the metropolitan policy plan. If it is not consistent, the commissioner shall disapprove and return the plan with its comments to the county for revision and resubmittal. The county shall have 90 days to revise and resubmit the plan for the commissioner's approval. Any county solid waste plan or report approved by the council prior to July 1, 1994, shall remain in effect until a new master plan is submitted to and approved by the commissioner in accordance with this section.

The commissioner shall review the household hazardous waste management portion of each county's plan.

Subd. 2a. Waste abatement. The commissioner may require any county that fails to meet the waste abatement objectives contained in the metropolitan policy plan to amend its master plan to address methods to achieve the objectives. The master plan amendment is subject to review and approval as provided in subdivision 2 and must consider at least:

(1) minimum recycling service levels for solid waste generators;

(2) mandatory generator participation in recycling programs including separation of recyclable material from mixed municipal solid waste;

(3) use of organized solid waste collection under section 115A.94; and

(4) waste abatement participation incentives including provision of storage bins, weekly collection of recyclable material, expansion of the types of recyclable material for collection, collection of recyclable material on the same day as collection of solid waste, and financial incentives such as basing charges to generators for waste collection services on the volume of waste generated and discounting collection charges for generators who separate recyclable material for collection separate from their solid waste.

Subd. 3. Annual report. By April 1 of each year, each metropolitan county shall prepare and submit to the commissioner for approval a report containing information, as prescribed in the metropolitan policy plan, concerning solid waste generation and management within the

county. The report shall include a statement of progress in achieving the land disposal abatement objectives for the county and classes of cities in the county as stated in the metropolitan policy plan and county master plan. The report must list cities that have not satisfied the county performance standards for local abatement required by subdivision 1c. The report must include a schedule of rates and charges in effect or proposed for the use of any solid waste facility owned or operated by or on its behalf, together with a statement of the basis for such charges.

The report shall contain the recycling development grant report required by section 473.8441 and the annual certification report required by section 473.848.

Subd. 4. Advisory committee. Each county shall establish a solid waste management advisory committee to aid in the preparation of the county master plan, any revisions thereof, and such additional matters as the county deems appropriate. The committee must consist of resident representatives, representatives from towns and cities within the county, and representatives from private waste management firms. The committee must include residents of towns or cities within the county containing solid waste disposal facilities. The commissioner or the commissioner's appointee is a nonvoting ex officio member of the committee.

Subd. 5. Role of private sector; county oversight. A county may include in its solid waste management master plan and in its plan for county land disposal abatement a determination that the private sector will achieve, either in part or in whole, the goals and requirements of sections 473.149 and 473.803, as long as the county:

(1) retains active oversight over the efforts of the private sector and monitors performance to ensure compliance with the law and the goals and standards in the metropolitan policy plan and the county master plan;

(2) continues to meet its responsibilities under the law for ensuring proper waste management, including, at a minimum, enforcing waste management law, providing waste education, promoting waste reduction, and providing its residents the opportunity to recycle waste materials; and

(3) continues to provide all required reports on the county's progress in meeting the waste management goals and standards of this chapter and chapter 115A.

CSWMP standards and procedures

The MPP hereby sets out the following specific procedures, standards and review criteria for the administration of Metropolitan CSWMP:

Procedures

- **Scope:** MPCA will review CSWMP submitted to MPCA for approval under Minn. Stat. § 473.803.
- **Timeline for CSWMP:** MPCA requires counties to formulate, submit and obtain MPCA approval of a new CSWMP within 12 months of the MPCA's adoption of the MPP. If a county fails to formulate and obtain MPCA approval of a new CSWMP within 24 months after the MPCA's adopts the MPP, then MPCA may withhold the disbursement of SCORE block grants under Minn. Stat. § 115A.557.
- **Requirements for the contents of CSWMP:** See statute above and additional standards outlined below.
- **MPCA review of CSWMP:** MPCA will review CSWMP and submit comments if there are any deficiencies in the CSWMP in accordance with the standards and criteria outlined below.

Standard. To be approved by the MPCA, the CSWMP must contain the information contained in Minn. Stat. § 473.803 and implement the CSWMP, including the goals and objectives of the MPP. The MPCA will review the CSWMP to determine:

- Whether the CSWMP implements the local abatement objectives for the county and cities within the county as stated in the Metropolitan System Plan (Part 3).
- Whether the CSWMP includes specific and quantifiable county landfill abatement objectives, based on the objectives in the metropolitan landfill abatement plan, for abating to the greatest feasible and prudent extent the need for and practice of land disposal of mixed municipal solid waste and of specific components of the solid waste stream generated in the county, stated in six-year increments for a period of at least 20 years from the date of the MPP revisions.
- Whether the CSWMP includes measurable performance standards for local abatement of solid waste through resource recovery and waste reduction and separation programs and activities for the county as a whole and for statutory or home rule charter cities of the first, second, and third class, respectively, in the county, stated in six-year increments for a period of at least 20 years from the date of the MPP revisions.
- Whether the performance standards implement the metropolitan and county abatement objectives.
- Whether the CSWMP includes standards and procedures to be used by the county in determining annually under Minn. Stat. § 473.803, subd. 3 whether a city within the county has implemented the CSWMP and has satisfied the performance standards for local abatement.
- Whether the CSWMP outlines specific and measurable actions to be taken by entities delegated by the county to implement the MPP.
- Whether the CSWMP outlines specific measures to maintain oversight over entities delegated by the county to implement the MPP.
- Whether the CSWMP outlines accountability measures for solid waste programs delegated to the private sector.
- Whether the CSWMP includes criteria and standards to protect comparable private and public facilities already existing in the area from displacement unless the displacement is required to achieve the waste management objectives identified in the CSWMP. Specifically, the CSWMP must require that for all solid waste facilities owned or operated by public agencies or supported primarily by public funds or obligations issued by a public agency (public facility), the owner must demonstrate that the public facility:
 - Does not displace comparable private and public facilities already existing in the area unless the displacement is required in order to achieve the waste management objectives identified in the CSWMP
 - Is consistent with the applicable CSWMP
 - Is necessary to achieve the waste management objectives identified in the CSWMP
 - Is consistent with state policy and purposes outlined in Minn. Stat. § 115A.02 and Minn. Stat. §§ 473.842 to 473.849

Role of private sector; county oversight. Pursuant to Minn. Stat. § 473.803, subd. 5, a county may include in its CSWMP and in its CSWMP for county land disposal abatement a determination that the private sector will achieve, either in part or in whole, the goals and requirements of sections 473.149 and 473.803, as long as the county:

4. Retains active oversight over the efforts of the private sector and monitors performance to ensure compliance with the law and the goals and standards in the MPP and the CSWMP.

5. Continues to meet its responsibilities under the law for ensuring proper waste management, including, at a minimum, enforcing waste management law, providing waste education, promoting waste reduction, and providing its residents the opportunity to recycle waste materials.
6. Continues to provide all required reports on the county's progress in meeting the waste management goals and standards of Minn. Stat. §. 473 and 115A.

To approve a CSWMP that includes this element, the CSWMP must include:

7. Specific quantifiable plans and strategies formulated and provided to the county by the private sector that shows how the private sector will implement applicable portions of the MPP and CSWMP.
8. Specific quantifiable methods and strategies that the county will implement to hold the private sector accountable for achieving waste management objectives. These strategies must include a description of applicable fees, subsidies, agreements, regulations, licenses, reporting requirements, and/or other institutional arrangement that are manifest in the arrangement that the county has with the private sector that will assure the private sector will implement applicable parts of the CSWMP and the MPP.
9. Specific measures that counties will implement to maintain oversight and measurement of outcomes of the programs delegated to the private sector. The CSWMP must also specify what fees, subsidies, agreements, regulations, licenses, reporting requirements, sanctions and/or other institutional arrangements that will be used to correct actions taken by the private sector if, in measuring the actions of the private sector, the county finds that the private entity is not managing waste as specified in the MPP and the CSWMP.

CSWMP approval. While a county is developing a new CSWMP for submittal to the MPCA, the existing CSWMP remains in effect until the MPCA approves or disapproves the new CSWMP. If the MPCA disapproves a county CSWMP, the county shall resubmit the CSWMP with changes that reflect the MPCA's comments within 90 days. If the CSWMP is not approvable after revision, the MPCA will disapprove the CSWMP and will terminate the eligibility of the county for grants pursuant to Minn. Stat. § 115A.557subd. 3(b)(1).

Appendix E: Glossary

Terms used in this MPP are intended to have meanings consistent with state statutes. Any words not defined in this appendix should be understood to have a meaning consistent with state law.

Collection

The aggregation of waste from the place at which it is generated and includes all activities up to the time the waste is delivered to a waste facility. (Minn. Stat. § 115A.03, subd. 5)

Composting

The controlled microbial degradation of organic waste to yield a humus-like product. (Minn. R. 7035.0300, subp. 20)

Construction debris

Waste building materials, packaging and rubble resulting from construction, remodeling, repair and demolition of buildings and roads. (Minn. Stat. § 115A.03, subd. 7). Also referred to in the MPP as construction and demolition waste.

Disposal facility

A waste facility permitted by the MPCA that is designed or operated for the purpose of disposing of waste on or in the land, together with any appurtenant facilities needed to process waste for disposal or transfer to another waste facility. (Minn. Stat. 115a.03, subd. 10)

Governance

Governance is the process by which materials are managed for the public good with an emphasis on highest and best use of materials and overall system sustainability. Governance includes the goals and activities of government entities, businesses, nonprofits, communities, and individual residents.

Hazardous waste

Any refuse, sludge, or other waste material or combinations of refuse, sludge or other waste materials in solid, semisolid, liquid, or contained gaseous form, which because of its quantity, concentration, or chemical, physical, or infectious characteristics may (a) cause or significantly contribute to an increase in mortality or an increase in serious irreversible, or incapacitating reversible illness; or b) poses a substantial present or potential hazard to human health or the environment when improperly treated, stored, transported, or disposed of, or otherwise managed. Categories of hazardous waste materials include but are not limited to explosives, flammables, oxidizers, poisons, irritants, and corrosives. Hazardous waste does not include source, special nuclear, or by-product material as defined by the Atomic Energy Act of 1954, as amended. (Minn. Stat. § 116.06, subd. 11)

Household hazardous waste

Waste generated from household activity that exhibits the characteristics of or that is listed as hazardous waste under MPCA rules but does not include waste from commercial activities that is generated, stored, or present in a household. (Minn. Stat. § 115A.96, subd. 1b)

Industrial waste

Solid waste resulting from an industrial, manufacturing, service, or commercial activity that is managed as a separate waste stream. (Minn. Stat. § 115A.03, subd. 13a)

Industrial solid waste

All solid waste generated from an industrial or manufacturing process and solid waste generated from nonmanufacturing activities such as service and commercial establishments. Industrial solid waste does not include office materials, restaurant and food preparation waste, discarded machinery, demolition debris, municipal solid waste combustor ash, or household refuse. (Minn. R. 7035.0300, subp. 45)

Land disposal

Depositing of materials in a land disposal facility.

Land disposal facility

Any tract or parcel of land, including any constructed facility, at which solid waste is disposed of in or on the land. (Minn. R. 7035.0300, subp. 52)

Leachate

Liquid that has percolated through solid waste and has extracted, dissolved, or suspended materials from it. (Minn. R. 7035.0300, subp. 56)

Local governmental unit

Cities, towns, and counties. (Minn. Stat. § 115A.03, subd. 17)

Long-term care

Actions to prevent or minimize the threat to public health and the environment posed by a mixed municipal solid waste disposal facility that has stopped accepting waste by controlling the sources of releases or threatened releases at the facility (Minn. Stat. § 115B.39, subd. 2.(c)).

Major appliances

Defined by statute as clothes washers and dryers, dishwashers, hot water heaters, heat pumps, furnaces, garbage disposals, trash compactors, conventional and microwave ovens, ranges and stoves, air conditioners, dehumidifiers, refrigerators, and freezers. (Minn. Stat. § 115A.03, subd. 17a)

Materials recovery facility (MRF)

Facility designed for centralized sorting, processing, and/or grading of collected recyclable materials for marketing.

Twin Cities Metropolitan Area (TCMA)

Means the area over which the Metropolitan Council has jurisdiction, including only the counties of Anoka; Carver; Dakota excluding the city of Northfield; Hennepin excluding the cities of Hanover and Rockford; Ramsey; Scott excluding the city of New Prague; and Washington. (Minn. Stat. § 473.121, subd. 2)

Municipal Solid Waste (MSW)

Means mixed municipal solid waste (MMSW), materials banned from MMSW such as yard waste and specific problem materials, recyclable materials, and other solid waste that is solid waste that is generated by residential, commercial, industrial, and community activities.

Mixed municipal solid waste (MMSW)

(a) Garbage, refuse and other solid waste from residential, commercial, industrial and community activities that the generator of the waste aggregates for collection, except as provided in paragraph (b),
(b) mixed MSW does not include auto hulks, street sweepings, ash, construction debris, mining waste, sludges, tree and agricultural wastes, tires, lead acid batteries, motor and vehicle fluids and filters, and other materials collected, processed and disposed of as separate waste streams, but does include source-separated compostable materials. (Minn. Stat. § 115A.03, subd. 21)

Non-municipal solid waste (non-MMSW)

Solid waste resulting from construction, demolition, or industrial activities which is not mixed municipal solid waste.

Organic material

Organic waste typically includes food waste, non-recyclable paper products, yard waste, and other materials that readily degrade. According to EPA, “Organic matter in landfills breaks down and releases methane, a potent GHG, and contributes to landfill leachate that can pollute waterways.”

Organized collection

A system for collecting solid waste in which a specified collector, or a member of an organization of collectors, is authorized to collect from a defined geographic service area or areas some or all the solid waste that is released by generators for collection. (Minn. Stat. § 115A.94, subd. 1)

Postconsumer material

A finished material that would normally be discarded as a solid waste having completed its life cycle as a consumer item. (Minn. Stat. § 115A.03, subd. 24b)

Problem material

Material that, when it is processed or disposed of with mixed municipal solid waste, contributes to one of the following results: 1) the release of a hazardous substance, or pollutant or contaminant; 2) pollution of water; 3) air pollution; or 4) a significant threat to the safe or efficient operation of a solid waste facility. The four conditions are further defined in Minn. Stat. § 115A.03, subd. 24a.

Processing

Describes the treatment of waste after collection and before disposal. Processing includes, but is not limited to, reduction, storage, separation, exchange, resource recovery, physical, chemical, or biological modification and transfer from one waste facility to another (Minn. Stat. § 115A.03, subd. 25 and 473.848, subd. 5).

Recycling

The process of collecting and preparing recyclable materials and reusing the materials in their original form or using them in manufacturing processes that do not cause the destruction of recyclable materials in a manner that precludes further use. (Minn. Stat. § 115A.03, subd. 25b)

Recycling facility

A facility at which materials are prepared for reuse in their original form or for use in manufacturing processes that do not cause the destruction of the materials in a manner that precludes further use. (Minn. Stat. § 115A.03, subd. 25c)

Recyclable materials

Materials that are separated from mixed municipal solid waste for the purpose of recycling or composting, including paper, glass, plastics, metals, automobile oil, batteries, source-separated compostable materials, and sole source food waste streams that are managed through biodegradative processes. Refuse-derived fuel or other material that is destroyed by incineration is not a recyclable material. (Minn. Stat. § 115A.03, subd. 25a)

Refuse-derived fuel

A product resulting from the processing of MMSW in a manner that reduces the quantity of noncombustible material present in the waste, reduces the size of waste components through shredding or other mechanical means, and produces a fuel suitable for combustion in existing or new solid fuel-fired boilers. (Minn. Stat. § 115A.03, subd. 25d)

Residuals

Waste materials left after recovery of recyclables and/or the physical, chemical, or biological processing of wastes.

Resource recovery

The reclamation for sale, use, or reuse of materials, substances, energy, or other products contained within or derived from waste. (Minn. Stat. § 115A.03, subd. 27)

Resource recovery facility

A waste facility established and used primarily for resource recovery, including related and appurtenant facilities such as transmission facilities and transfer stations primarily serving the resource recovery facility. (Minn. Stat. § 115A.03, subd. 28)

Reusable

Most items can be reused even if the original design was intended for single use, making a reuse definition more difficult. However, this also makes it more important for programming to clarify number of reuses necessary (e.g., grant programs for swapping single-use items for reusables or ordinance requiring reusables for all dine-in food service). Recently, reusable programming and policy has been focusing on food service ware, food packaging, and personal product packaging. These are three main elements defining “reusable” for these types of scenarios:

- **Durable design** – as previously noted, most items can be reused regardless of the original intent. Programs and policies must indicate how durable (i.e., number of reuses to break even with the life cycle impacts of a single-use alternative) an item needs to be considered “reusable”
- **Actual reuse (returns and/or refills)** – more resources go into manufacturing a more durable, reusable item, so actual reuse is needed to offset those impacts. This typically means ensuring a system is in place for individuals to personally refill the item or return it to be refilled or used again. Programs and policies must specify an expectation for how this system will be designed, funded, serviced, and operated long-term.
- **Non-toxic materials** – while there are clear benefits of reusable items and systems, it is critical to test, monitor, and restrict harmful chemicals to limit human and environmental exposures. Often programs and policies emphasize reuse to reduce waste generation or climate impacts from manufacturing and overlook toxicity considerations.

Reuse

The continued use, repair, or repurposing of items or materials which extends the life of resources and decreases the demand for new production. Continued use can include resale (e.g., thrift stores), sharing (e.g., clothing swaps without a financial exchange), or rental (e.g., formal wear rental). When repurposing an item or material, it is in the current form of the product without drastic modifications – this is the main difference between reuse and recycling.

Secondary materials

The marketable or usable products derived from solid or hazardous waste through processing or separation.

Solid waste

Garbage, refuse, or sludge from a water supply treatment plant or air contaminants treatment facilities, and other discarded waste materials and sludges, in solid, semisolid, liquid, or contained gaseous form, resulting from industrial, commercial, mining, and agricultural operations, and from community activities, but does not include hazardous waste; animal waste used as fertilizer; earthen fill, boulders, rock; sewage sludge; solid or dissolved materials in domestic sewage or other common pollutants in water sources, such as silt, dissolved or suspended solids in industrial wastewater effluents or discharges which are point sources subject to permits under section 402 of the federal Water Pollution Control Act; as amended, dissolved materials in irrigation return flows; or source, special nuclear, or by-product materials as defined by The Atomic Energy Act of 1954, as amended. (Minn. Stat. § 116.06, subd. 22)

Solid waste management

The systematic administration of activities that provide for the collection, separation, storage, transportation, transfer, processing, treatment, and disposal of solid waste.

Source separation

Separation of recyclable or compostable materials by the waste generator prior to collection.

Source reduction (see also waste reduction)

An activity that prevents generation of waste or the inclusion of toxic materials in waste, including: (1) reusing a product in its original form; (2) increasing the life span of a product; (2) reducing material used in production or packaging, or changing procurement, consumption, or waste generation habits to result in smaller quantities or lower toxicity of waste generated. (Minn. Stat. § 115A.03, subd. 36b)

Storage

Containment of solid or hazardous waste, in an approved manner, after generation and before collection, for ultimate recovery or disposal.

Sustainable materials management

Describes an approach to serving human needs by using/reusing resources most productively and sustainably throughout their life cycles, generally minimizing the amount of materials involved and all the associated environmental impacts (Source: EPA). SMM focuses on the best use and management of materials based on how they impact the environment throughout their life cycle. SMM considers the impacts of extracting raw materials, scarcity of materials, product design, product use, and reuse.

Transfer station

An intermediate waste facility in which waste collected from any source is temporarily deposited to await transportation to another waste facility. (Minn. Stat. § 115A.03, subd. 33)

Unprocessed mixed municipal solid waste (Unprocessed MMSW)

For the purpose of Minn. Stat. § 473.848, waste is "unprocessed" if it has not, after collection and before disposal, undergone separation of materials for resource recovery through recycling, incineration for energy production, production and use of refuse-derived fuel, composting, or any combination of these processes so that the weight of the waste remaining that must be disposed of in a mixed municipal solid waste disposal facility is not more than 35% of the weight before processing, on an annual average.

Waste flow designation

A requirement by a waste management district or county that all or any portion of the mixed municipal solid waste that is generated within its boundaries or any service area thereof be delivered to a processing or disposal facility identified by the district or county. (Minn. Stat. § 115A.81, subd. 2)

Waste facility

All property real or personal, including negative and positive easements and water and air rights, which is or may be needed or useful for the processing or disposal of waste, except property used for the collection of the waste and property used primarily for the manufacture of scrap metal or paper. Waste facility includes, but is not limited to, transfer stations, processing facilities, and disposal sites and facilities. (Minn. Stat. § 115A.03, subd. 35)

Waste management

Activities that are intended to affect or control the generation of waste and activities which provide for or control the collection, processing, and disposal of wastes. (Minn. Stat. § 115A.03, subd. 36)

Waste reduction (see also source reduction)

An activity that prevents generation of waste or the inclusion of toxic materials in waste, including: (1) reusing a product in its original form; (2) increasing the life span of a product; (2) reducing material used in production or packaging, or changing procurement, consumption, or waste generation habits to result in smaller quantities or lower toxicity of waste generated. (Minn. Stat. § 115A.03, subd. 36b)

Yard waste

Garden wastes, leaves, lawn cuttings, weeds, shrub, and tree waste, and prunings. (Minn. Stat. § 115A.03, subd. 38)

Appendix F: Metro Policy Plan MMSW forecast

Forecasted MMSW using per capita MMSW generation using a combination of ARIMA and baseline forecasting methods.

Data sources

Mixed Municipal Solid Waste (MMSW) Tonnage

All forecasts use tonnage information provided by the counties from their MMSW Certification reports and SCORE reports. Additional work has been done by the MPCA and the counties to ensure these sources are aligned.

Population

Population estimates and forecasts come from the Minnesota State Demographic Center at the Department of Administration. Additional interpolation has been performed on the forecasts to achieve annual values versus 5-year values. If there is no Population estimate available for a given year, the forecast value is used instead.

2020 Population values are sourced from the U.S. Census.

Alternative forecast assumptions

Assumptions for the alternative forecast regarding the amount of diversion of Recycling and Organics from MMSW were sourced from the counties and compiled by the MPCA into a consistent format and applied to the MPCA's forecasted MMSW generation rate.

Methodology

Forecast assumptions

Below is the summary of assumptions used for the MPP forecast:

- Ramsey and Washington counties are combined into one entity due to difficulty in splitting out their WTE and their joint powers agreement
- Metro counties will achieve the 75% recycling rate as laid out in Minn. Stat. § 115A.551 by 2030
 - Using the baseline rate for traditional recyclables and organics, increased recycling and organics diversion will be assumed at a constant rate until the 75% recycling rate is achieved in 2030.
- Total compliance with Restriction on Disposal (ROD) is assumed
 - Capacities for the WTE facilities serving the TCMA provided in Table 12.
 - If there is additional capacity at a given WTE facility, that capacity will be used by all available MMSW in the TCMA regardless of originating county
- Landfilling is assumed to be a minimum of 5% given the need to manage non-processibles, bulky items at WTE facilities and residuals and rejects from recycling and composting facilities.
- Baseline is the last year of observable data since the latest year of data represent the best data available to the counties and their current education and diversion practices.
- The continued operation of HERC is assumed. While the Hennepin County board has instructed staff to develop a plan with HERC closing sometime in the 2028-2040 timeframe, it is currently not clear if that timeline will be met or when within that timeframe the facility would come

offline. If HERC closes during the planning period, the MMSW would be managed via landfilling. The Metro Policy Plan (MPP) is updated every 6 years and a new forecast is developed with each iteration. MPCA will have a better understanding of the future of HERC during the development of the next MPP.

Forecast models

Each county was modeled separately using an Auto-regressive Integrated Moving Average (ARIMA) model on population corrected MMSW tonnage (per capita generation) from 2010 to 2020.

Recycling and Organics was forecasted using a baseline per capita generation (2020) – the tons of traditional recyclables generated per person and the tons of organics generated per person. As the population increases, new residents will have access to the same infrastructure, education, and benefits that current residents do thus increased population will not increase the current per capita generation but will increase total tonnage.

WTE capacity

Hennepin County is the sole provider of MMSW to the HERC facility while Ramsey and Washington split the capacity of the Ramsey-Washington Energy Center. Each of these facilities is assumed to be at capacity due to ROD compliance.

Dakota County will continue to send MMSW to the Red Wing processing facility, estimating 10,000 tons in 2020 and 13,000 tons in all subsequent years.

Table 12. Annual capacity (in tons) for the WTE facilities servicing the TCMA.

Facility	Annual Capacity (in Tons)
HERC	365,000
Ramsey-Washington Energy Center	450,000
City of Red Wing	13,000

Total landfill tonnage

The amount of material estimated to go to landfills is determined by the MMSW forecast created by the MPCA and is the amount remaining after additional diversion is removed from the MMSW and the amount dedicated to WTE is subtracted, as shown in Equation 1.

Equation 1. Calculation for landfill tonnage using MMSW forecast, additional diversion assumptions, and WTE capacity

$$\text{Landfill} = \text{MMSW} - (\text{Additional Diversion} + \text{WTE})$$

Results

The per capita generation point estimate was multiplied by the forecasted population change for each county and management method to provide the total MMSW.

Figure 16. Reported and forecasted TCMA MMSW collection methods amounts in tons

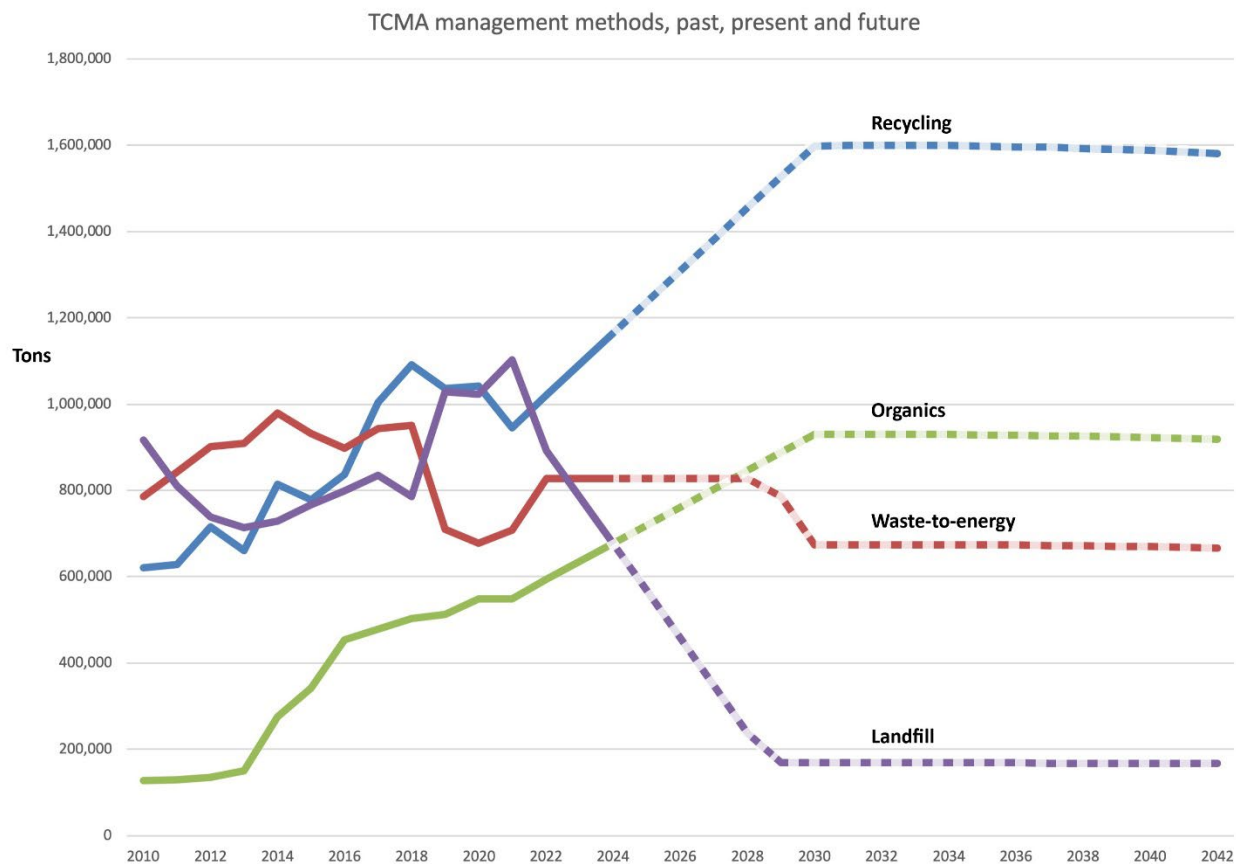


Table 13. Total TCMA MMSW forecast by management method

Year	Landfill	WTE	Recycling	Organics	Total MSW	Total MMSW	Recycling Rate
2010	917,472	785,506	620,069	127,879	2,450,926	1,702,979	31%
2011	810,443	842,273	627,884	130,010	2,410,610	1,652,716	31%
2012	739,152	901,721	715,089	134,292	2,490,254	1,640,873	34%
2013	713,741	908,636	660,166	150,980	2,433,523	1,622,377	33%
2014	728,970	978,326	813,580	275,574	2,796,450	1,707,296	39%
2015	767,491	931,415	778,092	341,745	2,818,743	1,698,906	40%
2016	799,435	897,494	836,135	452,956	2,986,020	1,696,929	43%
2017	834,315	942,536	1,004,251	479,283	3,260,385	1,776,852	46%
2018	785,118	951,181	1,091,967	502,906	3,331,173	1,736,299	48%
2019	1,028,517	710,286	1,036,330	511,934	3,287,068	1,738,803	47%
2020	1,023,749	678,239	1,041,423	549,135	3,292,546	1,701,987	48%
2021	825,124	821,000	1,118,619	590,477	3,355,219	1,809,433	51%
2022	750,682	821,000	1,188,683	627,698	3,388,064	1,720,145	54%
2023	674,392	821,000	1,259,825	665,492	3,420,710	1,612,238	56%
2024	596,250	821,000	1,332,017	703,843	3,453,110	1,503,892	59%
2025	516,260	821,000	1,405,232	742,737	3,485,229	1,395,014	62%

Year	Landfill	WTE	Recycling	Organics	Total MSW	Total MMSW	Recycling Rate
2026	434,457	821,000	1,479,466	782,172	3,517,095	1,285,592	64%
2027	350,828	821,000	1,554,665	822,118	3,548,611	1,175,605	67%
2028	265,388	821,000	1,630,789	862,556	3,579,733	1,065,079	70%
2029	180,521	818,633	1,707,795	903,462	3,610,411	954,059	72%
2030	182,030	728,122	1,785,643	944,814	3,640,609	842,609	75%
2031	183,515	734,060	1,800,245	952,479	3,670,298	842,970	75%
2032	184,973	739,892	1,814,588	960,006	3,699,459	843,113	75%
2033	186,404	745,615	1,828,665	967,391	3,728,075	843,036	75%
2034	187,807	751,230	1,842,477	974,635	3,756,150	842,739	75%
2035	189,184	756,737	1,856,024	981,738	3,783,683	842,225	75%
2036	190,534	762,137	1,869,311	988,703	3,810,684	841,497	75%
2037	191,858	767,433	1,882,342	995,531	3,837,165	840,562	75%
2038	193,157	772,628	1,895,128	1,002,229	3,863,142	839,423	75%
2039	194,432	777,726	1,907,674	1,008,799	3,888,632	838,089	75%
2040	195,683	782,731	1,919,992	1,015,248	3,913,653	836,565	75%
2041	196,911	787,646	1,932,092	1,021,580	3,938,229	834,858	75%
2042	198,120	792,479	1,943,990	1,027,805	3,962,393	832,977	75%

Appendix G: Strategy table

Table 14. Strategy table with point values and interested parties

Code Number	Strategy	Type	Optional Point Value	Interested Parties
1	Increase compliance with Hauler reporting per Minn. Stat. § 115A.93.	Required		haulers, industry, county staff
2	Provide required county reporting.	Required		county staff
3	Require waste composition study at least once every 5 years at all landfills that are located within your county.	Required		landfill operators
4	Improve recycling data collection at businesses within the county.	Optional	7	county staff, businesses
5	Require waste composition study at all landfills.	State-led		MPCA
6	Develop appropriate and consistent waste reporting systems to measure all waste.	State-led		MPCA
7	Continue to explore options for growing the agency's LCA data, modeling, and resources to better support counties in measuring and tracking environmental and human health impacts.	State-led		MPCA
8	Continue to engage with counties in the development of an environmental target that better accounts for and incentivizes programming and actions higher on the hierarchy.	State-led		MPCA
9	Participate in an annual joint commissioner/staff meeting on solid waste.	Required		county staff and board
10	Commit to standardized outreach and education.	Required		county staff, MRFs, residents
11	Engage in efficient and value-added infrastructure planning.	Required		county staff, SW facility operators
12	Develop contingency plans for large facility closures to reduce landfill reliance	Required		county staff, SW facility operators
13	Provide grants for or access to software that can track food waste.	Required		county staff, restaurants, cafeterias
14	Establish partnerships between food rescue organizations and restaurants/stores to increase food rescue.	Required		county staff, food rescue orgs, restaurants, grocery stores
15	Launch bi-annual sustainable consumption challenges for residents.	Required		county staff, residents
16	Implement a formal county sustainable purchasing policy using MPCA guidance.	Required		county staff, vendors
17	Participate in Responsible Public Purchasing Council meetings.	Required		county staff, MPCA

Code Number	Strategy	Type	Optional Point Value	Interested Parties
18	Work with health inspectors to educate restaurants and other establishments that have excess prepared food to donate.	Optional	7	county staff, health dept, restaurants and other food producers/surveyors
19	Offer grants or rebates for organizations to transition to reusable food and beverage service ware.	Required		county staff, restaurants , organizations serving food
20	Offer grants for source reduction, reuse, and repair.	Required		county staff, repair and reuse businesses
21	Implement a green meeting policy.	Required		county staff
22	Implement a county policy encouraging all county and city-led events and food providers use reusable food and beverage service ware.	Optional	6	county staff
23	Adopt an ordinance with a mandatory consumer charge or ban for single-use items.	Optional	9	county staff, restaurants
24	Join and/or actively participate in a reuse network, like Reuse Minnesota, to provide county and city staff with learning opportunities to broaden their reuse expertise.	Optional	6	county staff
25	Establish a Repair Ambassador program, like the Recycler/Composters (RCAs) Ambassador programs.	Optional	7	county staff, residents
26	Establish a reuse location for residential drop-off and pick-up.	Optional	7	county staff, residents
27	Establish a curbside set-out day to allow residents to set out used items for reuse.	Optional	7	county staff, residents, reuse businesses
28	Develop standardized guidance and methodology for tracking source reduction and reuse activities and their resulting benefits.	State-led		MPCA
29	Research and pursue financial strategies to best incentivize source reduction and reuse, such as grants and loans.	State-led		MPCA
30	Collect recyclables, organics, and trash on the same day.	Required		county staff, residents, haulers
31	Collect recycling weekly by 2030.	Optional	7	county staff, residents, haulers
32	Pair the option of bi-weekly trash collection with weekly recycling and organics collection.	Optional	7	county staff, residents, haulers
33	Contract for residential recycling and organics by 2030.	Optional	7	county staff, residents, haulers
34	Contract for residential MMSW collection by 2030.	Optional	7	county staff, residents, haulers
35	Recruit a minimum of 12 commercial businesses a year to recycle at least three materials from their operations and promote the environmental and resource benefits.	Required		county staff, businesses

Code Number	Strategy	Type	Optional Point Value	Interested Parties
36	Establish mandatory pre-processing of waste at resource recovery facilities and landfills by 2030.	Required		haulers, landfill operators, transfer station operators
37	Provide assistance to multi-family properties to improve recycling (4 or more units with shared walls)	Required		county staff, property managers
38	Assist with tracking commercial recycling self-hauling activities.	State-led		MPCA
39	Support and invest in new facilities and retain processors of recycled material for end markets.	State-led		MPCA
40	Make residential curbside organics collection available in cities with a population greater than 5,000 by 2030.	Required		county staff, residents, haulers
41	Expand backyard composting outreach and resources for residents.	Required		county staff, residents
42	Require management of organics from large commercial food generators by 2033.	Required		county staff, commercial food generators
43	Establish additional organics recycling drop-off sites.	Optional	7	county staff, residents
44	Standardize the role of compostable products in organics recycling programs by 2025.	State-led		MPCA
45	Develop plans to prevent and manage wood waste in each county and throughout the region.	Required		county staff, yard waste processors, tree care and landscaping operators
46	Promote existing programs that use EAB-affected wood for furniture, home goods, flooring, and other purposes.	Required		county staff, local artisans and producers of wood products
47	Composting and mulching operations must continue to be supported.	Required		county staff, composting and mulching operators
48	Update ordinances that address wood burning.	Optional	4	county staff, county board
49	Develop and distribute EAB tree care education programs for privately owned land.	Optional	8	county staff, residents
50	Incentivize tree treatment as a cost-effective strategy to extend the life of ash trees and to reduce the volume of wood waste generated over the next 20 years.	Optional	8	county staff, residents, arborists
51	Allow assessments on property taxes to spread the cost of tree care over a multi-year timeframe.	Optional	9	county staff, residents, arborists
52	Expand composting and mulching capacity beyond existing markets.	Optional	5	county staff, industry
53	Support development of systems that use wood fuel.	Optional	4	county staff, industry
54	MPCA will continue state agency coordination to address wood waste.	State-led		MPCA, DNR, MDA

Code Number	Strategy	Type	Optional Point Value	Interested Parties
55	Require food-derived compost in county construction and landscaping projects.	Required		county staff, industry
56	Find new outlets to increase food to animal operations.	Optional	7	county staff, farmers, restaurants
57	Develop a process for gathering the information necessary to make timelier and consistent policy decisions.	State-led		MPCA
58	Counties must continue to support the implementation of Minn. Stat. § 473.848 Restriction on Disposal.	Required		county staff, industry, facility operators
59	Implement additional fees to better account for the externalities of land disposal.	Optional	4	county staff, industry
60	Participate with the Product Stewardship Committee under the Solid Waste Administrators Association (SWAA).	Required		county staff
61	Encourage retailers to increase consumer awareness of responsible end-of-life handling for products containing lithium-ion batteries.	Required		county staff, retail store operators
62	Continue participation in the reciprocal use agreement for HHW collection sites.	Required		county staff, HHW sites
63	Partner with cities to increase participation in HHW collection.	Required		county staff, HHW sites
64	Host monthly drop-off sites in locations other than a permanent HHW site.	Optional	8	county staff, HHW sites
65	Implement the use of a Building Material Management Plan.	Required		county staff, builders and contractors
66	Prior to demolition of county-owned buildings, require that SMM strategies are considered.	Optional	7	county staff
67	Host a building material collection event or swap.	Optional	8	county staff, residents
68	Provide financial assistance to offset the additional cost of building deconstruction, used building material installation, and/or structural moving.	Optional	8	county staff, residents, builders and contractors
69	Provide deconstruction training.	Optional	8	county staff, builders and contractors
70	Annually host or aid with home and building repair and refurbishment trainings.	Optional	8	county staff, builders and contractors, residents
71	Use purchasing guidelines to require environmental product declaration (EPD) for concrete.	Optional	7	county staff
72	Study waste classification practices.	State-led		MPCA
73	Propose changes to B3 guidelines to strengthen deconstruction requirements.	State-led		MPCA
74	Incentivize deconstruction over landfilling MMSW and demolition debris.	State-led		MPCA
75	Lead Sustainable Building Group (SBG) developments.	State-led		MPCA

Appendix H: Air Toxic and Cumulative Impact Rules

Proposed changes to certain rules will be applicable to HERC. These rules apply only to air quality permits in certain geographic areas of Minnesota. Option B registration permits are exempt from these rules.

Minn. Stat. § 116.065 requires MPCA to adopt rules to implement and govern cumulative impacts analysis in Environmental Justice areas in 7 county metro and cities of Duluth and Rochester. The Notice of Intent to Adopt (NOIA) must be published in the State Register by May 2026. The Cumulative Impacts Analysis Rule will be applicable to facilities with air permits located in or within one mile of an environmental justice area in the TCMA and cities of Duluth and Rochester. HERC will be subjected to Cumulative Impacts Analysis rule once adopted due to its location in an EJ area within Hennepin County and its Part 70 permit. The MPCA may require a Cumulative Impacts assessment, if a petition requesting that a cumulative analysis be conducted by at least 100 individuals who reside or own property in the environmental justice area impacted by the facility and is supported by material evidence that demonstrates a potential adverse cumulative impact. More detail can be found on the MPCA website. [Cumulative impacts | Minnesota Pollution Control Agency \(state.mn.us\)](https://state.mn.us/cumulative-impacts)

The Air Toxics Regulations Rule will be applicable to facilities with air permits located in the TCMA. Three years after adopting rules, the MPCA is required amend existing air quality permits to conform to the rules. This applies even if the case there is no pending permit action. HERC will be subjected to this rule once adopted due to its location within Hennepin County and its Part 70 permit. The MPCA must establish testing, monitoring, reporting, record-keeping, and inspection requirements for facilities that reflect:

1. The different risks to human health and the environment posed by the specific air toxics and amounts emitted by a facility, such that facilities posing greater risks are required to provide more frequent evidence of permit compliance, including but not limited to performance tests, agency inspections, and reporting;
2. The facility's record of compliance with air toxics emission limits and other permit conditions; and
3. Any exposure of residents of an environmental justice area to the facility's air toxics emissions.

More information can be found on the MPCA website. [Air toxics emissions reporting | Minnesota Pollution Control Agency \(state.mn.us\)](https://state.mn.us/air-toxics-emissions-reporting)

Appendix I: Public Comments and Responses

Name	Affiliation	Comment	Response
Ally Sutherland	City of Inver Grove Heights	https://scs-public.s3-us-gov-west-1.amazonaws.com/env_production/oid333/did200071/pid_206566/assets/merged/mv0yUj3_document.pdf	Source separation is the best way to recover materials and to ensure the highest value of those materials. However, despite our best efforts, human behavior is unpredictable. Preprocessing is the process of pulling recyclables out of mixed waste and it can recover additional recyclables, especially metals. The cost of collection is the primary driver of cost to residents, but historically tip fees have not been the driver for cost. The plan has been modified to extend the timeline to allow facilities time to plan the best preprocessing system. The Minnesota Legislature passed a sweeping bill to address and prohibit PFAS in consumer products. The Minnesota Attorney General reached an \$850 million settlement with 3M. For more information about this, visit https://3msettlement.state.mn.us/ . All past and present research can be found on this page. This language will reduce the amount of PFAS entering landfills. To address landfill leachate, the MPCA is addressing PFAS through our solid waste and wastewater programs. MPCA is also reviewing newly published research on landfill leachate. The plan prioritizes waste reduction, reuse, and recycling as the most important things we can do. These all minimize the amount of waste going to disposal. These activities are funded by the solid waste management tax and landfill fees. A clear and consistent process for MPCA's issuance of CON to landfills statewide is now reflected in the plan.
Aaron Rosenblum	Resident	https://scs-public.s3-us-gov-west-1.amazonaws.com/env_production/oid333/did200071/pid_206566/assets/merged/k00uivg_document.pdf	MPCA received many comments of concern about the continued operation of the Hennepin Energy Recovery Center. We have re-examined our approach to the waste-to-energy (WTE) section of the plan. Changes include a comparison of the impacts of WTE and landfills and acknowledgement of the possible closure that will be determined by the Hennepin County Board. It is critical to ensure that large infrastructure decisions are being made with consideration to environmental and environmental justice impacts. MPCA supports minimizing disposal options of WTE and landfill as much as possible and the plan focuses on waste reduction, recycling, and composting to meet the 75% goal. Cumulative air impacts are outside of the scope of this document. Air quality impacts will be addressed as part of the cumulative air impact rule-making effort that is underway. Thank you for your feedback.
Akira Yano	Resident	https://scs-public.s3-us-gov-west-1.amazonaws.com/env_production/oid333/did200071/pid_206566/assets/merged/wj0oi5v_document.pdf	The 5% waste reduction goal references the total generation of waste. Despite our best efforts, consumption influences waste generation. To truly be successful in waste reduction, upstream policies must be put into place by the Minnesota Legislature that result in fewer materials being generated. The 75% goal is determined by state statute as the disposal avoidance goal and MPCA intends to aggressively push for improvement in all areas that are feasible. The plan includes required strategies for counties to reduce and divert food waste, launch bi-annual sustainable consumption challenges for residents, and to implement a formal county sustainable purchasing policy. There are also strategies to support reuse and repair through volunteer program, outreach, and grants. Thank you for your feedback.
Albert (Shane) McCaffrey	Resident	https://scs-public.s3-us-gov-west-1.amazonaws.com/env_production/oid333/did200071/pid_206566/assets/merged/au0hq5_document.pdf	Metro counties will develop solid waste plans of their own based on this plan. This plan includes strategies to address organics recycling, multi-family, and education.
Alex Burns	Resident	https://scs-public.s3-us-gov-west-1.amazonaws.com/env_production/oid333/did200071/pid_206566/assets/merged/wq0ri3v_document.pdf	MPCA received many comments of concern about the continued operation of the Hennepin Energy Recovery Center. We have re-examined our approach to the waste-to-energy (WTE) section of the plan. Changes include a comparison of the impacts of WTE and landfills and acknowledgement of the possible closure that will be determined by the Hennepin County Board. It is critical to ensure that large infrastructure decisions are being made with consideration to environmental and environmental justice impacts. MPCA supports minimizing disposal options of WTE and landfill as much as possible and the plan focuses on waste reduction, recycling, and composting to meet the 75% goal. Cumulative air impacts are outside of the scope of this document. Air quality impacts will be addressed as part of the cumulative air impact rule-making effort that is underway. The 5% waste reduction goal references the total generation of waste. Despite our best efforts, consumption influences waste generation. To truly be successful in waste reduction, upstream policies must be put into place by the Minnesota Legislature that result in fewer materials being generated. The 75% goal is determined by state statute as the disposal avoidance goal and MPCA intends to aggressively push for improvement in all areas that are feasible. The plan includes required strategies for counties to reduce and divert food waste, launch bi-annual sustainable consumption challenges for residents, and to implement a formal county sustainable purchasing policy. There are also strategies to support reuse and repair through volunteer program, outreach, and grants. Thank you for your feedback.
Alice Brandt	Resident	https://scs-public.s3-us-gov-west-1.amazonaws.com/env_production/oid333/did200071/pid_206566/assets/merged/om04ie8_document.pdf	MPCA received many comments of concern about the continued operation of the Hennepin Energy Recovery Center. We have re-examined our approach to the waste-to-energy (WTE) section of the plan. Changes include a comparison of the impacts of WTE and landfills and acknowledgement of the possible closure that will be determined by the Hennepin County Board. It is critical to ensure that large infrastructure decisions are being made with consideration to environmental and environmental justice impacts. MPCA supports minimizing disposal options of WTE and landfill as much as possible and the plan focuses on waste reduction, recycling, and composting to meet the 75% goal. Cumulative air impacts are outside of the scope of this document. Air quality impacts will be addressed as part of the cumulative air impact rule-making effort that is underway. Thank you for your feedback.
Amanda Koehler	Resident	https://scs-public.s3-us-gov-west-1.amazonaws.com/env_production/oid333/did200071/pid_206566/assets/merged/xw0lii3_document.pdf	Compostable single-use is a better option than conventional single-use. However, reuse is the best option. The plan calls for residential curbside organics collection to be required region-wide in cities greater than 5,000. MPCA agrees that it must be more convenient for people to participate in greater numbers. Chickens are not officially considered a solid waste management method, but the additional avenue for food waste management for residents is intriguing.
Amy Sheldon	Resident	https://scs-public.s3-us-gov-west-1.amazonaws.com/env_production/oid333/did200071/pid_206566/assets/merged/ir03iaj_document.pdf	Curbside collection of textiles has been discontinued by municipal programs due to the exposure to weather. Textiles must be dry and clean for both reuse and recycling. The Secondary Materials and Recycled Textiles (SMART) Association estimates that about half of new clothing end up donated. Of the clothing that is donated, about 20% are sold in reuse outlets, 25% are shipped overseas, 50% are used as absorbents/rags/stuffing, and about 5% head to landfills or WTE facilities. That means that over half of all textiles end up in the garbage. For a material to be recycled, it needs to be used to create a new product. Fast fashion has resulted in an onslaught of low-quality textiles that have no reuse nor recycling value. Durable textiles made from natural fibers and extending the life via proper care and repair can help reduce personal impact. Minnesota Statute 115A.151 applies to most commercial buildings. Those that contract waste service for 4 cubic yards or more per week are required to recycle at least three materials types. Resident education is addressed in this plan with a strategy that calls for a commitment to standardized outreach and education. We agree that the messaging reaching residents should be easy to understand. Piecemeal efforts by counties, cities, haulers, and other organizations are rarely collaboratively developed and therefore can lead to confusion over what materials can be recycled or composted. Assuring a consistent message from those within the solid waste system would help bring clarity to the users of the system. The plan calls for residential curbside organics collection to be required region-wide in cities greater than 5,000. MPCA agrees that it must be more convenient for people to participate in greater numbers. The plan requires counties to standardized outreach and education. This will address the concern that different terms are used throughout the metro and will help to address confusion. Waste reduction in construction and remodeling projects will require many solutions. The state doesn't currently have requirements for construction and remodeling material management. However, there are several waste reduction initiatives and an increase in reuse activities. Removing barriers to buying, selling and donation of surplus materials benefits us all.
Andrea Siegel	Resident	https://scs-public.s3-us-gov-west-1.amazonaws.com/env_production/oid333/did200071/pid_206566/assets/merged/o502i9s_document.pdf	MPCA received many comments of concern about the continued operation of the Hennepin Energy Recovery Center. We have re-examined our approach to the waste-to-energy (WTE) section of the plan. Changes include a comparison of the impacts of WTE and landfills and acknowledgement of the possible closure that will be determined by the Hennepin County Board. It is critical to ensure that large infrastructure decisions are being made with consideration to environmental and environmental justice impacts. MPCA supports minimizing disposal options of WTE and landfill as much as possible and the plan focuses on waste reduction, recycling, and composting to meet the 75% goal. Cumulative air impacts are outside of the scope of this document. Air quality impacts will be addressed as part of the cumulative air impact rule-making effort that is underway. Counties are required to complete an environmental justice review when developing their solid waste plans. The requirements are laid out in Appendix B. With the addition of multi-family strategies in the plan, we believe this supports a solid waste system that strives for fair treatment and meaningful involvement of all people. The plan has been amended to allow for counties to propose optional strategies. We encourage all our metro counties to propose strategies that would directly address environmental justice. The plan includes required strategies for counties to reduce and divert food waste, launch bi-annual sustainable consumption challenges for residents, and to implement a formal county sustainable purchasing policy. There are also strategies to support reuse and repair through volunteer program, outreach, and grants. The 5% waste reduction goal references the total generation of waste. Despite our best efforts, consumption influences waste generation. To truly be successful in waste reduction, upstream policies must be put into place by the Minnesota Legislature that result in fewer materials being generated. The 75% goal is determined by state statute as the disposal avoidance goal and MPCA intends to aggressively push for improvement in all areas that are feasible. Thank you for your feedback.

Name	Affiliation	Comment	Response
Amy Sklar	Resident	https://scs-public.s3-us-gov-west-1.amazonaws.com/env_production/oid333/did200071/pid_206566/assets/merged/gy0wioh_k_document.pdf	MPCA received many comments of concern about the continued operation of the Hennepin Energy Recovery Center. We have re-examined our approach to the waste-to-energy (WTE) section of the plan. Changes include a comparison of the impacts of WTE and landfills and acknowledgement of the possible closure that will be determined by the Hennepin County Board. It is critical to ensure that large infrastructure decisions are being made with consideration to environmental and environmental justice impacts. MPCA supports minimizing disposal options of WTE and landfill as much as possible and the plan focuses on waste reduction, recycling, and composting to meet the 75% goal. Cumulative air impacts are outside of the scope of this document. Air quality impacts will be addressed as part of the cumulative air impact rule-making effort that is underway. Thank you for your feedback.
Andrea Sit	Resident	https://scs-public.s3-us-gov-west-1.amazonaws.com/env_production/oid333/did200071/pid_206566/assets/merged/ct07iaa_document.pdf	This plan requires residential curbside organics collection to be region-wide in cities greater than 5,000. MPCA agrees that it must be more convenient for people to participate in greater numbers. The plan includes education requirements that should help create more informed residents. Minnesota has some of the best recycling rates in the nation. There are many systems and requirements in place that assure the materials in resident bins are routed to their intended place. MN statute 115A.95 does not allow for haulers to deliver source-separated recyclable materials to a disposal facility unless the MPCA determines that no other recycling options are available. Except for litter in waterways, it's highly unlikely that any plastic waste from Minnesota ends up in the ocean. County environmental centers and household hazardous waste drop sites are wonderful resources for managing materials safely and to their highest use. The plan has been revised to require counties to promote these sites to residents.
Andrea Tauer	Resident	https://scs-public.s3-us-gov-west-1.amazonaws.com/env_production/oid333/did200071/pid_206566/assets/merged/ad0fiet_document.pdf	Curbside collection of textiles has been discontinued by municipal programs due to the exposure to weather. Textiles must be dry and clean for both reuse and recycling. The Secondary Materials and Recycled Textiles (SMART) Association estimates that about half of new clothing end up donated. Of the clothing that is donated, about 20% are sold in reuse outlets, 25% are shipped overseas, 50% are used as absorbents/rags/stuffing, and about 5% head to landfills or WTE facilities. That means that over half of all textiles end up in the garbage. For a material to be recycled, it needs to be used to create a new product. Fast fashion has resulted in an onslaught of low-quality textiles that have no reuse nor recycling value. Durable textiles made from natural fibers and extending the life via proper care and repair can help reduce personal impact.
Andrew Coyne	City of Stillwater	https://scs-public.s3-us-gov-west-1.amazonaws.com/env_production/oid333/did200071/pid_206566/assets/merged/i60hi6j_document.pdf	MPCA is working in collaboration with DNR and local governments to create a cohesive plan for wood waste management. The plan has been modified to be inclusive of other tree disease issues, such as Oak Wilt. Wood waste is expected to increase and will require collaboration to find upstream solutions. Planning will be required to avoid open burning.
Andy Healy	ARCA Recycling, Inc.	https://scs-public.s3-us-gov-west-1.amazonaws.com/env_production/oid333/did200071/pid_206566/assets/merged/uk0xi04_document.pdf	Appliances at the end of their useful life contain many valuable materials—like steel—that can be recycled. There are also many concerning components, like refrigerants, that need to be managed properly to avoid harm to human health and the environment. MPCA will continue to value appliance recycling and recovery as playing a very important role in solid waste management. MPCA received funding in the last Legislative session for various grants that will be utilized to make address waste issues and climate change reduction.
Ann Hanson	Resident	https://scs-public.s3-us-gov-west-1.amazonaws.com/env_production/oid333/did200071/pid_206566/assets/merged/t20qi10_document.pdf	Due to difficulty with sorting at recycling centers, black plastic has nearly no market value for recycling. For a material to be recycled, it needs to be used to create a new product. Fast fashion has resulted in an onslaught of low-quality textiles that have no reuse nor recycling value. Durable textiles made from natural fibers and extending the life via proper care and repair can help reduce personal impact. Removing barriers for participation was our original intent and we received great feedback on changes to further our progress. Legislative action will be needed to create accountability for those producing waste through product design.
Beverly Mears	Resident	https://scs-public.s3-us-gov-west-1.amazonaws.com/env_production/oid333/did200071/pid_206566/assets/merged/d308igb_document.pdf	All of the 7-county metro environmental centers and household hazardous waste (HHW) drop-off sites are open to residents of any metro county. Many materials are collected for free, but some require a collection fee. The plan also includes a strategy to expand mobile collection of HHW, which would provide residents with more convenient access.
Bill Keegan	Dem-Con Companies	https://scs-public.s3-us-gov-west-1.amazonaws.com/env_production/oid333/did200071/pid_206566/assets/merged/hl0xi5b_document.pdf ; https://scs-public.s3-us-gov-west-1.amazonaws.com/env_production/oid333/did200071/pid_206566/assets/merged/fa0fio3_document.pdf	Minnesota has an existing rechargeable battery law. MPCA's Solid Waste Policy Report to the Minnesota Legislature recommends updates to address the full scope of the lithium battery issue. The MPCA is working with partners on legislative proposals to improve the collection and recycling of batteries. A strategy has been added to the plan to implement education programs on proper battery management. Creating safe storage spaces that minimize fire risks at waste facilities is challenging. Thank you for the feedback on Appendix D. You provided many valid points, which were considered when revising the plan. A clear and consistent process for MPCA's issuance of CON to landfills statewide is now reflected in the plan. Source separation is the best way to recover materials and to ensure the highest value of those materials. However, despite our best efforts, human behavior is unpredictable. Preprocessing can recover additional recyclables, especially metals. The cost of collection is the primary driver of cost to residents and historically tip fees have not been the driver for cost. The strategy's timeline has been extended.
Blaine McKeever	Resident	https://scs-public.s3-us-gov-west-1.amazonaws.com/env_production/oid333/did200071/pid_206566/assets/merged/9r04i6c_document.pdf	Retail drop off is far from ideal, but is currently the best option for plastic film recycling. We can encourage retailers to monitor their collection bins more closely to optimize collection efforts.
Bobby Stewart	Highland Sanitation	https://scs-public.s3-us-gov-west-1.amazonaws.com/env_production/oid333/did200071/pid_206566/assets/merged/5l0ji1u_document.pdf	Tax breaks and credits are outside of the scope and authority of the plan. The authority of this plan extends to counties in the metro area. Strategies are included to encourage the development of reuse markets and programs. The Recycling Association of MN has a Recycling Education Toolkit available on their website that has signage and messaging available for use. https://recycleminnesota.org/rec-toolbox/ The strategy for single-use containers has been revised in response to multiple comments. Yard waste and SSO mixed together is undesirable for most compost facilities. Effective composting requires the proper ratio of carbon and nitrogen sources. Co-collection of these materials make it difficult to achieve a consistent ratio. However, if compost facilities and haulers can work together to ensure co-collection works effectively, it would be worth exploring as an option.

Name	Affiliation	Comment	Response
Bonnie Matter	Resident	https://scs-public.s3-us-gov-west-1.amazonaws.com/env_production/oid333/did200071/pid_206566/assets/merged/cd0wig9_document.pdf	This plan does not have authority to make changes like eliminating plastic bags. However, there is an optional strategy for counties to adopt an ordinance with a consumer charge or ban on disposable single-use items, which is open for a county to interpret as including plastic shopping bags. Convenience is a critical component of success. The plan includes a strategy that would expand curbside collection of organics recycling to all cities with a population of 5,000 or greater. Restaurants cannot place orders directly in customers own containers, but you may bring your containers to restaurants for leftovers. The plan also includes a requirement for counties to provide financial assistance to organizations for transitioning to reusable foodware options. This plan seeks to address and divert unnecessary food waste through strategies that provide access to tracking software, partnering with health inspectors to identify diversion and prevention, and establishing partnerships between food rescue organizations and the businesses that create it. Some manufacturers produce packaging-free products. The strategies in this plan can encourage a shift toward that direction, but we will need more manufacturers to reduce packaging and residents to support these changes. Reducing waste at the source provides the greatest environmental benefit. Legislative action will be necessary to require manufacturers to participate. This plan does not have authority to standardize packaging, but does call for standardized outreach and education on recycling.
Brad Hanzel	Carver County	https://scs-public.s3-us-gov-west-1.amazonaws.com/env_production/oid333/did200071/pid_206566/assets/merged/og09i6p_document.pdf	The composting rule changes adopted in 2015 prioritized environmental protection and sought to allow flexibility in compost operations. To expand organics capacity in the region, composters have advocated for the agency to prioritize market development for compost. Additionally, pushing for the expansion of collection programs signals to existing and future operators that there will be material for them to manage. Focusing on these two strategies will support market conditions that can help meet the regions capacity needs. The plan calls for residential curbside organics collection to be required region-wide in cities greater than 5,000. MPCA agrees that it must be more convenient for people to participate in greater numbers. MPCA will continue to enforce MN Stat. 473.848, which requires WTE energy facilities to operate at full capacity. It is understood that some counties will supply more waste to those facilities than others. It is also understood that some counties will not be able to meet the total percentage laid out in the Metro Policy Plan. However, it should be noted that MPCA expects counties to support the existing infrastructure when possible as well as continue to implement strategies to avoid land disposal as much as possible. MPCA will defer to the expertise of counties to propose variations to strategies that will work for their residents and haulers. The plan has been amended to allow counties to provide alternative strategies. For required strategies, proposals must achieve comparable objectives. For optional strategies, counties should work with their PCA solid waste planner to determine the point value of the alternative strategy. MPCA acknowledges that data submittal prior to a license renewal may be challenging. This appears in the plan as a best practice to ensure hauler compliance. Carver County may follow the other best practices, which can be effective too. We appreciate that the county understands the value of quality hauler data. Interested parties have raised many concerns about the undue burden weekly recycling would have on their operations. Accordingly, this now appears in the plan as an optional strategy. This strategy can make collection frequency more convenient for residents but is cost prohibitive and would further exacerbate the driver shortage. Providing additional bins at no cost could achieve the same objective as weekly collection without the added emissions from extra truck routes. The strategy to pair trash and recycling collection has been made optional to address similar hauler concerns. MPCA is working in collaboration with DNR and local governments to create a cohesive plan for wood waste management. The plan has been modified to be inclusive of other tree disease issues, such as Oak Wilt. MPCA has requested and received funding to work on wood waste projects which will also include developing markets. Implementing the strategy for county-owned buildings was the original intent of this strategy. The plan has been edited for clarity. Thank you for your valuable feedback.
Bridget Diep	Resident	https://scs-public.s3-us-gov-west-1.amazonaws.com/env_production/oid333/did200071/pid_206566/assets/merged/ea0hinx_document.pdf	Enforcement of 115A.93 Subd 3(c) assures that haulers do not imposing a greater charge on residents who recycle than on residents who do not recycle, which includes organics recycling. Minn. Stat. § 115A.151 requires businesses to collect a minimum of three materials for recycling. The plan calls for residential curbside organics collection to be required region-wide in cities greater than 5,000. MPCA agrees that it must be more convenient for people to participate in greater numbers.
Caleb Werth	Resident	https://scs-public.s3-us-gov-west-1.amazonaws.com/env_production/oid333/did200071/pid_206566/assets/merged/40fjql_document.pdf	Compostable single-use is a better option than conventional single-use that cannot be recycled, but reuse is the best option. MPCA will look to counties to interpret or adjust this strategy to achieve the best outcome given their resources and residents. The strategy has been edited to incorporate the successful and vetted aspects of the Minneapolis ordinance. Many county environmental centers have incorporated reuse areas or plan to in the future. We encourage every metro county to provide this service. Resident education is addressed in this plan with a strategy that calls for a commitment to standardized outreach and education. We agree that the messaging reaching residents should be easy to understand. Piecemeal efforts by counties, cities, haulers, and other organizations are rarely collaboratively developed and therefore can lead to confusion over what materials can be recycled or composted. Assuring a consistent message from those within the solid waste system would help bring clarity to the users of the system. The plan includes a required strategy to offer grants for waste reduction, reuse, and repair. Reuse businesses may be eligible for this funding.
Calla Martin	Resident	https://scs-public.s3-us-gov-west-1.amazonaws.com/env_production/oid333/did200071/pid_206566/assets/merged/t30ei62_document.pdf	MPCA received many comments of concern about the continued operation of the Hennepin Energy Recovery Center. We have re-examined our approach to the waste-to-energy (WTE) section of the plan. Changes include a comparison of the impacts of WTE and landfills and acknowledgement of the possible closure that will be determined by the Hennepin County Board. It is critical to ensure that large infrastructure decisions are being made with consideration to environmental and environmental justice impacts. MPCA supports minimizing disposal options of WTE and landfill as much as possible and the plan focuses on waste reduction, recycling, and composting to meet the 75% goal. Cumulative air impacts are outside of the scope of this document. Air quality impacts will be addressed as part of the cumulative air impact rule-making effort that is underway. The optional strategies for sustainable building and deconstruction have high point values, which should incentivize counties to incorporate them in their plans. Extended producer responsibility laws have been shown to be a very effective tool to achieve the following, provided the right incentives and requirements are included in the EPR legal framework: Influence manufacturer design to improve recyclability, repair, and reuse; Reduce material use and toxicity; Improve recovery for reuse, repair, and recycling; Help create a sustainable and circular economy for the materials and products covered by specific EPR requirements; Manufacturers and others along the product chain share in the financial and physical responsibility for collection, reuse, and recycling of products at the end of their useful lives. This includes the role for consumers that must be responsible for ensuring that end-of-life products get into the collection system that's provided. This is the overarching plan for the metro area. Counties have flexibility to choose optional strategies that they can effectively implement. In order for Minnesota to utilize this type of program, the Minnesota Legislature would have to create new laws with requirements for manufacturers and other parties that have a role in the cycle of commerce for the products and materials in question.
Carmela Giardina	Resident	https://scs-public.s3-us-gov-west-1.amazonaws.com/env_production/oid333/did200071/pid_206566/assets/merged/c10i07_document.pdf	Recycling refund legislation is very successful at increasing the collection of beverage containers. States with recycling refund often have capture rates greater than 80% for those materials that are covered by the redemption fee. MPCA does not have the authority to require this type of legislation through this plan, because it would take action by the Minnesota Legislature to enact that requirement on beverage manufacturers. The plan calls for residential curbside organics collection to be required region-wide in cities greater than 5,000. MPCA agrees that it must be more convenient for people to participate in greater numbers. The types of materials collected in curbside collection programs are determined by the recycling market. If there is an end-use for an additional material that could be collected in a quantity great enough to support an economically viable market, the industry will implement it.
Carolyn Majkrzak	Resident	https://scs-public.s3-us-gov-west-1.amazonaws.com/env_production/oid333/did200071/pid_206566/assets/merged/t10bi3v_document.pdf	Thank you for the feedback.
Cassie Lefeber	Resident	https://scs-public.s3-us-gov-west-1.amazonaws.com/env_production/oid333/did200071/pid_206566/assets/merged/oc0x78_document.pdf	Due to the varied resources of metro counties, we believe requiring these strategies would place an undue burden on county staff at this time. Impactful optional strategies carry a high point value, which should provide a strong incentive for counties with the appropriate resources to successfully implement. The plan includes a strategy with several strategies to address barriers and expand reuse access. Drop-off events hosted by the counties are popular with residents, but these events have been shown to be very expensive and time intensive for county staff to plan and execute. Advertising a special collection day at the existing permanent sites could have a similar impact to raise community awareness, perhaps outside of regular hours. Convenience is a critical component of success for organics recycling. The plan includes a strategy that would expand curbside collection of organics recycling to all cities with a population of 5,000 or greater. The plan includes a strategy for the management of organics recycling from large commercial food generators by 2030. It was optional in the draft and has been changed to required. MPCA has been working with the Departments of Agriculture and Health to create content for inspectors to educate licensed facilities about financial assistance, donation, and opportunities to reduce wasted food. The plan has been revised to include the MPCA's commitment to continue work with partner agencies on improved food rescue and prevention efforts. A strategy encouraging county engagement with health inspectors in individual county plans will remain in the plan to help accelerate adoption of the practice but will not be required.

Name	Affiliation	Comment	Response
Chris Kostik	Resident	https://scs-public.s3-us-gov-west-1.amazonaws.com/env_production/oid333/did200071/pid_206566/assets/merged/750fijm_document.pdf	Interested parties have raised many concerns about the undue burden weekly recycling would have on their operations. Accordingly, this now appears in the plan as an optional strategy with an alternative option to provide extra bins at no cost. The single-use container fee is an optional strategy that counties may choose to add to their plans. We will look to the counties to select an approach that will best serve the needs of their residents. Counties will be required to offer grants or rebates for organizations to transition to reusable food and beverage service ware. Restrictions like a bag ban should be determined through county and/or city ordinances. The most effective way to reduce waste is to not create it in the first place. Compostable single-use products are a better option than conventional single-use products that cannot be recycled, but reuse is the best option. Extended producer responsibility (EPR) laws have been shown to be a very effective tool to achieve the following, provided the right incentives and requirements are included in the EPR legal framework: Influence manufacturer design to improve recyclability, repair, and reuse; Reduce material use and toxicity; Improve recovery for reuse, repair, and recycling; Help create a sustainable and circular economy for the materials and products covered by specific EPR requirements; Manufacturers and others along the product chain share in the financial and physical responsibility for collection, reuse, and recycling of products at the end of their useful lives. This includes the role for consumers that must be responsible for ensuring that end-of-life products get into the collection system that's provided. For us to utilize this type of program, the Minnesota Legislature would have to create new laws with requirements for manufacturers and other parties that have a role in the cycle of commerce for the products and materials in question. Packaging: The Partnership on Waste and Energy—which includes Hennepin, Ramsey, and Washington counties—are working on issues raised by MPP commenters regarding the need to address quantities, types, and management of packaging materials. EPR can provide a better pathway for compostable packaging to be collected and directed to a commercial composting facility. EPR can require proper labeling for reuse, recycling, or composting.
Chris Long	Resident	https://scs-public.s3-us-gov-west-1.amazonaws.com/env_production/oid333/did200071/pid_206566/assets/merged/ik06ipj_document.pdf	The plan prioritizes reuse strategies. Reducing the amount of material being managed in the solid waste system provides the greatest environmental benefit.
Chris McConn	Minnesota Resource Recovery Association	https://scs-public.s3-us-gov-west-1.amazonaws.com/env_production/oid333/did200071/pid_206566/assets/merged/5x0s1qj_document.pdf	MPCA supports the waste hierarchy and values the role of waste-to-energy in the system. We appreciate MRRA's alignment with the agency's stance. Due to the unfolding events in Hennepin County and many comments of concern about the continued operation of the Hennepin Energy Recovery Center, we have re-examined our approach to the waste-to-energy (WTE) section of the plan. Changes include a comparison of the impacts of WTE and landfills and acknowledgement of the possible closure that will be determined by the Hennepin County Board. It is critical to ensure that large infrastructure decisions are being made with consideration to environmental and environmental justice impacts. MPCA supports minimizing disposal options of WTE and landfill as much as possible and the plan focuses on waste reduction, recycling, and composting to meet the 75% goal. Extended producer responsibility (EPR) laws have been shown to be a very effective tool to achieve the following, provided the right incentives and requirements are included in the EPR legal framework: Influence manufacturer design to improve recyclability, repair, and reuse; Reduce material use and toxicity; Improve recovery for reuse, repair, and recycling; Help create a sustainable and circular economy for the materials and products covered by specific EPR requirements; Manufacturers and others along the product chain share in the financial and physical responsibility for collection, reuse, and recycling of products at the end of their useful lives. This includes the role for consumers that must be responsible for ensuring that end-of-life products get into the collection system that's provided. For us to utilize this type of program, the Minnesota Legislature would have to create new laws with requirements for manufacturers and other parties that have a role in the cycle of commerce for the products and materials in question. The Partnership on Waste and Energy—which includes Hennepin, Ramsey, and Washington counties—are working on issues raised by MPP commenters regarding the need to address quantities, types, and management of packaging materials. EPR can provide a better pathway for compostable packaging to be collected and directed to a commercial composting facility. EPR can require proper labeling for reuse, recycling, or composting. Thank you for your support and valuable feedback.
Christine Popowski	Resident	https://scs-public.s3-us-gov-west-1.amazonaws.com/env_production/oid333/did200071/pid_206566/assets/merged/t10s2r_document.pdf	MPCA received many comments of concern about the continued operation of the Hennepin Energy Recovery Center. We have re-examined our approach to the waste-to-energy (WTE) section of the plan. Changes include a comparison of the impacts of WTE and landfills and acknowledgement of the possible closure that will be determined by the Hennepin County Board. It is critical to ensure that large infrastructure decisions are being made with consideration to environmental and environmental justice impacts. MPCA supports minimizing disposal options of WTE and landfill as much as possible and the plan focuses on waste reduction, recycling, and composting to meet the 75% goal. Cumulative air impacts are outside of the scope of this document. Air quality impacts will be addressed as part of the cumulative air impact rule-making effort that is underway. Thank you for your feedback.
Chris Roloff	Resident	https://scs-public.s3-us-gov-west-1.amazonaws.com/env_production/oid333/did200071/pid_206566/assets/merged/5f02iba_document.pdf	The reciprocal use agreement among the metro counties allows residents of any metro county to use any of the 7-metro county environmental centers and HHW sites. The single-use container fee is an optional strategy that counties may choose to add to their plans. We will look to the counties to select an approach that will best serve the needs of their residents.
cj stone	Resident	https://scs-public.s3-us-gov-west-1.amazonaws.com/env_production/oid333/did200071/pid_206566/assets/merged/fm0uik1_document.pdf	Carbon capture and storage (CCS) is a theoretical idea that has not been tested in real world applications. Additional research is needed to confirm that it can be implemented at a scalable level. MPCA would potentially support demonstration research projects to investigate CCS. Landfills and compost facilities are open for use over many years. During this time any collected organic material would be exposed to precipitation and the atmosphere allowing for the generation of decomposition gases. Introducing large quantities of salt into a landfill would increase the risk of groundwater contamination. Composting and anaerobic digestion provide benefits beyond the disposal of waste such as creating mulch for reuse or electricity generation. CCS would only be used as a disposal method and therefore would be lower on the solid waste hierarchy. The referenced articles discuss agro-sequestration using various crops specifically chosen for the carbon capture potential. The heterogeneous nature of human generated organics used in composting may impact the feasibility of using CCS.
Claire Graupmann	Resident	https://scs-public.s3-us-gov-west-1.amazonaws.com/env_production/oid333/did200071/pid_206566/assets/merged/3b0jic0_document.pdf	Resident education is addressed in that plan with a strategy that calls for a commitment to standardized outreach and education. We agree that the messaging reaching residents should be easy to understand. Piecemeal efforts by counties, cities, haulers, and other organizations are rarely collaboratively developed and can lead to confusion over what materials can be recycled or composted. Assuring a consistent message from those within the solid waste system would help bring clarity to the users of the system. The plan includes many waste reduction strategies. The plan requires counties to standardized outreach and education. Using consistent terms throughout the metro should help to reduce confusion.

Name	Affiliation	Comment	Response
Commissioner Liz Workman, Board Chair	Dakota County	https://scs-public.s3-us-gov-west-1.amazonaws.com/env_production/oid333/did200071/pid_2_06566/assets/merged/ow0filbx_document.pdf	Appendix G now includes a column identifying interested parties expected to be impacted by each strategy in the Metro Policy Plan. Based on comments received, it's clear that the MPCA needs to play a role in creating regional consistency. As the leading state agency, MPCA is committed to coordinating and facilitating regional meetings to discuss solid waste issues. The plan has been modified to clarify the role that MPCA will play. If a county and the MPCA have conflicting compliance rates, that demonstrates a need to collaborate and identify the source of this anomaly. If the MPCA has an outdated license list from the county, this could be the source of the discrepancy. Implementing this strategy for county owned buildings was the intent of this strategy. The plan has been edited for clarity. Interested parties have raised many concerns about the undue burden weekly recycling would have on their operations. Accordingly, this now appears in the plan as an optional strategy. MPCA is working in collaboration with DNR and local governments to create a cohesive plan for wood waste management. The plan has been modified to be inclusive of other tree disease issues, such as Oak Wilt. Wood waste is expected to increase and will require collaboration to find upstream solutions. Planning will be required to avoid open burning. The plan has been revised to include a state-led strategy aimed at inter-agency coordination. MPCA promotes the use of compost to MNDOT and enterprise wide. Food-derived compost requirements in some metro counties and cities has bolstered markets. The region's food waste can have a beneficial use in metro construction projects. MPCA must promote robust markets for compost. One avenue is through partnerships with other state agencies. However, the MNDOT specification may not be the right tool for a statewide market development strategy for food-derived compost. In much of Greater Minnesota, food-derived compost is not established. Facilities and compost sites may be remote. Current MNDOT specifications do allow for use of food-derived compost. However, requiring only food-derived compost statewide is not currently feasible. The volume of compost used under MNDOT specifications exceeds the supply of food-derived compost. Additionally, some projects are located far from sources of food-derived compost. These statewide specifications must be achievable through a variety of feedstocks. MPCA will continue to enforce MN Stat. 473.848, which requires WTE energy facilities to operate at full capacity. It is understood that some counties will supply more waste to those facilities than others. It is also understood that some counties will not be able to meet the total percentage laid out in the Metro Policy Plan. However, it should be noted that MPCA expects counties to support the existing infrastructure when possible. The MPCA also has many strategies that expect counties to move materials up the hierarchy via reuse, recycling, and composting whether they have access to WTE or not. Source separation is the best way to recover materials and to ensure the highest value of those materials. However, despite our best efforts, human behavior is unpredictable. Preprocessing can recover additional recyclables, especially metals. The cost of collection is the primary driver of cost to residents, but historically tip fees have not been the driver for cost. The plan has been modified to extend the timeline in order to allow facilities more time to plan. The metro forecast was developed as described in the methodology included within Appendix F. Organics and recycling tonnages were calculated based on needed benchmarks to achieve the 75% recycling goal by 2030. Capacity has historically expanded as programs have come online and as needed. Organics processors (i.e., compost sites and anaerobic digestion facilities) are only likely to make the necessary investments in expanding their capacity if/when they have assurances that materials will be available to be managed. New capacity could come from a variety of sources, including already announced expansions, the initiation of operations at already permitted sites, management of organics at facilities outside the metro region and/or the development of new sites. The forecast is a more useful planning tool in its current format than it would be if it were to reflect an estimate of new capacity that may not accurately reflect real capacity in 2025. The MPCA is generally supportive of adequately funding programs at a state, county, and city-level. Legislative changes are outside the scope of the plan. The plan provides a waste forecast of anticipated generation. Waste reduction is determined by comparing forecasted population growth with documented solid waste generation data. Ideally, the strategies proposed throughout the plan result in future reported generation rates as less than forecasted. The vast number of strategies creates a wide range of possible systems/programs. It wouldn't be possible to estimate costs for all outcomes. It is expected that metro counties consider costs of implementation as they select strategies for their County Solid Waste Plans. MPCA will allow counties to recommend alternative strategies that will be approved by MPCA on a case-by-case basis. The standardized education strategy has been edited to address your concern.
Connor Stratton	Resident	https://scs-public.s3-us-gov-west-1.amazonaws.com/env_production/oid333/did200071/pid_2_06566/assets/merged/8o0bilhe_document.pdf	MPCA is committed to addressing the GHG contributions the solid waste system produces. This plan seeks to hold counties accountable for assuring meaningful effort is being put forth into the greatest impact reduction activities, like source reduction. MPCA received many comments of concern about the continued operation of the Hennepin Energy Recovery Center. We have re-examined our approach to the waste-to-energy (WTE) section of the plan. Changes include a comparison of the impacts of WTE and landfills and acknowledgement of the possible closure that will be determined by the Hennepin County Board. It is critical to ensure that large infrastructure decisions are being made with consideration to environmental and environmental justice impacts. MPCA supports minimizing disposal options of WTE and landfill as much as possible and the plan focuses on waste reduction, recycling, and composting to meet the 75% goal. Cumulative air impacts are outside of the scope of this document. Air quality impacts will be addressed as part of the cumulative air impact rule-making effort that is underway. Thank you for your feedback.
Cora Preston	Resident	https://scs-public.s3-us-gov-west-1.amazonaws.com/env_production/oid333/did200071/pid_2_06566/assets/merged/1s03lqu_document.pdf	Ramsey County will soon roll out curbside pick-up for food scraps: https://www.ramseycounty.us/residents/recycling-waste/collection-sites/food-scraps . Making this an easier option for residents should increase participation and divert more food waste from landfills. An optional strategy that counties may choose to add to their plans would require a fee on takeout containers. We will look to the counties to plan for an approach that will best serve the needs of their residents. There is flexibility in how counties fulfill this strategy and also to better align with the waste hierarchy, which values recycling over composting. Interested parties have raised many concerns about the undue burden weekly recycling would have on their operations. Accordingly, this now appears in the plan as an optional strategy. Piecemeal efforts by counties, cities, haulers, and other organizations are rarely collaboratively developed and therefore can lead to confusion over what materials can be recycled or composted. Assuring a consistent message from those within the solid waste system would help bring clarity to the users of the system.
Corissa Nohrenberg	Resident	https://scs-public.s3-us-gov-west-1.amazonaws.com/env_production/oid333/did200071/pid_2_06566/assets/merged/s60bjaf_document.pdf	A required strategy calls for expanded backyard composting outreach and resources for residents. Those resources would provide guidance and materials for residents to set up their own backyard compost. Encouraging a reduction in paper marketing materials is a great source reduction idea. Recycling is exempt from the solid waste management tax, so a tax break is already in place. The State and counties could do a better job of making this clear to residents. The cost of curbside collection is outside of the scope of this plan. Haulers establish the costs for service. The Minnesota Department of Corrections (DOC) work release program is something materials recovery facilities (MRFs) have historically used. However, this practice was interrupted during the COVID-19 pandemic due to both safety concerns as well as limited availability of incarcerated workers at MRFs.
Curt Wynkoop	Resident	https://scs-public.s3-us-gov-west-1.amazonaws.com/env_production/oid333/did200071/pid_2_06566/assets/merged/pz0nhiv_document.pdf	An analysis of existing data shows that higher participation rates are realized with single-sort recycling than historical rates with multiple streams. Switching from one bin to 5-6 different types in bags or containers would be very difficult. Additionally, workers now use hydraulic systems to empty rolling carts. Under the old system, workers had to physically empty 5-6 different bags or containers into different compartments in the truck. This resulted in injuries that are now avoidable through the simplified single-stream system.
D B	Resident	https://scs-public.s3-us-gov-west-1.amazonaws.com/env_production/oid333/did200071/pid_2_06566/assets/merged/720gict_document.pdf	The MPCA has a responsibility to assure the solid waste system is equitable and does not create an undue burden on any community in the Twin Cities Metro Area.
Dagny Heimisdottir	Resident	https://scs-public.s3-us-gov-west-1.amazonaws.com/env_production/oid333/did200071/pid_2_06566/assets/merged/oe0vi52_document.pdf	The plan calls for residential curbside organics collection to be required region-wide in cities greater than 5,000. MPCA agrees that it must be more convenient for people to participate in greater numbers.

Name	Affiliation	Comment	Response
Dale Lutz	Resident	https://scs-public.s3-us-gov-west-1.amazonaws.com/env_production/oid333/did200071/pid_206566/assets/merged/840pi2a_document.pdf ; https://scs-public.s3-us-gov-west-1.amazonaws.com/env_production/oid333/did200071/pid_206566/assets/merged/sx07lea_document.pdf	Thank you for sharing the information about CCC for WTE facilities. MPCA is aware of carbon capture technology and the Minnesota Resource Recovery Association is exploring partnerships with carbon capture technology for WTE facilities located in MN. Carbon captured in MN could be deep well injected into bedrock as close as North Dakota, but there are some technical hurdles to cross prior to that, most notably the pipeline infrastructure to get the CO2 transported efficiently. Solving climate change will require a wide range of creative solutions and CCC could be one of the tools.
Daniel Rosenblum	Resident	https://scs-public.s3-us-gov-west-1.amazonaws.com/env_production/oid333/did200071/pid_206566/assets/merged/rw60blms_document.pdf	Extended producer responsibility laws have been shown to be a very effective tool to achieve the following, provided the right incentives and requirements are included in the EPR legal framework: Influence manufacturer design to improve recyclability, repair, and reuse; Reduce material use and toxicity; Improve recovery for reuse, repair, and recycling; Help create a sustainable and circular economy for the materials and products covered by specific EPR requirements; Manufacturers and others along the product chain share in the financial and physical responsibility for collection, reuse, and recycling of products at the end of their useful lives. This includes the role for consumers that must be responsible for ensuring that end-of-life products get into the collection system that's provided. For us to utilize this type of program, the Minnesota Legislature would have to create new laws with requirements for manufacturers and other parties that have a role in the cycle of commerce for the products and materials in question. The Partnership on Waste and Energy—which includes Hennepin, Ramsey, and Washington counties—are working on issues raised by MPP commenters regarding the need to address quantities, types, and management of packaging materials. EPR can provide a better pathway for compostable packaging to be collected and directed to a commercial composting facility. EPR can require proper labeling for reuse, recycling, or composting. MPCA received many comments of concern about the continued operation of the Hennepin Energy Recovery Center. We have re-examined our approach to the waste-to-energy (WTE) section of the plan. Changes include a comparison of the impacts of WTE and landfills and acknowledgement of the possible closure that will be determined by the Hennepin County Board. It is critical to ensure that large infrastructure decisions are being made with consideration to environmental and environmental justice impacts. MPCA supports minimizing disposal options of WTE and landfill as much as possible and the plan focuses on waste reduction, recycling, and composting to meet the 75% goal. Cumulative air impacts are outside of the scope of this document. Air quality impacts will be addressed as part of the cumulative air impact rule-making effort that is underway. This plan seeks to manage waste to its highest and best use.
Deb Leibel	Resident	https://scs-public.s3-us-gov-west-1.amazonaws.com/env_production/oid333/did200071/pid_206566/assets/merged/c90qtr_document.pdf	Organized collection systems provide many overall benefits to residents, if implemented properly. Establishment of an organized collection system is a local decision and therefore, this strategy will remain optional. The plan calls for residential curbside organics collection to be required region-wide in cities greater than 5,000. MPCA agrees that it must be more convenient for people to participate in greater numbers.
Delaney Welle	Resident	https://scs-public.s3-us-gov-west-1.amazonaws.com/env_production/oid333/did200071/pid_206566/assets/merged/oa0ai9g_document.pdf	Convenience is a critical component of success. A required strategy in the plan expands curbside collection of organics recycling to all cities with a population greater than 5,000. MPCA agrees that it must be more convenient for people to participate in greater numbers. Counties are able to pursue the implementation of an ordinance to tax single-use items. Restrictions like a bag ban should be determined through county and/or city ordinances. Education must be a priority to improve our system. In addition, different types of education are important to reach different people. The plan calls for robust education in all seven metro counties.
denise dawson	Resident	https://scs-public.s3-us-gov-west-1.amazonaws.com/env_production/oid333/did200071/pid_206566/assets/merged/d20yicn_document.pdf	Minnesota Statute 115A.93 Subd. 3 prohibits haulers from imposing a greater charge on residents who recycle than on residents who do not recycle. The initial draft of this plan explored the feasibility of weekly recycling collection, which was determined to cause an undue burden on the haulers without evidence of an increase in collection of recyclable materials.
Diane Ballentine	Resident	https://scs-public.s3-us-gov-west-1.amazonaws.com/env_production/oid333/did200071/pid_206566/assets/merged/ah03i9n_document.pdf	Compostable single-use products are a better option than conventional single-use products, but reuse is the best option.
Diane Edson	Resident	https://scs-public.s3-us-gov-west-1.amazonaws.com/env_production/oid333/did200071/pid_206566/assets/merged/vw0s8b_document.pdf	Contamination is a serious issue plaguing the recycling stream. Penalizing violators would be difficult to enforce. The plan focuses on education strategies to mitigate the issue. Interested parties have raised many concerns about the undue burden weekly recycling would have on their operations. Accordingly, this now appears in the plan as an optional strategy. Recycling refund legislation is very successful at increasing the collection of beverage containers. States with recycling refund often have capture rates greater than 80% for materials covered by the redemption fee. MPCA does not have the authority to require this type of legislation through this plan. This would require action by the Minnesota Legislature to enact a requirement on beverage manufacturers. The plan includes a strategy for the management of organics recycling from large commercial food generators by 2030. It was optional in the draft and has been changed to required, based on public comments.
Dick Evans	Resident	https://scs-public.s3-us-gov-west-1.amazonaws.com/env_production/oid333/did200071/pid_206566/assets/merged/l6067a_document.pdf	The plan calls for residential curbside organics collection to be required region-wide in cities greater than 5,000. MPCA agrees that it must be more convenient for people to participate in greater numbers.
don nelson	Resident	https://scs-public.s3-us-gov-west-1.amazonaws.com/env_production/oid333/did200071/pid_206566/assets/merged/0905i8v_document.pdf	Compostable single-use products are a better option than conventional single-use products that cannot be recycled, but reuse is the best option. The plan requires expansion of curbside organics collection to a greater number of households. Terracycle can fill the gaps in collection of materials that cannot be diverted/processed at a traditional recycling facility. Reducing or eliminating these materials is best. For unavoidable waste, it's a great option to assure these materials stay out of landfills and WTE facilities.

Name	Affiliation	Comment	Response
Donna Lindberg	Resident	https://scs-public.s3-us-gov-west-1.amazonaws.com/env_production/oid333/did200071/pid_206566/assets/merged/wb0aibx_document.pdf	Educational requirements appear throughout the plan. School districts are required to collect and recycle at least three types of recyclables in their schools, although contamination of the recyclables can be a challenge. Curbside collection of organics recycling is a requirement in the plan.
Doug Gurian-Sherman	MN EJ Table and MCEA	https://scs-public.s3-us-gov-west-1.amazonaws.com/env_production/oid333/did200071/pid_206566/assets/merged/310qivd_document.pdf	MPCA used up-to-date peer-reviewed science as a basis for the recommendations in this report. The strategies of this plan have merit for reducing waste generation and disposal. We acknowledge that some are more effective and impactful than others. State statute backs the waste hierarchy, and the plan has a strong emphasis on the top of the hierarchy to reduce waste to the extent possible. MPCA received many comments of concern about the continued operation of the Hennepin Energy Recovery Center. We have re-examined our approach to the waste-to-energy (WTE) section of the plan. Changes include a comparison of the impacts of WTE and landfills and acknowledgement of the possible closure that will be determined by the Hennepin County Board. It is critical to ensure that large infrastructure decisions are being made with consideration to environmental and environmental justice impacts. MPCA supports minimizing disposal options of WTE and landfill as much as possible and the plan focuses on waste reduction, recycling, and composting to meet the 75% goal. Cumulative air impacts are outside of the scope of this document. Air quality impacts will be addressed as part of the cumulative air impact rule-making effort that is underway. The objectives of the plan show that we are attempting to increase traditional recycling by 20%, organics by 11% and to reduce overall waste generation by 5%. If the Metro area can successfully achieve these objectives, the solid waste system will generate far fewer greenhouse gases.
Doug Heuer	Resident	https://scs-public.s3-us-gov-west-1.amazonaws.com/env_production/oid333/did200071/pid_206566/assets/merged/7r0vihm_document.pdf	Reducing waste is a keystone theme in this plan. Replacing single-use containers with reusable containers is an effective way to reduce waste. We encourage counties to address solutions to reduce reliance on single-use waste through several optional strategies.
Douglas Carnival	McGrann Shea Carnival Straughn & Lamb, Chartered	https://scs-public.s3-us-gov-west-1.amazonaws.com/env_production/oid333/did200071/pid_206566/assets/merged/w104i7g_document.pdf ; https://scs-public.s3-us-gov-west-1.amazonaws.com/env_production/oid333/did200071/pid_206566/assets/merged/w104i7g_document.pdf	Interested parties have raised many concerns about the undue burden weekly recycling would have on their operations. Accordingly, this now appears in the plan as an optional strategy. The MPCA is tasked with enforcing state law as written. MPCA continues to support the 75% recycling goal. We have and will continue to support a greater emphasis on waste prevention and reuse because of their increased benefits. MPCA continually reviews goals and requirements for ways they can be improved or revised and recommend revisions as appropriate. Source separation is the best way to recover materials and to ensure the highest value of those materials. However, despite our best efforts, human behavior is unpredictable. Preprocessing can recover additional recyclables, especially metals. The cost of collection is the primary driver of cost to residents, but historically tip fees have not been the driver for cost. The plan has been modified to extend the timeline. MPCA acknowledges that an additional cost may not change human behavior, but these added costs could provide resources to fund programs that can focus on alternatives to disposal. It is the intention of the MPCA that the tax/fee would be utilized by the county to reinvest in education and alternatives to disposal. The vast number of strategies creates a wide range of possible systems/programs. It wouldn't be possible to estimate costs for all outcomes. It is expected that metro counties consider costs of implementation as they select strategies for their County Solid Waste Plans. Minnesota has a rechargeable battery law. Updates to the law are needed to address the full scope of the lithium battery issue. The MPCA is working with partners on legislative proposals to improve the collection and recycling of batteries. A strategy has been added to the plan to implement education programs on proper battery management. Creating safe storage spaces that minimize fire risks at waste facilities is challenging. Minnesota Statute 473.149 Subd 3 (b) states that revisions to the plan are exempt from rulemaking. The statute also puts in a robust public comment and engagement process that guides the MPCA in development of the Metro Policy Plan. The plan states that required strategies must be included in county plans in order for approval by MPCA pursuant to MN Stat 473.803. Only those criteria and standards as laid out in Appendix D are required of facilities. Required strategies in the body of the plan are requirements that counties must include in their solid waste plans. County plans set policies and goals. Counties are expected to implement their plans, which may require the introduction of ordinances.
Drew Hatzenbuehler	Morrison County	https://scs-public.s3-us-gov-west-1.amazonaws.com/env_production/oid333/did200071/pid_206566/assets/merged/hp0bill_document.pdf	Greater Minnesota CON is currently identified in rule. Issuance of CON is not done for a set number of years, but rather for the volume of waste anticipated for a set amount of time. Time-based CON is challenging, because it requires long-term forecasts that must account for uncertainty. When landfill capacity is constrained, MPCA and the affected facilities must coordinate to ensure that there is no disruption to the system that results in illegal dumping of waste.
Elia Rubio	Resident	https://scs-public.s3-us-gov-west-1.amazonaws.com/env_production/oid333/did200071/pid_206566/assets/merged/5x0micx_document.pdf	MPCA received many comments of concern about the continued operation of the Hennepin Energy Recovery Center. We have re-examined our approach to the waste-to-energy (WTE) section of the plan. Changes include a comparison of the impacts of WTE and landfills and acknowledgement of the possible closure that will be determined by the Hennepin County Board. It is critical to ensure that large infrastructure decisions are being made with consideration to environmental and environmental justice impacts. MPCA supports minimizing disposal options of WTE and landfill as much as possible and the plan focuses on waste reduction, recycling, and composting to meet the 75% goal. Cumulative air impacts are outside of the scope of this document. Air quality impacts will be addressed as part of the cumulative air impact rule-making effort that is underway. Thank you for your feedback.
Elizabeth Aseftine	Resident	https://scs-public.s3-us-gov-west-1.amazonaws.com/env_production/oid333/did200071/pid_206566/assets/merged/010lirl_document.pdf	Recycling refund legislation is very successful at increasing the collection of beverage containers. States with recycling refund often have capture rates greater than 80% for those materials that are covered by the redemption fee. MPCA does not have the authority to require this type of legislation through this plan, because it would take action by the Minnesota Legislature to enact that requirement on beverage manufacturers.
Elizabeth Kittelson	Resident	https://scs-public.s3-us-gov-west-1.amazonaws.com/env_production/oid333/did200071/pid_206566/assets/merged/3n0r2dd_document.pdf	Universally-sized collection bins are the best option for hauler safety. If other accommodations could ease your burden, that may be feedback you can share with your city officials.
Elizabeth Shvedenko	Resident	https://scs-public.s3-us-gov-west-1.amazonaws.com/env_production/oid333/did200071/pid_206566/assets/merged/lp0ui7n_document.pdf	Curbside organics recycling pickup programs play an important role in solid waste diversion.
Eke Zimmermann	Resident	https://scs-public.s3-us-gov-west-1.amazonaws.com/env_production/oid333/did200071/pid_206566/assets/merged/fe0yis6_document.pdf	Contract for residential recycling and organics by 2030 is an optional strategy in the plan. Organized collection has numerous benefits and can lower costs for all types of service (i.e., MSW, recycling, organics) to residents of a community. Resident education is addressed in this plan with a strategy that calls for a commitment to standardized outreach and education. We agree that the messaging reaching residents should be easy to understand. Piecemeal efforts by counties, cities, haulers, and other organizations are rarely collaboratively developed and therefore can lead to confusion over what materials can be recycled or composted. Assuring a consistent message from those within the solid waste system would help bring clarity to the users of the system. The draft plan did not include strategies for multi-family housing. Strategies for multi-family recycling, organics recycling, and reduction have been added to the final plan. The plan includes a strategy to establish a curbside set-out day to allow residents to set out used items for reuse. This should lead counties to eliminate prohibitive ordinances and policies.

Name	Affiliation	Comment	Response
Emily Barker	Minnesota Reusables Coalition	https://scs-public.s3-us-gov-west-1.amazonaws.com/env_production/oid333/did200071/pid_206566/assets/merged/y909i8d-document.pdf	A strategy requiring counties to establish their own green meeting policy now appears in the plan. In response to comments received from cities and counties, the strategy for reusables at county events will remain optional. Compostable single-use products are a better option than conventional single-use products that cannot be recycled, but reuse is the best option. MPCA will look to counties to interpret or adjust this strategy to achieve the best outcome given their resources and residents. The strategy has been edited to incorporate the successful and vetted aspects of the Minneapolis ordinance. MPCA received funding in the last legislative session for grants that will address waste issues and climate change reduction. Quality tracking of materials is the key to successful solid waste management. Measuring our successes and failures allows us to advance the system in a meaningful, data-based way. The plan has been amended to allow counties to provide alternative strategies. For required strategies, proposals must achieve comparable objectives. For optional strategies, counties should work with their PCA solid waste planner to determine the point value of the alternative strategy. This state-led strategy is a brief description of the complex work PCA staff will continue to focus on.
Emily Beltt	Resident	https://scs-public.s3-us-gov-west-1.amazonaws.com/env_production/oid333/did200071/pid_206566/assets/merged/Sj0aifi-document.pdf	Ramsey County will soon roll out curbside pick-up for food scraps: https://www.ramseycounty.us/residents/recycling-waste/collection-sites/food-scraps . Making this an easier option for residents should increase participation and divert more food waste from landfills.
Emma Marlar	Resident	https://scs-public.s3-us-gov-west-1.amazonaws.com/env_production/oid333/did200071/pid_206566/assets/merged/v30ci5l-document.pdf	MPCA received many comments of concern about the continued operation of the Hennepin Energy Recovery Center. We have re-examined our approach to the waste-to-energy (WTE) section of the plan. Changes include a comparison of the impacts of WTE and landfills and acknowledgement of the possible closure that will be determined by the Hennepin County Board. It is critical to ensure that large infrastructure decisions are being made with consideration to environmental and environmental justice impacts. MPCA supports minimizing disposal options of WTE and landfill as much as possible and the plan focuses on waste reduction, recycling, and composting to meet the 75% goal. Cumulative air impacts are outside of the scope of this document. Air quality impacts will be addressed as part of the cumulative air impact rule-making effort that is underway. Thank you for your feedback.
Eric Brace	Resident	https://scs-public.s3-us-gov-west-1.amazonaws.com/env_production/oid333/did200071/pid_206566/assets/merged/8a0zi2o-document.pdf	Convenience is a critical component of success. The plan includes a strategy that would expand curbside collection of organics recycling to all cities with a population of 5,000 or greater. The most effective way to reduce waste is to not create it in the first place. Compostable single-use products are a better option than conventional single-use products that cannot be recycled, but reuse is the best option. The plan requires expansion of curbside organics collection to a greater number of households. Making a new product emits greenhouse gases that contribute to climate change and requires a lot of materials and energy - raw materials must be extracted from the earth, and the product must be fabricated then transported to wherever it will be sold. As a result, reduction and reuse are the most effective ways you can save natural resources, protect the environment and save money.
Erin Oakley	Resident	https://scs-public.s3-us-gov-west-1.amazonaws.com/env_production/oid333/did200071/pid_206566/assets/merged/kd0zil6-document.pdf	The most effective way to reduce waste is to not create it in the first place. Making a new product emits greenhouse gases that contribute to climate change and requires a lot of materials and energy—raw materials must be extracted from the earth, and the product must be fabricated then transported to wherever it will be sold. As a result, reduction and reuse are the most effective ways you can save natural resources, protect the environment, and save money. The plan includes many strategies targeted at improving diversion of businesses.
Evan Mulholland	MN EJ Table and MCEA	https://scs-public.s3-us-gov-west-1.amazonaws.com/env_production/oid333/did200071/pid_206566/assets/merged/vk0siden-document.pdf	MPCA received many comments of concern about the continued operation of the Hennepin Energy Recovery Center. We have re-examined our approach to the waste-to-energy (WTE) section of the plan. Changes include a comparison of the impacts of WTE and landfills and acknowledgement of the possible closure that will be determined by the Hennepin County Board. It is critical to ensure that large infrastructure decisions are being made with consideration to environmental and environmental justice impacts. MPCA supports minimizing disposal options of WTE and landfill as much as possible and the plan focuses on waste reduction, recycling, and composting to meet the 75% goal. Cumulative air impacts are outside of the scope of this document. Air quality impacts will be addressed as part of the cumulative air impact rule-making effort that is underway. Decentralized waste management is an interesting concept. In many ways, this plan is pushing for strategies that do just that. By prioritizing waste reduction, reuse, recycling, and composting over disposal methods, the idea of moving material into decentralized management is in this plan. The plan contains strategies to diversify our end markets for recycling, compost, and wood waste. When it comes to diversifying trash outlets, MPCA would be receptive to discussing what those options could be that also are protective of the environment. The Metro Policy Plan will not be including a HERC shut down by 2025 scenario. At the time of publication, Hennepin County is in the process of developing a plan to close HERC between 2028 and 2040. CON for land disposal facilities is not contingent on the Metro Plan having that scenario published. CON needs are evaluated as needed arises, and landfills can expand without a forecast that states that it's needed if conditions in the region are substantially different than the time that the forecast was developed. Forecasts for non-MSW were inadvertently omitted from the draft plan. Non-MSW forecasts, including ash estimates, have been added. Waste-to-energy facilities reduce waste volume by about 75%, greatly reducing the amount of space needed for land disposal. Additionally, ash is homogeneous and chemically-stable, which reduces some of the risks of land disposal. The 5% waste reduction goal references the total generation of waste. Despite our best efforts, consumption influences waste generation. To truly be successful in waste reduction, upstream policies must be put into place by the Minnesota Legislature that result in fewer materials being generated. The 75% goal is determined by state statute as the disposal avoidance goal and MPCA intends to aggressively push for improvement in all areas that are feasible. The draft plan did not include strategies for multi-family housing. Strategies for multi-family recycling, organics recycling, and reduction have been added to the final plan.
Frank Hornstein	Minnesota Legislature	https://scs-public.s3-us-gov-west-1.amazonaws.com/env_production/oid333/did200071/pid_206566/assets/merged/ov0ki2k-document.pdf	Forecasts for non-MSW were inadvertently omitted from the draft plan. Non-MSW forecasts, including ash estimates, have been added. Waste-to-energy facilities reduce waste volume by about 75%, greatly reducing the amount of space needed for land disposal. Additionally, ash is homogeneous and chemically-stable, which reduces some of the risks of land disposal. MPCA uses the Metro Policy Plan cycle to increase the expectations for county plans by requiring additional items for them to include. In addition, in previous cycles, MPCA has met with underperforming counties to work with them to see better results. MPCA intends to await the response of the counties in their solid waste plans. We have the authority to approve or deny plans and will work to enforce this statute within our authority in order to continue to push the region toward the 75% goal. MPCA received many comments of concern about the continued operation of the Hennepin Energy Recovery Center. We have re-examined our approach to the waste-to-energy (WTE) section of the plan. Changes include a comparison of the impacts of WTE and landfills and acknowledgement of the possible closure that will be determined by the Hennepin County Board. It is critical to ensure that large infrastructure decisions are being made with consideration to environmental and environmental justice impacts. MPCA supports minimizing disposal options of WTE and landfill as much as possible and the plan focuses on waste reduction, recycling, and composting to meet the 75% goal. Cumulative air impacts are outside of the scope of this document. Air quality impacts will be addressed as part of the cumulative air impact rule-making effort that is underway. MPCA is supportive of significantly reducing the burning of fossil fuels by 2040. The challenge for the waste management sector is that data indicates that landfills generate greater amounts of greenhouse gases than WTE facilities do because of the methane generated. Well intended policy can create unintended consequences. MPCA agrees that we need to consider the best ways to reduce emissions from combusting certain materials. For example, the ban on mercury in batteries had a huge impact on reducing mercury emissions from WTE facilities. The Hennepin County Board passed a resolution requiring that county staff develop a plan to close HERC between 2028 and 2040. It is clear to MPCA that Hennepin County is taking the intent from the Minnesota Legislature seriously and MPCA does not feel the need to interject into their on-going process.
G R	Resident	https://scs-public.s3-us-gov-west-1.amazonaws.com/env_production/oid333/did200071/pid_206566/assets/merged/2k0tjpk-document.pdf	Extended producer responsibility laws have been shown to be a very effective tool to achieve the following, provided the right incentives and requirements are included in the EPR legal framework: Influence manufacturer design to improve recyclability, repair, and reuse; Reduce material use and toxicity; Improve recovery for reuse, repair, and recycling; Help create a sustainable and circular economy for the materials and products covered by specific EPR requirements; Manufacturers and others along the product chain share in the financial and physical responsibility for collection, reuse, and recycling of products at the end of their useful lives. This includes the role for consumers that must be responsible for ensuring that end-of-life products get into the collection system that's provided. For us to utilize this type of program, the Minnesota Legislature would have to create new laws with requirements for manufacturers and other parties that have a role in the cycle of commerce for the products and materials in question. The Partnership on Waste and Energy—which includes Hennepin, Ramsey, and Washington counties—are working on issues raised by MPP commenters regarding the need to address quantities, types, and management of packaging materials. EPR can provide a better pathway for compostable packaging to be collected and directed to a commercial composting facility. EPR can require proper labeling for reuse, recycling, or composting.

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Gael Zembal	Resident	https://scs-public.s3-us-gov-west-1.amazonaws.com/env_production/oid333/did200071/pid_206566/assets/merged/r10cjh2_document.pdf	Interested parties have raised many concerns about the undue burden weekly recycling would have on their operations. Accordingly, this now appears in the plan as an optional strategy. One strategy in the plan encourages donation of excess food from restaurants and grocery stores with the help of health inspectors. Resident education is addressed in that plan with a strategy that calls for a commitment to standardized outreach and education. We agree that the messaging reaching residents should be easy to understand. Piecemeal efforts by counties, cities, haulers, and other organizations are rarely collaboratively developed and therefore can lead to confusion over what materials can be recycled or composted. Assuring a consistent message from those within the solid waste system would help bring clarity to the users of the system. The Minnesota State Legislature has enacted rules to maintain the integrity of the recycling system. MN Statute 115A.95 was written to ensure that once material is collected for recycling, it must be taken to a recycling processing facility or end market. This law prohibits material that is collected as recycling from being taken to a landfill and ensures that material collected for recycling is indeed being recycled. In addition, Minnesota imposes a solid waste tax on every ton of solid waste disposed. Counties also impose a separate solid waste tax if material is disposed of in their county. Minnesota does not tax material that is taken to a recycling processing facility. This makes recycling cheaper than disposal. In the 1990's private companies and the public sector made investments in the recycling system to make recycling more desirable. When overseas markets closed their borders to recyclable materials in 2017, Minnesota companies made even more investments to make sure material was clean and ready for end markets. Cleaner material and fewer contaminants in bales of recyclable material mean companies will buy Minnesota's recyclable material over others and at a better price. Minnesota has good, stable end markets for recyclable materials because of the investments made over the last 30+ years. Recycling is important to Minnesota's local economy. Overall, recycling helps support nearly 78,000 jobs in Minnesota. Over 330 manufacturers in Minnesota use recycled material in their products. There is a strategy in the plan for counties to expand backyard composting outreach and resources. Placing a backyard compost pile at least 20 feet away from habitable buildings is widely accepted as a measure to mitigate the associated risks. This is an optional strategy that counties may choose to add to their plans. The strategy requires the adoption of an ordinance with a mandatory consumer charge for take out containers.
Gerald Stiff	Resident	https://scs-public.s3-us-gov-west-1.amazonaws.com/env_production/oid333/did200071/pid_206566/assets/merged/i00oioo_document.pdf	Education is addressed throughout the plan and plays a very important role in the success of a functional solid waste system. Your county, city, and hauler are all great resources for learning how to best dispose or find a new use for a waste or material.
H McCrillis	Resident	https://scs-public.s3-us-gov-west-1.amazonaws.com/env_production/oid333/did200071/pid_206566/assets/merged/xg0rih6_document.pdf	Black plastics are not recyclable due to limitations of the sorting equipment at recycling facilities. The optical sorter cannot read the resin type. Elimination of black plastic in packaging would be more beneficial than recycling it.
Hannibal Hayes	Resident	https://scs-public.s3-us-gov-west-1.amazonaws.com/env_production/oid333/did200071/pid_206566/assets/merged/o00diq3_document.pdf	MPCA is working in collaboration with DNR and local governments to create a cohesive plan for wood waste management. The plan has been modified to be inclusive of other tree disease issues, such as Oak Wilt. Wood waste is expected to increase and will require collaboration to find upstream solutions. Planning will be required to avoid open burning.
Heidi Blum	Resident	https://scs-public.s3-us-gov-west-1.amazonaws.com/env_production/oid333/did200071/pid_206566/assets/merged/910niq3_document.pdf	The draft plan did not include strategies for multi-family housing. Strategies for multi-family recycling, organics recycling, and reduction have been added to the final plan based on comments like yours.
Helen M Carrillo	Resident	https://scs-public.s3-us-gov-west-1.amazonaws.com/env_production/oid333/did200071/pid_206566/assets/merged/pt0zi7p_document.pdf	Preventing contamination through education is less costly and more effective than establishing a penalty system with compliance officers.
Ivy Booth	Resident	https://scs-public.s3-us-gov-west-1.amazonaws.com/env_production/oid333/did200071/pid_206566/assets/merged/rn0bib5_document.pdf	The plan includes a strategy for the management of organics recycling from large commercial food generators by 2030. The point value of this strategy has been raised to reflect the impactfulness of the strategy and recognize the amount of work required of county staff to accomplish it. Thanks for your support of this impactful strategy.
J Forman	Resident	https://scs-public.s3-us-gov-west-1.amazonaws.com/env_production/oid333/did200071/pid_206566/assets/merged/m10zih4_document.pdf	Compostable single-use products are a better option than conventional single-use products, but reuse is the best option. Replacing single-use containers with reusable containers is an effective way to reduce waste. We encourage counties to address solutions to reduce reliance on single-use waste through several optional strategies.
Jacquelyn Chlebeck	Resident	https://scs-public.s3-us-gov-west-1.amazonaws.com/env_production/oid333/did200071/pid_206566/assets/merged/px04i37_document.pdf	Thank you for the feedback. The plan includes education strategies that the counties will execute. A visit to a solid waste facility can be exceptionally enlightening.
Jake Heidelberger	Resident	https://scs-public.s3-us-gov-west-1.amazonaws.com/env_production/oid333/did200071/pid_206566/assets/merged/i409ifm_document.pdf	Ramsey County will soon roll out curbside pick-up for food scraps: https://www.ramseycounty.us/residents/recycling-waste/collection-sites/food-scraps . Making this an easier option for residents should increase participation and divert more food waste from landfills.

Name	Affiliation	Comment	Response
Jane Dow	Resident	https://scs-public.s3-us-gov-west-1.amazonaws.com/env_production/oid333/did200071/pid_2/06566/assets/merged/77c034d0_document.pdf	Extended producer responsibility laws have been shown to be a very effective tool to achieve the following, provided the right incentives and requirements are included in the EPR legal framework: Influence manufacturer design to improve recyclability, repair, and reuse; Reduce material use and toxicity; Improve recovery for reuse, repair, and recycling; Help create a sustainable and circular economy for the materials and products covered by specific EPR requirements; Manufacturers and others along the product chain share in the financial and physical responsibility for collection, reuse, and recycling of products at the end of their useful lives. This includes the role for consumers that must be responsible for ensuring that end-of-life products get into the collection system that's provided. For us to utilize this type of program, the Minnesota Legislature would have to create new laws with requirements for manufacturers and other parties that have a role in the cycle of commerce for the products and materials in question. The Partnership on Waste and Energy—which includes Hennepin, Ramsey, and Washington counties—are working on issues raised by MPP commenters regarding the need to address quantities, types, and management of packaging materials. EPR can provide a better pathway for compostable packaging to be collected and directed to a commercial composting facility. EPR can require proper labeling for reuse, recycling, or composting. MPCA received many comments of concern about the continued operation of the Hennepin Energy Recovery Center. We have re-examined our approach to the waste-to-energy (WTE) section of the plan. Changes include a comparison of the impacts of WTE and landfills and acknowledgement of the possible closure that will be determined by the Hennepin County Board. It is critical to ensure that large infrastructure decisions are being made with consideration to environmental and environmental justice impacts. MPCA supports minimizing disposal options of WTE and landfill as much as possible and the plan focuses on waste reduction, recycling, and composting to meet the 75% goal. Cumulative air impacts are outside of the scope of this document. Air quality impacts will be addressed as part of the cumulative air impact rule-making effort that is underway. The plan includes many strategies to address food waste. MPCA advocates for diversion of food waste to the extent of the plan's authority. Food waste rescue activities beyond what is included in the plan would require legislative action and/or county/city ordinance passage. Recycling refund legislation is very successful at increasing the collection of beverage containers. States with recycling refund often have capture rates greater than 80% for those materials that are covered by the redemption fee. MPCA advises the MN Legislature in the Solid Waste Policy Report to implement a statewide deposit refund program.
Janet Court	Resident	https://scs-public.s3-us-gov-west-1.amazonaws.com/env_production/oid333/did200071/pid_2/06566/assets/merged/sc0hia1_document.pdf	The most effective way to reduce waste is to not create it in the first place. Making a new product emits greenhouse gases that contribute to climate change and requires a lot of materials and energy—raw materials must be extracted from the earth, and the product must be fabricated then transported to wherever it will be sold. As a result, reduction and reuse are the most effective ways you can save natural resources, protect the environment, and save money.
Jay Krafthefer	Resident	https://scs-public.s3-us-gov-west-1.amazonaws.com/env_production/oid333/did200071/pid_2/06566/assets/merged/p0mi6t_document.pdf	Recycling refund legislation is very successful at increasing the collection of beverage containers. States with recycling refund often have capture rates greater than 80% for those materials that are covered by the redemption fee. MPCA advises the Minnesota Legislature in the Solid Waste Policy Report to implement a statewide deposit refund program.
Jayson Smart	Resident	https://scs-public.s3-us-gov-west-1.amazonaws.com/env_production/oid333/did200071/pid_2/06566/assets/merged/dd06i88_document.pdf	The plan calls for residential curbside organics collection to be required region-wide in cities greater than 5,000. MPCA agrees that it must be more convenient for people to participate in greater numbers. The plan includes a required strategy to offer grants for waste reduction, reuse, and repair. Reuse businesses may be eligible for this funding.
Jeanne Nordland	Resident	https://scs-public.s3-us-gov-west-1.amazonaws.com/env_production/oid333/did200071/pid_2/06566/assets/merged/vv0i04_document.pdf	Thank you for the feedback. The plan now includes a suggestion to include worm composting in public outreach. There are a lot of plastics in landfills. This approach is still being researched and developed, but could potentially be part of our waste reduction approach in the future.
Jeanne Norrgard	Resident	https://scs-public.s3-us-gov-west-1.amazonaws.com/env_production/oid333/did200071/pid_2/06566/assets/merged/4a08iql_document.pdf	The 5% waste reduction goal references the total generation of waste. Despite our best efforts, consumption influences waste generation. Reducing the amount of material being managed in the solid waste system provides the greatest environmental benefit. To truly be successful in waste reduction, upstream policies must be put into place by the Minnesota Legislature that result in the generation of fewer materials. MPCA supports minimizing disposal options (e.g., WTE and landfill) as much as possible. The plan focuses on waste reduction, recycling, and composting to meet the 75% diversion goal. The 75% disposal avoidance goal is determined by state statute and MPCA intends to aggressively push for improvement in all feasible areas. Extended producer responsibility laws have been shown to be a very effective tool to achieve the following, provided the right incentives and requirements are included in the EPR legal framework: Influence manufacturer design to improve recyclability, repair, and reuse; Reduce material use and toxicity; Improve recovery for reuse, repair, and recycling; Help create a sustainable and circular economy for the materials and products covered by specific EPR requirements; Manufacturers and others along the product chain share in the financial and physical responsibility for collection, reuse, and recycling of products at the end of their useful lives. This includes the role for consumers that must be responsible for ensuring that end-of-life products get into the collection system that's provided. For us to utilize this type of program, the Minnesota Legislature would have to create new laws with requirements for manufacturers and other parties that have a role in the cycle of commerce for the products and materials in question. The Partnership on Waste and Energy—which includes Hennepin, Ramsey, and Washington counties—are working on issues raised by MPP commenters regarding the need to address quantities, types, and management of packaging materials. EPR can provide a better pathway for compostable packaging to be collected and directed to a commercial composting facility. EPR can require proper labeling for reuse, recycling, or composting. We have re-examined our approach to the waste-to-energy (WTE) section of the plan. Changes include a comparison of the impacts of WTE and landfills and acknowledgement of the possible closure that will be determined by the Hennepin County Board. Cumulative air impacts are outside of the scope of this document. Air quality impacts will be addressed as part of the cumulative air impact rule-making effort that is underway.
Jenna Olson	Resident	https://scs-public.s3-us-gov-west-1.amazonaws.com/env_production/oid333/did200071/pid_2/06566/assets/merged/vs0c90_document.pdf	Curbside collection of textiles has been discontinued by municipal programs due to the exposure to weather. Textiles must be dry and clean for both reuse and recycling. The Secondary Materials and Recycled Textiles (SMART) Association estimates that about half of new clothing end up donated. Of the clothing that is donated, about 20% are sold in reuse outlets, 25% are shipped overseas, 50% are used as absorbents/rags/stuffing, and about 5% head to landfills or WTE facilities. That means that over half of all textiles end up in the garbage. For a material to be recycled, it needs to be used to create a new product. Fast fashion has resulted in an onslaught of low-quality textiles that have no reuse nor recycling value. Durable textiles made from natural fibers and extending the life via proper care and repair can help reduce personal impact.
Jennifer Hoesel	Resident	https://scs-public.s3-us-gov-west-1.amazonaws.com/env_production/oid333/did200071/pid_2/06566/assets/merged/vc0zii3_document.pdf	Every collection program has varying implementation costs. In some communities, curbside organics will be absorbed into existing trash fees and compostable bags will be provided by their county. In other communities, a separate hauler collects the organics recycling. This is more expensive and residents experience higher fees for that type of service.
Jenny Cook	Resident	https://scs-public.s3-us-gov-west-1.amazonaws.com/env_production/oid333/did200071/pid_2/06566/assets/merged/ok05in1_document.pdf	Thank you for the feedback. We will re-examine how to better engage the public for the next iteration of the plan.

Name	Affiliation	Comment	Response
Jessica Kullander	Resident	https://scs-public.s3-us-gov-west-1.amazonaws.com/env_production/oid333/did200071/pid_206566/assets/merged/3k0ziph_document.pdf	All the 7-county metro HHW drop-off sites are open to residents of any metro county. Aside from textile recycling, every site will collect the items you listed and many other types of household hazardous waste. The plan includes a strategy to provide additional drop sites or collection events for these items. Curbside collection of textiles has been discontinued by municipal programs due to the exposure to weather. Textiles must be dry and clean for both reuse and recycling. The Secondary Materials and Recycled Textiles (SMART) Association estimates that about half of new clothing end up donated. Of the clothing that is donated, about 20% are sold in reuse outlets, 25% are shipped overseas, 50% are used as absorbents/rags/stuffing, and about 5% head to landfills or WTE facilities. That means that over half of all textiles end up in the garbage. For a material to be recycled, it needs to be used to create a new product. Fast fashion has resulted in an onslaught of low-quality textiles that have no reuse or recycling value. Durable textiles made from natural fibers and extending the life via proper care and repair can help reduce personal impact. Extended producer responsibility laws have been shown to be a very effective tool to achieve the following, provided the right incentives and requirements are included in the EPR legal framework: Influence manufacturer design to improve recyclability, repair, and reuse; Reduce material use and toxicity; Improve recovery for reuse, repair, and recycling; Help create a sustainable and circular economy for the materials and products covered by specific EPR requirements; Manufacturers and others along the product chain share in the financial and physical responsibility for collection, reuse, and recycling of products at the end of their useful lives. This includes the role for consumers that must be responsible for ensuring that end-of-life products get into the collection system that's provided. For us to utilize this type of program, the Minnesota Legislature would have to create new laws with requirements for manufacturers and other parties that have a role in the cycle of commerce for the products and materials in question. The Partnership on Waste and Energy—which includes Hennepin, Ramsey, and Washington counties—are working on issues raised by MPP commenters regarding the need to address quantities, types, and management of packaging materials. EPR can provide a better pathway for compostable packaging to be collected and directed to a commercial composting facility. EPR can require proper labeling for reuse, recycling, or composting. The plan calls for residential curbside organics collection to be required region-wide in cities greater than 5,000. MPCA agrees that it must be more convenient for people to participate in greater numbers.
Jessica Strasser	Resident	https://scs-public.s3-us-gov-west-1.amazonaws.com/env_production/oid333/did200071/pid_206566/assets/merged/230tigd_document.pdf	Bringing your own container for takeout is an effective source reduction behavior. Incentivizing that behavior through fee avoidance should encourage some to participate.
Jessica Tritsch	Resident	https://scs-public.s3-us-gov-west-1.amazonaws.com/env_production/oid333/did200071/pid_206566/assets/merged/5y09jpo_document.pdf	MPCA received many comments of concern about the continued operation of the Hennepin Energy Recovery Center. We have re-examined our approach to the waste-to-energy (WTE) section of the plan. Changes include a comparison of the impacts of WTE and landfills and acknowledgement of the possible closure that will be determined by the Hennepin County Board. It is critical to ensure that large infrastructure decisions are being made with consideration to environmental and environmental justice impacts. MPCA supports minimizing disposal options of WTE and landfill as much as possible and the plan focuses on waste reduction, recycling, and composting to meet the 75% goal. Cumulative air impacts are outside of the scope of this document. Air quality impacts will be addressed as part of the cumulative air impact rule-making effort that is underway. The 5% waste reduction goal references the total generation of waste. Despite our best efforts, consumption influences waste generation. To truly be successful in waste reduction, upstream policies must be put into place by the Minnesota Legislature that result in fewer materials being generated. The 75% goal is determined by state statute as the disposal avoidance goal and MPCA intends to aggressively push for improvement in all areas that are feasible. The plan includes required strategies for counties to reduce and divert food waste, launch bi-annual sustainable consumption challenges for residents, and to implement a formal county sustainable purchasing policy. There are also strategies to support reuse and repair through volunteer program, outreach, and grants. Thank you for your feedback.
Jo Chambers	Resident	https://scs-public.s3-us-gov-west-1.amazonaws.com/env_production/oid333/did200071/pid_206566/assets/merged/luy0eiev_document.pdf	The Twin Cities metro area has some of the highest recycling rates in the nation. Our waste is managed locally, with some materials going to landfills in Wisconsin and Iowa, and therefore is not disposed of near an ocean. Additionally, MN statute 115A.95 does not allow for haulers to deliver source-separated recyclable materials unless the MPCA determines that no other disposal method is available. Minnesota has a robust local recycling market as well. Consumption behaviors need to shift to be less wasteful and it will require cooperation between government, retailers, manufacturers, and consumers.
Joel Jensen	Resident	https://scs-public.s3-us-gov-west-1.amazonaws.com/env_production/oid333/did200071/pid_206566/assets/merged/lv0ni8id_document.pdf	The bag fee is an optional strategy that counties may choose to add to their plans. The strategy requires the adoption of an ordinance with a mandatory consumer charge for takeout containers and is open for counties to propose a different approach that achieves the same objective. Extended producer responsibility (EPR) laws have been shown to be a very effective tool to achieve the following, provided the right incentives and requirements are included in the EPR legal framework: Influence manufacturer design to improve recyclability, repair, and reuse; Reduce material use and toxicity; Improve recovery for reuse, repair, and recycling; Help create a sustainable and circular economy for the materials and products covered by specific EPR requirements; Manufacturers and others along the product chain share in the financial and physical responsibility for collection, reuse, and recycling of products at the end of their useful lives. This includes the role for consumers that must be responsible for ensuring that end-of-life products get into the collection system that's provided. For us to utilize this type of program, the Minnesota Legislature would have to create new laws with requirements for manufacturers and other parties that have a role in the cycle of commerce for the products and materials in question. Packaging: The Partnership on Waste and Energy—which includes Hennepin, Ramsey, and Washington counties—are working on issues raised by MPP commenters regarding the need to address quantities, types, and management of packaging materials. EPR can provide a better pathway for compostable packaging to be collected and directed to a commercial composting facility. EPR can require proper labeling for reuse, recycling, or composting. Convenience is a critical component of success for organics recycling. The plan includes a strategy that would expand curbside collection of organics recycling to all cities with a population of 5,000 or greater. The plan includes a strategy for the management of organics recycling from large commercial food generators by 2030. It was optional in the draft and has been changed to required. MPCA has been working with the Departments of Agriculture and Health to create content for inspectors to educate licensed facilities about financial assistance, donation, and opportunities to reduce wasted food. The plan has been revised to include the MPCA's commitment to continue work with partner agencies on improved food rescue and prevention efforts. A strategy encouraging county engagement with health inspectors in individual county plans will remain in the plan to help accelerate adoption of the practice but will not be required.
John Borden	Resident	https://scs-public.s3-us-gov-west-1.amazonaws.com/env_production/oid333/did200071/pid_206566/assets/merged/qp0killi_document.pdf	The draft plan did not include strategies for multi-family housing. Strategies for multi-family recycling, organics recycling, and reduction have been added to the final plan based on comments like yours.
John Gunyou	Resident	https://scs-public.s3-us-gov-west-1.amazonaws.com/env_production/oid333/did200071/pid_206566/assets/merged/hb0uig9_document.pdf	Thank you for the feedback.
John Sullivan	Resident	https://scs-public.s3-us-gov-west-1.amazonaws.com/env_production/oid333/did200071/pid_206566/assets/merged/290sidm_document.pdf	Extended producer responsibility laws have been shown to be a very effective tool to achieve the following, provided the right incentives and requirements are included in the EPR legal framework: Influence manufacturer design to improve recyclability, repair, and reuse; Reduce material use and toxicity; Improve recovery for reuse, repair, and recycling; Help create a sustainable and circular economy for the materials and products covered by specific EPR requirements; Manufacturers and others along the product chain share in the financial and physical responsibility for collection, reuse, and recycling of products at the end of their useful lives. This includes the role for consumers that must be responsible for ensuring that end-of-life products get into the collection system that's provided. For us to utilize this type of program, the Minnesota Legislature would have to create new laws with requirements for manufacturers and other parties that have a role in the cycle of commerce for the products and materials in question. The Partnership on Waste and Energy—which includes Hennepin, Ramsey, and Washington counties—are working on issues raised by MPP commenters regarding the need to address quantities, types, and management of packaging materials. EPR can provide a better pathway for compostable packaging to be collected and directed to a commercial composting facility. EPR can require proper labeling for reuse, recycling, or composting.

Name	Affiliation	Comment	Response
Joseph Robinson	Resident	https://scs-public.s3-us-gov-west-1.amazonaws.com/env_production/oid333/did200071/pid_206566/assets/merged/ff0nikl_document.pdf	Resident education is addressed in that plan with a strategy that calls for a commitment to standardized outreach and education. We agree that the messaging reaching residents should be easy to understand. Piecemeal efforts by counties, cities, haulers, and other organizations are rarely collaboratively developed and therefore can lead to confusion over what materials can be recycled or composted. Assuring a consistent message from those within the solid waste system would help bring clarity to the users of the system. The Minnesota State Legislature has enacted laws to maintain the integrity of the recycling system. MN Statute 115A.95 was written to ensure that once material is collected for recycling, it must be taken to a recycling processing facility or end market. This law prohibits material that is collected as recycling from being taken to a landfill. This ensures that once material is collected for recycling, it is getting recycled. Minnesota has some communities that use the Pay-as-you-throw (PAYT) model and volume-based pricing is required in MN Stat. 115A.9301. Extended producer responsibility has been shown to be very effective tool to divert waste to recycling in Canada, Europe, and other states in the U.S. In order for Minnesota to utilize this type of program, the MN Legislature would have to create new laws with requirements on manufacturers. This plan does not have authority to make statewide changes. Policy recommendations for the MN Legislature are found in the MPCA's Solid Waste Policy Report.
Judy Huber	Resident	https://scs-public.s3-us-gov-west-1.amazonaws.com/env_production/oid333/did200071/pid_206566/assets/merged/p70zill_document.pdf	Please contact management at the Eagan Community Center with this request. The plan calls for residential curbside organics collection to be required region-wide in cities greater than 5,000. MPCA agrees that it must be more convenient for people to participate in greater numbers.
Juli Albright	Resident	https://scs-public.s3-us-gov-west-1.amazonaws.com/env_production/oid333/did200071/pid_206566/assets/merged/r70diou_document.pdf	Contract for residential recycling and organics by 2030 is an optional strategy in the plan. Organized collection has numerous benefits and can lower costs for all types of service (i.e., MSW, recycling, organics) to residents of a community. The plan includes several strategies for reducing wasted food. Food donation is part of those recommendations.
Julie Ketchem	WM	https://scs-public.s3-us-gov-west-1.amazonaws.com/env_production/oid333/did200071/pid_206566/assets/merged/sh0ni6_document.pdf ; https://scs-public.s3-us-gov-west-1.amazonaws.com/env_production/oid333/did200071/pid_206566/assets/merged/m30picl_document.pdf	Contamination is a serious issue plaguing the recycling stream. The plan focuses on education strategies to mitigate this issue. Contract for residential recycling and organics by 2030 is an optional strategy in the plan. Organized collection has numerous benefits and can lower costs for all types of service (i.e., MSW, recycling, organics) to residents of a community. Every collection program has varying implementation costs. In some communities, curbside organics will be absorbed into existing trash fees and compostable bags will be provided by their county. In other communities, a separate hauler collects the organics recycling. This is more expensive, and residents experience higher fees for that type of service. Durable compostable bag systems reduce the number of trucks needed for collection, as the bags are placed in the garbage bins. There are opportunities for costs to residents and haulers to be minimized. Counties, cities, haulers, and the state will learn a lot about the best method to provide organics collection to residents as this program implemented. Interested parties have raised many concerns about the undue burden weekly recycling would have on their operations. Accordingly, this now appears in the plan as an optional strategy. MPCA position is that the settlement agreement about restriction on disposal with WM and Republic Services has been effective. The language that was agreed upon in the settlement negotiations has provided the flexibility to the landfills and to the waste-to-energy (WTE) facilities to navigate the challenge of when the facility is at capacity. The 14-day notification period addresses most of the concerns that you are stating about closures and outages. The landfills have 14 days to adjust and coordinate with WTE facilities to ensure capacity needs are met. MPCA has and will continue to focus on generators of waste. However, the pre-processing strategy is an acknowledgement that—despite our best education efforts—a certain percentage of residents will continue to discard recyclable material into the trash. MSW processing is needed to get county recovery rates closer to 75%. Education efforts will continue, and efforts will be made to tie those efforts to the values of our residents. Source separation is the best way to recover materials and to ensure the highest value of those materials. Human behavior is unpredictable. Preprocessing can recover additional recyclables, mainly metals. The cost of collection is the primary driver of cost to residents, but historically tip fees have not been the driver for cost. The plan has been modified to extend the timeline. Sustainable materials management (SMM) is the best way to reduce the impacts of our waste generation. The plan is consistent with the goals of SMM. The vast number of strategies creates a wide range of possible systems/programs. It wouldn't be possible to estimate costs for all outcomes. It is expected that metro counties consider costs of implementation as they select strategies for their County Solid Waste Plans. The current process for issuing CON is arduous. However, the MPCA also is tasked with ensuring that waste facilities are developed in an orderly and deliberate manner. The lengthy process ensures that there is need for a landfill to be developed. As such, MPCA views certificate of need as a critical step in the permitting process for MSW landfills. The revoke and reissue language appears in MN Rule 9215.0940. This rule grants MPCA the right to revoke and reissue CON. This aligns metro CON with the Greater Minnesota Rule. Additionally, the Metro Policy Plan is required to be consistent with existing rules and statutes when applicable. Historically, MPCA has never rescinded capacity from a landfill without also reissuing capacity. The plan has been revised to clarify that this requirement applies to landfills and WTE facilities. The composition analysis can also be conducted at apartment facilities. This requirement applies to all landfills and WTE facilities within the 7-county metro area. The result is that five additional sites will now be required to perform waste composition studies. Minnesota has a rechargeable battery law. Updates to the law are needed to address the full scope of the lithium battery issue. The MPCA is working with partners on legislative proposals to improve the collection and recycling of batteries. A strategy has been added to the plan to implement education programs on proper battery management. Creating safe storage spaces that minimize fire risks at waste facilities is challenging. The plan is consistent with protecting our existing infrastructure. Larger policy discussions on topics like the bottle bill and EPR should be handled through the legislative process. Additionally, legislative proposals are not discussed in the plan, because of their state-wide impacts.
Julie Schramke	Resident	https://scs-public.s3-us-gov-west-1.amazonaws.com/env_production/oid333/did200071/pid_206566/assets/merged/3j0oi73_document.pdf	Plastic resin codes may give the impression that all plastic is recyclable, but the recycling symbol was co-opted for this code system. Contamination is a serious issue plaguing the recycling stream. The plan focuses on education strategies to mitigate this issue.
Julie Svendahl	Resident	https://scs-public.s3-us-gov-west-1.amazonaws.com/env_production/oid333/did200071/pid_206566/assets/merged/zq0aizd_document.pdf	Education must be a priority to improve our system. In addition, different types of education are important to reach different people. The plan calls for robust education in all seven metro counties. Resident education is addressed in this plan with a strategy that calls for a commitment to standardized outreach and education. We agree that the messaging reaching residents should be easy to understand. Piecemeal efforts by counties, cities, haulers, and other organizations are rarely collaboratively developed and therefore can lead to confusion over what materials can be recycled or composted. Assuring a consistent message from those within the solid waste system would help bring clarity to the users of the system.
Kait Sergenian	Resident	https://scs-public.s3-us-gov-west-1.amazonaws.com/env_production/oid333/did200071/pid_206566/assets/merged/hh018y_document.pdf	MPCA received many comments of concern about the continued operation of the Hennepin Energy Recovery Center. We have re-examined our approach to the waste-to-energy (WTE) section of the plan. Changes include a comparison of the impacts of WTE and landfills and acknowledgment of the possible closure that will be determined by the Hennepin County Board. It is critical to ensure that large infrastructure decisions are being made with consideration to environmental and environmental justice impacts. MPCA supports minimizing disposal options of WTE and landfill as much as possible and the plan focuses on waste reduction, recycling, and composting to meet the 75% goal. Cumulative air impacts are outside of the scope of this document. Air quality impacts will be addressed as part of the cumulative air impact rule-making effort that is underway. Thank you for your feedback.

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Kala Fisher	City of Saint Louis Park	https://scs-public.s3-us-gov-west-1.amazonaws.com/env_production/oid333/did200071/pid_206566/assets/merged/uh0t4h_document.pdf	Feedback from our metro cities is so important to assure the success of our plan. On Strategy 4: Improve recycling data collection at businesses within the county. This strategy is optional and it intended to give counties a broader understanding of recycling rates. We will work with counties on their plans, and some may choose to incorporate this optional strategy. Several metro counties track business data. We will encourage a process that is not unduly burdensome. On Strategy 17: Work with health inspectors to educate restaurants and other establishments that have excess food to donate. This strategy has been amended to include diversion for inedible food waste. On Strategy 20: Implement a county policy encouraging all county and city-led events and food providers use reusable food and beverage service ware. Thank you for providing context on the implications of the strategy as it appeared in the draft. This strategy has been revised to clarify intended outcomes and to limit the scope to the county. On Strategy 21: Adopt an ordinance with a mandatory consumer charge for take-out single-use cups, containers, and utensils. This is an optional strategy that counties may choose to add to their plans. We will look to the counties to plan for an approach that will best serve the needs of their residents. This has been revised to allow more flexibility in how counties fulfill this strategy and also to better align with the waste hierarchy. On Strategy 25: Establish a curbside set-out day to allow residents to set out used items for reuse. This is an optional strategy that counties may choose to include in their solid waste plans. It is a good way to make reuse more convenient for residents. However, if any county wants to propose other reuse strategies, the provides them the freedom to do that. The plan includes a new strategy to require counties to promote their reuse outlets that are located in the county. On Strategy 28: Collect recycling weekly by 2025. Interested parties have raised concerns on the undue burden of weekly recycling. Accordingly, this now appears in the plan as an optional strategy. Strategy 34: Establish mandatory pre-processing of waste at resource recovery facilities and landfill by 2025. Source separation is the best way to recover materials and to ensure the highest value of those materials. However, despite our best efforts, human behavior is unpredictable. Preprocessing can recover additional recyclables, especially metals. The cost of collection is the primary driver of cost to residents. But historically tip fees have not been the driver for cost. The plan has been modified to extend the timeline and allow for alternative proposals. On Strategy 37: Make residential curbside organics collection available in cities with a population greater than 5,000. The plan calls for residential curbside organics collection to be required region-wide in cities greater than 5,000. MPCA agrees that it must be more convenient for people to participate in greater numbers. The plan has been clarified to include language that this strategy is for single-family residential. On Strategy 38: Expand backyard composting outreach and resources for residents. Thank you for the feedback. The plan has been edited to allow for more flexibility in how counties promote backyard composting activities. On Strategy 40: Standardize the role of compostable products in organics recycling programs by 2025. This strategy has been edited for clarity.
Karen Kiener	Resident	https://scs-public.s3-us-gov-west-1.amazonaws.com/env_production/oid333/did200071/pid_206566/assets/merged/h303iaf_document.pdf	Thank you for the feedback. A predraft meeting was held on May 26, 2021 with a comment period of 6 weeks afterward. We will evaluate our approach to the predraft notice and ways of gathering input for our next plan.
Karissa VanErem	Resident	https://scs-public.s3-us-gov-west-1.amazonaws.com/env_production/oid333/did200071/pid_206566/assets/merged/ea0pjlj_document.pdf	The plan calls for residential curbside organics collection to be required region-wide in cities greater than 5,000. MPCA agrees that it must be more convenient for people to participate in greater numbers.
Katherine Haun Schuring	Resident	https://scs-public.s3-us-gov-west-1.amazonaws.com/env_production/oid333/did200071/pid_206566/assets/merged/t10iic4_document.pdf	Thank you for the feedback and support of this plan. Reducing the amount of food waste that currently is managed through landfills and waste-to-energy is our goal. In Minnesota, the Department of Agriculture sets food labeling requirements. While best by and sell by date labeling is outside of the scope of this plan, the MPCA plays an important role in providing expertise and perspective to our fellow state agencies. Curbside collection of textiles has been discontinued by municipal programs due to the exposure to weather. Textiles must be dry and clean for both reuse and recycling. The Secondary Materials and Recycled Textiles (SMART) Association estimates that about half of new clothing end up donated. Of the clothing that is donated, about 20% are sold in reuse outlets, 25% are shipped overseas, 50% are used as absorbents/rags/stuffing, and about 5% head to landfills or WTE facilities. That means that over half of all textiles end up in the garbage. For a material to be recycled, it needs to be used to create a new product. Fast fashion has resulted in an onslaught of low-quality textiles that have no reuse nor recycling value. Durable textiles made from natural fibers and extending the life via proper care and repair can help reduce personal impact. Private companies like Terracycle and Ridwell help fill the gaps by collecting materials that are difficult and costly for counties to process and manage. Black plastics are not recyclable due to limitations of the sorting equipment at recycling facilities. The optical sorter cannot read the resin type. Elimination of black plastic in packaging would be more beneficial than recycling it. Reusable takeout containers might be a better option to reduce the waste associated with takeaway food. This has been prioritized in the plan by requiring counties to provide grant funding to organizations to transition to reusable options.
Kathleen Karsko	Resident	https://scs-public.s3-us-gov-west-1.amazonaws.com/env_production/oid333/did200071/pid_206566/assets/merged/ao0qj5o_document.pdf	The plan includes an optional strategy for counties to establish a reuse set out day. The plan requires counties to standardized outreach and education. This will address the concern that different terms are used throughout the metro and will help to address confusion.
Kathy Ulmer	Resident	https://scs-public.s3-us-gov-west-1.amazonaws.com/env_production/oid333/did200071/pid_206566/assets/merged/rt0ei8m_document.pdf	MN statute 115A.95 does not allow for haulers to deliver recyclable materials collected from residents to landfills, unless the MPCA determines that no other disposal method is available. Due to the extensive reporting required by haulers and solid waste facilities, we have the data to prove our recyclables are being recycled. Minnesota has a strong recycling market and some of the highest recycling rates in the nation. While recyclables may end up in landfills in other states, Minnesota has a strong system of checks and balances to assure materials placed in recycling bins by residents are routed to facilities that truly recycle them.
Kelly Gryting	Resident	https://scs-public.s3-us-gov-west-1.amazonaws.com/env_production/oid333/did200071/pid_206566/assets/merged/nh0oia_d_document.pdf	We received a lot of feedback about weekly recycling collection. Interested parties alerted us to the undue burden weekly recycling would have on their operations, both cities and haulers. Accordingly, this now appears in the plan as an optional strategy. We agree that the messaging reaching residents should be easy to understand. A strategy in the plan requires counties to commit to standardized outreach and education for residents. Piecemeal efforts by counties, cities, haulers, and other organizations are rarely collaboratively developed and can lead to confusion over what materials can be recycled or composted. Assuring a consistent message from those within the solid waste system would help bring clarity to the users of the system.
Kelly Lindsay	Resident	https://scs-public.s3-us-gov-west-1.amazonaws.com/env_production/oid333/did200071/pid_206566/assets/merged/90081f_document.pdf	An HOA is a legal entity that may enforce rules in your neighborhood. The HOA restriction on placement of bins is outside the scope of the PCA's authority. Carver County may adapt a strategy to establish a curbside set-out day into their solid waste plan. Carver County staff operate their environmental center independently of the MPCA. Carver County may propose a strategy to extend the hours of the environmental center to be more accessible to the public. The plan calls for residential curbside organics collection to be required region-wide in cities greater than 5,000. MPCA agrees that it must be more convenient for people to participate in greater numbers. There are several options for disposing of shredded paper, particularly document destruction organizations such as Shred-It. Those companies shred and recycle the documents that they manage and usually work with large commercial customers. They may also participate in document shredding days for residents that counties host. Your comment inspired a strategy that counties should establish a document destruction day for residents.
Ken Smith	Ever-Green Energy	https://scs-public.s3-us-gov-west-1.amazonaws.com/env_production/oid333/did200071/pid_206566/assets/merged/pb0qjgt_document.pdf	State statute defines yard waste as including garden wastes, leaves, lawn cuttings, weeds, shrub and tree waste, and prunings in Minn. Stat. § 115A.03. Sites that refuse large wood waste items like logs often lack the equipment or space to process these into small pieces. The Minnesota Department of Agriculture has enacted a quarantine to limit the movement of firewood. MPCA is working in collaboration with DNR and local governments to create a cohesive plan for wood waste management. Wood waste is expected to increase and will require collaboration to find upstream solutions and assure there is adequate space at our wood yards. Planning will be required to avoid open burning. Market development for wood waste is called for in the plan. MPCA is aware that additional markets beyond St. Paul Co-generation will be needed to ensure outlets are available in the future. Markets can include composting, bio-char, lumber markets, or others that MPCA may not have yet considered. We will be looking to the county solid waste plans to propose solutions for supporting the continued operation of wood yards within their counties.

Name	Affiliation	Comment	Response
Ken Stewart	Resident	https://scs-public.s3-us-gov-west-1.amazonaws.com/env_production/oid333/did200071/pid_206566/assets/merged/150b9j1_document.pdf	The scope of this plan is dictated by Minn. Stat. § 473.149. This plan has many strategies for reduction, such as food waste reduction grants, increasing food rescue from restaurants and grocery stores, and sustainable purchasing policies at counties. However, the most effective waste reduction efforts will require legislative changes.
Kim B	Resident	https://scs-public.s3-us-gov-west-1.amazonaws.com/env_production/oid333/did200071/pid_206566/assets/merged/910midv_document.pdf	Organics and recycling collected from schools tends to have higher contamination rates. Focusing education on students and staff to improve this behavior could help improve diversion rates. There is a required strategy in the plan to offer grants or rebates for organizations to transition to reusable food and beverage service ware. The school district can work with Washington County to purchase reusable trays to replace Styrofoam trays. Dakota County's ordinance to require commercial collection of organics has been a success. The plan has a strategy that would require counties to coordinate on their outreach and education efforts. Washington County has great resources for recycling and waste prevention, with a helpful website: https://www.ramseycounty.us/residents/recycling-waste/education/education-resources An HOA is a legal entity that is subject to state laws and may be subject to the strategies selected in your county's solid waste plan. The plan has an optional strategy for counties to adopt an ordinance with a mandatory consumer charge for take-out single-use cups, containers, and utensils. The Washington County Environmental Center in Woodbury is an excellent resource. This is the great challenge for this moment in our history. We are surrounded by easy consumption and disposal. Capturing products for a circular economy is challenging and will require support and advocacy by citizens like you. Establishing incentives for creating less waste is a great idea, but tracking it would be very difficult.
Kim Kuhn	Resident	https://scs-public.s3-us-gov-west-1.amazonaws.com/env_production/oid333/did200071/pid_206566/assets/merged/460bi84_document.pdf	Curbside collection of textiles has been discontinued by municipal programs due to the exposure to weather. Textiles must be dry and clean for both reuse and recycling. The Secondary Materials and Recycled Textiles (SMART) Association estimates that about half of new clothing end up donated. Of the clothing that is donated, about 20% are sold in reuse outlets, 25% are shipped overseas, 50% are used as absorbents/rags/stuffing, and about 5% head to landfills or WTE facilities. That means that over half of all textiles end up in the garbage. For a material to be recycled, it needs to be used to create a new product. Fast fashion has resulted in an onslaught of low-quality textiles that have no reuse nor recycling value. Durable textiles made from natural fibers and extending the life via proper care and repair can help reduce personal impact. The plan includes many waste reduction strategies that incorporate financial incentives.
Kim Rollie	Resident	https://scs-public.s3-us-gov-west-1.amazonaws.com/env_production/oid333/did200071/pid_206566/assets/merged/m708i2f_document.pdf	The plan calls for residential curbside organics collection to be required region-wide in cities greater than 5,000. MPCA agrees that it must be more convenient for people to participate in greater numbers.
Kris Lovaas	Resident	https://scs-public.s3-us-gov-west-1.amazonaws.com/env_production/oid333/did200071/pid_206566/assets/merged/s00cics_document.pdf . https://scs-public.s3-us-gov-west-1.amazonaws.com/env_production/oid333/did200071/pid_206566/assets/merged/kq0ai3r_document.pdf	Thank you for the feedback. The plan has been revised to make the weekly collection strategy optional. This strategy has the opportunity to make collection frequency more convenient for residents, but may be cost prohibitive and further exacerbate the driver shortage. The plan calls for residential curbside organics collection to be required region-wide in cities greater than 5,000. MPCA agrees that it must be more convenient for people to participate in greater numbers.
Ky Schmidt	Resident	https://scs-public.s3-us-gov-west-1.amazonaws.com/env_production/oid333/did200071/pid_206566/assets/merged/v30qicr_document.pdf	MPCA received many comments of concern about the continued operation of the Hennepin Energy Recovery Center. We have re-examined our approach to the waste-to-energy (WTE) section of the plan. Changes include a comparison of the impacts of WTE and landfills and acknowledgement of the possible closure that will be determined by the Hennepin County Board. It is critical to ensure that large infrastructure decisions are being made with consideration to environmental and environmental justice impacts. MPCA supports minimizing disposal options of WTE and landfills as much as possible and the plan focuses on waste reduction, recycling, and composting to meet the 75% goal. Cumulative air impacts are outside of the scope of this document. Air quality impacts will be addressed as part of the cumulative air impact rule-making effort that is underway. Thank you for your feedback.
Laura Grevas	Resident	https://scs-public.s3-us-gov-west-1.amazonaws.com/env_production/oid333/did200071/pid_206566/assets/merged/zb0wi93_document.pdf	The plan calls for residential curbside organics collection to be required region-wide in cities greater than 5,000. MPCA agrees that it must be more convenient for people to participate in greater numbers.
Lauren Allen	Resident	https://scs-public.s3-us-gov-west-1.amazonaws.com/env_production/oid333/did200071/pid_206566/assets/merged/ao0gi2p_document.pdf	The Minnesota Legislature passed a sweeping bill to address and prohibit PFAS in consumer products. The Minnesota Attorney General reached an \$850 million settlement with 3M. For more information about this, visit https://3msettlement.state.mn.us/ . To learn more about PFAS in Minnesota, visit https://www.pca.state.mn.us/pfas-in-minnesota .
Laurie Rossin	Resident	https://scs-public.s3-us-gov-west-1.amazonaws.com/env_production/oid333/did200071/pid_206566/assets/merged/uu0ci78_document.pdf	The plan calls for residential curbside organics collection to be required region-wide in cities greater than 5,000. MPCA agrees that it must be more convenient for people to participate in greater numbers.
Leanna Goose	Resident	https://scs-public.s3-us-gov-west-1.amazonaws.com/env_production/oid333/did200071/pid_206566/assets/merged/ox0eieg_document.pdf	E-waste recycling must be convenient. The plan calls for convenient drop site access for residents. The plan requires pre-processing at landfills to remove recyclable material, but we will continue to strive for e-waste collection upstream for the most effective recovery of materials.
Lee Mehrkens	Resident	https://scs-public.s3-us-gov-west-1.amazonaws.com/env_production/oid333/did200071/pid_206566/assets/merged/ld07ih4_document.pdf	Organics recycling is the highest and best use for inedible food waste. Single-use plastics can be recycled, but they can also be replaced with reusable options. The plan places greater emphasis on addressing the root problem and expanding reduction efforts.

Name	Affiliation	Comment	Response
Leigh Behrens	Partnership on Waste and Energy	https://scs-public.s3-us-gov-west-1.amazonaws.com/env_production/oid333/did200071/pid_206566/assets/merged/ic0wi2n_document.pdf	Thank you for your support of our many impactful strategies. Thank you also for calling attention to the importance of being mindful of the words we choose. We have amended to plan to remove harmful terms. MPCA will defer to the expertise of counties to propose variations to strategies that will work for their residents and haulers. The plan has been amended to allow counties to provide alternative strategies. For required strategies, proposals must achieve comparable objectives. For optional strategies, counties should work with their PCA solid waste planner to determine the point value of the alternative strategy. Implementing strategy 60 for county owned buildings was the original intent of this strategy. The plan has been edited for clarity. Interested parties have raised many concerns about the undue burden weekly recycling would have on their operations. Accordingly, this now appears in the plan as an optional strategy. The public education and backyard composting strategies have been edited to address your concerns. Source separation is the best way to recover materials and to ensure the highest value of those materials. However, despite our best efforts, human behavior is unpredictable. Preprocessing is the process of pulling recyclables out of mixed waste and it can recover additional recyclables, especially metals. The cost of collection is the primary driver of cost to residents, but historically tip fees have not been the driver for cost. The plan has been modified to extend the timeline to allow facilities time to plan the best preprocessing system. MPCA will look to counties to interpret or adjust this strategy to achieve the best outcome given their resources and residents. Hauler reporting is a shared responsibility for the state and county. Without cooperation from counties and accurate license lists, the MPCA cannot rely on the information collected. Both the state and counties benefit from the collection of this data. Sharing in the responsibility ensures accuracy and efficiency. MPCA views increased compliance as a partnership effort. Counties need to maintain and share hauler license lists with the MPCA. State leadership is needed to assure consistency. Sustainable materials management (SMM) is the best way to reduce the impacts of our waste generation. The plan is consistent with the goals of SMM. The MPCA relies on EPA's WARM for decision-making but does not require counties to do the same if other models are found to be reliable and consistent with an SMM approach. Extended producer responsibility (EPR) laws have been shown to be a very effective tool to achieve the following, provided the right incentives and requirements are included in the EPR legal framework: Influence manufacturer design to improve recyclability, repair, and reuse; Reduce material use and toxicity; Improve recovery for reuse, repair, and recycling; Help create a sustainable and circular economy for the materials and products covered by specific EPR requirements; Manufacturers and others along the product chain share in the financial and physical responsibility for collection, reuse, and recycling of products at the end of their useful lives. This includes the role for consumers that must be responsible for ensuring that end-of-life products get into the collection system that's provided. For us to utilize this type of program, the Minnesota Legislature would have to create new laws with requirements for manufacturers and other parties that have a role in the cycle of commerce for the products and materials in question. Packaging: The Partnership on Waste and Energy—which includes Hennepin, Ramsey, and Washington counties—are working on issues raised by MPP commenters regarding the need to address quantities, types, and management of packaging materials. EPR can provide a better pathway for compostable packaging to be collected and directed to a commercial composting facility. EPR can require proper labeling for reuse, recycling, or composting. MPCA is working in collaboration with DNR and local governments to create a cohesive plan for wood waste management. The plan has been modified to be inclusive of other tree disease issues, such as Oak Wilt. Wood waste is expected to increase and will require collaboration to find upstream solutions. Planning will be required to avoid open burning. Market development for wood waste is called for in the plan because MPCA is aware that additional markets beyond St. Paul Co-generation will be needed to ensure outlets are available for wood waste in the future. Markets can be composting, biochar, lumber markets, or others that MPCA may not be considering at this time. The MPCA has a role in promoting use of compost - the MNDOT specification may not be the right tool for a statewide market development strategy for food derived compost. In many areas of the state food derived compost is not yet available and/or may be manufactured substantial distances away. Current MNDOT specifications do allow for use of food derived compost. However, requiring only food derived compost statewide is not currently feasible. The volume of compost used under MNDOT specifications exceeds the supply of food derived compost and some projects are located far from sources of food derived compost. These challenges are also why specifications must be flexible enough to offer compost from multiple varieties of feedstocks.
Leslie Frick	Sustainable Stillwater	https://scs-public.s3-us-gov-west-1.amazonaws.com/env_production/oid333/did200071/pid_206566/assets/merged/d30hi2l_document.pdf	Thank you for your support of our many impactful strategies. On Strategy 21: Adopt an ordinance with a mandatory consumer charge for take-out single-use cups, containers, and utensils. This is an optional strategy that counties may choose to add to their plans. We will look to the counties to plan for an approach that will best serve the needs of their residents. This has been revised to allow more flexibility in how counties fulfill this strategy and also to better align with the waste hierarchy. The plan also requires counties to offer grants or rebates for organizations to transition to reusable food and beverage service ware. Washington County has developed many opportunities for reuse and reduction. The environmental center houses a free product room. The county organizes a group of repair volunteers for fix-it clinics and instructional videos. Their webpage also provides many resources and information on reuse. You can find more here: https://www.co.washington.mn.us/3175/Reduce-and-Reuse
Leslie Leik	Resident	https://scs-public.s3-us-gov-west-1.amazonaws.com/env_production/oid333/did200071/pid_206566/assets/merged/ck0pjp4_document.pdf	Interested parties have raised many concerns about the undue burden weekly recycling would have on their operations. Accordingly, this now appears in the plan as an optional strategy. Many communities in the Twin Cities Metro Area have enacted backyard burning/nuisance burning ordinances. These types of requirements are out of scope for this plan, but you may reach out to your local city to learn of similar ordinances. The draft plan did not include strategies for multi-family housing. Strategies for multi-family recycling, organics recycling, and reduction have been added to the final plan. The plan includes a strategy to incentivize treatment for affected trees. The language in this strategy has been revised to address a wider range of pathogens that affect other tree species as well. We advocate for home repair to the extent that is within scope of this solid waste plan.
Leslie Martin	Resident	https://scs-public.s3-us-gov-west-1.amazonaws.com/env_production/oid333/did200071/pid_206566/assets/merged/sk0bire_document.pdf	Compostable single-use products are a better option than conventional single-use products that cannot be recycled, but reuse is the best option. The plan requires counties to provide financial assistance to organizations to transition to reusable food and beverage service ware.
Libby Parker	Resident	https://scs-public.s3-us-gov-west-1.amazonaws.com/env_production/oid333/did200071/pid_206566/assets/merged/ep0wiq4_document.pdf	The plan calls for residential curbside organics collection to be required region-wide in cities greater than 5,000. MPCA agrees that it must be more convenient for people to participate in greater numbers.
Lilita Keire	Resident	https://scs-public.s3-us-gov-west-1.amazonaws.com/env_production/oid333/did200071/pid_206566/assets/merged/i10biu6_document.pdf	MPCA received many comments of concern about the continued operation of the Hennepin Energy Recovery Center. We have re-examined our approach to the waste-to-energy (WTE) section of the plan. Changes include a comparison of the impacts of WTE and landfills and acknowledgement of the possible closure that will be determined by the Hennepin County Board. It is critical to ensure that large infrastructure decisions are being made with consideration to environmental and environmental justice impacts. MPCA supports minimizing disposal options of WTE and landfill as much as possible and the plan focuses on waste reduction, recycling, and composting to meet the 75% goal. Cumulative air impacts are outside of the scope of this document. Air quality impacts will be addressed as part of the cumulative air impact rule-making effort that is underway. Thank you for your feedback.
Linda Bruemmer	Resident	https://scs-public.s3-us-gov-west-1.amazonaws.com/env_production/oid333/did200071/pid_206566/assets/merged/c909i9d_document.pdf	Ridwell provides pickup for materials that counties tend to collect at their environmental centers or HHW drop-off sites. Some waste types are not appropriate for curbside collection and require residents to safely deliver them to environmental centers. Shredded paper is difficult for recycling centers to sort. Inquire with Ramsey County or St. Paul about shredding events if you'd like to recycling your shredded paper. Curbside collection of textiles has been discontinued by municipal programs due to the exposure to weather. Textiles must be dry and clean for both reuse and recycling. For a material to be recycled, it needs to be used to create a new product. Fast fashion has resulted in an onslaught of low-quality textiles that have no reuse nor recycling value. Durable textiles made from natural fibers and extending the life via proper care and repair can help reduce personal impact. The preferred method to dispose of Teflon-coated cookware is through the trash. When other opportunities to recover these items exist, MPCA will promote them. Minnesota Statute 115A.95 does not allow for haulers to deliver source-separated recyclable materials to landfills unless the MPCA determines that no other disposal method is available. The State, counties, and cities assure collected recycling is being recycled.

Name	Affiliation	Comment	Response
Lisa Cerney	Hennepin County	https://scs-public.s3-us-gov-west-1.amazonaws.com/env_production/oid333/did200071/pid_206566/assets/merged/rq0mic_a_document.pdf	The plan has been revised to make the weekly recycling collection strategy optional. This strategy can make collection frequency more convenient for residents but may be cost prohibitive and further exacerbate the driver shortage. MPCA still sees weekly collection as a best practice but agrees that it should be a local decision. The commercial recycling strategy will remain as required. Counties have the flexibility to implement more stringent requirements than those presented in the plan. The Plan has been edited to allow for counties to pursue the regulatory approach, in addition to or in lieu of assistance. Source separation is the best way to recover materials and to ensure the highest value of those materials. However, despite our best efforts, human behavior is unpredictable. Preprocessing is the process of pulling recyclables out of mixed waste and it can recover additional recyclables, especially metals. The cost of collection is the primary driver of cost to residents, but historically tip fees have not been the driver for cost. The plan has been modified to extend the timeline to allow facilities time to plan the best preprocessing system. MPCA will look to counties to interpret or adjust this strategy to achieve the best outcome given their resources and residents. Hauler reporting is a shared responsibility for the state and county. Without cooperation from counties and accurate license lists, the MPCA cannot rely on the information collected. Both the state and counties benefit from the collection of this data. Sharing in the responsibility ensures accuracy and efficiency. MPCA views increased compliance as a partnership effort. Counties need to maintain and share hauler license lists with the MPCA. State leadership is needed to assure consistency. The plan has been amended to allow counties to provide alternative strategies. For required strategies, proposals must achieve comparable objectives. For optional strategies, counties should work with their PCA solid waste planner to determine the point value of the alternative strategy. MPCA is working in collaboration with DNR and local governments to create a cohesive plan for wood waste management. The plan has been modified to be inclusive of other tree disease issues, such as Oak Wilt. Wood waste is expected to increase and will require collaboration to find upstream solutions. Planning will be required to avoid open burning. The wood waste section has been modified to reflect that treatment may be more cost effective for healthy trees. MPCA promotes the use of compost to MNDOT and enterprise wide. Food-derived compost requirements in some metro counties and cities has bolstered markets. The region's food waste can have a beneficial use in metro construction projects. MPCA must promote robust markets for compost. One avenue is through partnerships with other state agencies. However, the MNDOT specification may not be the right tool for a statewide market development strategy for food-derived compost. In much of Greater Minnesota, food-derived compost is not established. Facilities and compost sites may be remote. Current MNDOT specifications do allow for use of food-derived compost. However, requiring only food-derived compost statewide is not currently feasible. The volume of compost used under MNDOT specifications exceeds the supply of food-derived compost. Additionally, some projects are located far from sources of food-derived compost. These statewide specifications must be achievable through a variety of feedstocks. Implementing the building material management plan strategy for county-owned buildings was the original intent of this strategy. The plan has been edited for clarity.
Lisbeth Petersen	Resident	https://scs-public.s3-us-gov-west-1.amazonaws.com/env_production/oid333/did200071/pid_206566/assets/merged/a906im_a_document.pdf	Recycling refund legislation is very successful at increasing the collection of beverage containers. States with recycling refund often have capture rates greater than 80% for those materials that are covered by the redemption fee. MPCA advises the Minnesota Legislature in the Solid Waste Policy Report to implement a statewide deposit refund program.
Liz Borchardt	Resident	https://scs-public.s3-us-gov-west-1.amazonaws.com/env_production/oid333/did200071/pid_206566/assets/merged/ri02ikh_document.pdf	All metro counties have online resources on how and where to dispose of items banned from curbside collection bins. County HHW drop-off sites and many retail outlets collect clean, dry plastic bags for recycling. Reusable produce bags are a great option if you are looking to reduce your reliance on plastic. Curbside collection of textiles has been discontinued by municipal programs due to the exposure to weather. Textiles must be dry and clean for both reuse and recycling. The Secondary Materials and Recycled Textiles (SMART) Association estimates that about half of new clothing end up donated. Of the clothing that is donated, about 20% are sold in reuse outlets, 25% are shipped overseas, 50% are used as absorbents/rags/stuffing, and about 5% head to landfills or WTE facilities. That means that over half of all textiles end up in the garbage. For a material to be recycled, it needs to be used to create a new product. Fast fashion has resulted in an onslaught of low-quality textiles that have no reuse nor recycling value. Durable textiles made from natural fibers and extending the life via proper care and repair can help reduce personal impact. The plan calls for residential curbside organics collection to be required region-wide in cities greater than 5,000. MPCA agrees that it must be more convenient for people to participate in greater numbers.
Lois Norrgard	Resident	https://scs-public.s3-us-gov-west-1.amazonaws.com/env_production/oid333/did200071/pid_206566/assets/merged/ra02ikw_document.pdf	The 5% waste reduction goal references the total generation of waste. Despite our best efforts, consumption influences waste generation. To truly be successful in waste reduction, upstream policies must be put into place by the Minnesota Legislature that result in fewer materials being generated. The 75% goal is determined by state statute as the disposal avoidance goal and MPCA intends to aggressively push for improvement in all areas that are feasible. The plan includes required strategies for counties to reduce and divert food waste, launch bi-annual sustainable consumption challenges for residents, and to implement a formal county sustainable purchasing policy. There are also strategies to support reuse and repair through volunteer program, outreach, and grants. MPCA received many comments of concern about the continued operation of the Hennepin Energy Recovery Center. We have re-examined our approach to the waste-to-energy (WTE) section of the plan. Changes include a comparison of the impacts of WTE and landfills and acknowledgement of the possible closure that will be determined by the Hennepin County Board. It is critical to ensure that large infrastructure decisions are being made with consideration to environmental and environmental justice impacts. MPCA supports minimizing disposal options of WTE and landfill as much as possible and the plan focuses on waste reduction, recycling, and composting to meet the 75% goal. Cumulative air impacts are outside of the scope of this document. Air quality impacts will be addressed as part of the cumulative air impact rule-making effort that is underway. MPCA is still learning how best to engage with impacted communities with our planning processes and there is a long way to go to get the levels of engagement that we'd like. However, MPCA received six times the comments received for the prior plan. Most of these comments were from community members rather than our usual industry/county contacts. MPCA will continue to improve community outreach, but we are pleased with the progress made between this plan and the prior plan. The Minnesota State Legislature has enacted laws to maintain the integrity of the recycling system. MN Statute 115A.95 was written to ensure that once material is collected for recycling, it must be taken to a recycling processing facility or end market. This law prohibits material that is collected as recycling from being taken to a landfill. This ensures that once material is collected for recycling, it is getting recycled. In addition, Minnesota imposes a solid waste tax on every ton of solid waste disposed. Counties also impose a separate solid waste tax if material is disposed of in their county. Minnesota does not tax material that is taken to a recycling facility. In the 1990s private companies and the public sector made investments in the recycling system to make recycling more desirable. When overseas markets closed their borders to recyclable materials in 2017, Minnesota companies made even more investments to make sure material was clean and ready for end markets. Cleaner material and less contamination in bales of recyclable material mean companies will buy Minnesota's recyclable material over others and at a better price. Minnesota has good, stable end markets for recyclable materials because of the investments made over the last 30+ years. Recycling is important to Minnesota's local economy. Overall, recycling helps support nearly 78,000 jobs in Minnesota. Over 330 manufacturers in Minnesota use recycled material in their products. The single-use container fee is an optional strategy that counties may choose to add to their plans. We will look to the counties to select an approach that will best serve the needs of their residents. Counties will be required to offer grants or rebates for organizations to transition to reusable food and beverage service ware. Restrictions like a bag ban should be determined through county and/or city ordinances. The most effective way to reduce waste is to not create it in the first place. Compostable single-use products are a better option than conventional single-use products that cannot be recycled, but reuse is the best option.
Ioraine Allison	Resident	https://scs-public.s3-us-gov-west-1.amazonaws.com/env_production/oid333/did200071/pid_206566/assets/merged/320s01_document.pdf	Recycling refund legislation is very successful at increasing the collection of beverage containers. States with recycling refund often have capture rates greater than 80% for those materials that are covered by the redemption fee. MPCA advises the Minnesota Legislature in the Solid Waste Policy Report to implement a statewide deposit refund program.
Lori Belz	Resident	https://scs-public.s3-us-gov-west-1.amazonaws.com/env_production/oid333/did200071/pid_206566/assets/merged/yo0oi86_document.pdf	The plan was authored by MPCA staff. The length of the plan is due to the breadth of topics covered and complicated solid waste system of the Twin Cities Metro Area. The single-use container fee is an optional strategy that counties may choose to add to their plans. The strategy was edited to be more customizable for counties to include problematic materials. We will look to the counties to select an approach that will best serve the needs of their residents. Counties will be required to offer grants or rebates for organizations to transition to reusable food and beverage service ware. Restrictions like a bag ban should be determined through county and/or city ordinances. The most effective way to reduce waste is to not create it in the first place. Compostable single-use products are a better option than conventional single-use products that cannot be recycled, but reuse is the best option. The draft plan did not include strategies for multi-family housing. Strategies for multi-family recycling, organics recycling, and reduction have been added to the final plan. The plan includes a strategy to establish a curbside set-out day to allow residents to set out used items for reuse. This should lead counties to eliminate prohibitive ordinances and policies.

Name	Affiliation	Comment	Response
Lori Olinger	Coalition for Plastic Reduction	https://scc-public.s3-us-gov-west-1.amazonaws.com/env_production/oid333/did200071/oid_206566/assets/merged/dt0117_document.pdf	<p>Over-consumption is at the root of the planet's environmental crisis, with impacts beyond the waste produced at the end of useful life. The 5% waste reduction goal references the total generation of waste. Despite our best efforts, consumption influences waste generation. To truly be successful in waste reduction, upstream policies must be put into place by the MN Legislature that result in fewer materials being generated. The 75% goal is determined by state statute as the disposal avoidance goal and MPCA intends to aggressively push for improvement in all areas that are feasible. The metro forecast was developed as described in the methodology included within Appendix F. Organics and recycling tonnages were calculated based on needed benchmarks to achieve the 75% recycling goal by 2030. Capacity has historically expanded as programs have come online and as needed. The plan includes required strategies for counties to reduce and divert food waste, launch bi-annual sustainable consumption challenges for residents, and to implement a formal county sustainable purchasing policy. There are also strategies to support reuse and repair through volunteer program, outreach, and grants. MPCA received many comments of concern about the continued operation of the Hennepin Energy Recovery Center. We have re-examined our approach to the waste-to-energy (WTE) section of the plan. Changes include a comparison of the impacts of WTE and landfills and acknowledgement of the possible closure that will be determined by the Hennepin County Board. It is critical to ensure that large infrastructure decisions are being made with consideration to environmental and environmental justice impacts. MPCA supports minimizing disposal options of WTE and landfill as much as possible and the plan focuses on waste reduction, recycling, and composting to meet the 75% goal. Cumulative air impacts are outside of the scope of this document. Air quality impacts will be addressed as part of the cumulative air impact rule-making effort that is underway. The Minnesota Legislature passed a sweeping bill to address and prohibit PFAS in consumer products. The Minnesota Attorney General reached an \$850 million settlement with 3M. For more information about this, visit https://3msettlement.state.mn.us/. To learn more about PFAS in Minnesota, visit https://www.pca.state.mn.us/pfas-in-minnesota. Removing PFAS from consumer products will lead to a reduction of PFAS in our solid waste stream. The most effective way to reduce waste is to not create it in the first place. Making a new product emits greenhouse gases that contribute to climate change and requires a lot of materials and energy - raw materials must be extracted from the earth, and the product must be fabricated then transported to wherever it will be sold. As a result, reduction and reuse are the most effective ways you can save natural resources, protect the environment, and save money. Counties measure and report to the PCA on reduction and reuse efforts. The plan includes many strategies to address food waste. MPCA advocates for diversion of food waste to the extent of the plan's authority. Food waste rescue activities beyond what is included in the plan would require legislative action and/or county/city ordinance passage. Extended producer responsibility (EPR) laws have been shown to be a very effective tool to achieve the following, provided the right incentives and requirements are included in the EPR legal framework: Influence manufacturer design to improve recyclability, repair, and reuse; Reduce material use and toxicity; Improve recovery for reuse, repair, and recycling; Help create a sustainable and circular economy for the materials and products covered by specific EPR requirements; Manufacturers and others along the product chain share in the financial and physical responsibility for collection, reuse, and recycling of products at the end of their useful lives. This includes the role for consumers that must be responsible for ensuring that end-of-life products get into the collection system that's provided. For us to utilize this type of program, the Minnesota Legislature would have to create new laws with requirements for manufacturers and other parties that have a role in the cycle of commerce for the products and materials in question. The Partnership on Waste and Energy—which includes Hennepin, Ramsey, and Washington counties—are working on issues raised by MPP commenters regarding the need to address quantities, types, and management of packaging materials. EPR can provide a better pathway for compostable packaging to be collected and directed to a commercial composting facility. EPR can require proper labeling for reuse, recycling, or composting. Minnesota has a rechargeable battery law. Updates to the law are needed to address the full scope of the lithium battery issue. The MPCA is working with partners on legislative proposals to improve the collection and recycling of batteries. A strategy has been added to the plan to implement education programs on proper battery management. Creating safe storage spaces that minimize fire risks at waste facilities is challenging. Much like EPR, legislative action will be necessary to implement changes. Recycling refund legislation is very successful at increasing the collection of beverage containers. States with recycling refund often have capture rates greater than 80% for those materials that are covered by the redemption fee. MPCA advises the MN Legislature in the Solid Waste Policy Report to implement a statewide deposit refund program. Thank you for these thoughtful suggestions for the county sustainable purchasing policy strategy. Adding more prescriptive language will ensure there is a metro-wide consistent movement toward waste reduction through purchasing activities. The plan is only for the metro area. MPCA's Solid Waste Policy Report has recommendations for EPR and other legislation that would have state-wide impacts regarding the use of plastics.</p>
LuAnn Johnson	Resident	https://scc-public.s3-us-gov-west-1.amazonaws.com/env_production/oid333/did200071/oid_206566/assets/merged/sn0y9x_document.pdf	<p>MPCA received many comments of concern about the continued operation of the Hennepin Energy Recovery Center. We have re-examined our approach to the waste-to-energy (WTE) section of the plan. Changes include a comparison of the impacts of WTE and landfills and acknowledgement of the possible closure that will be determined by the Hennepin County Board. It is critical to ensure that large infrastructure decisions are being made with consideration to environmental and environmental justice impacts. MPCA supports minimizing disposal options of WTE and landfill as much as possible and the plan focuses on waste reduction, recycling, and composting to meet the 75% goal. Cumulative air impacts are outside of the scope of this document. Air quality impacts will be addressed as part of the cumulative air impact rule-making effort that is underway. The 5% waste reduction goal references the total generation of waste. Despite our best efforts, consumption influences waste generation. To truly be successful in waste reduction, upstream policies must be put into place by the Minnesota Legislature that result in fewer materials being generated. The 75% goal is determined by state statute as the disposal avoidance goal and MPCA intends to aggressively push for improvement in all areas that are feasible. The plan includes required strategies for counties to reduce and divert food waste, launch bi-annual sustainable consumption challenges for residents, and to implement a formal county sustainable purchasing policy. There are also strategies to support reuse and repair through volunteer program, outreach, and grants. Extended producer responsibility (EPR) laws have been shown to be a very effective tool to achieve the following, provided the right incentives and requirements are included in the EPR legal framework: Influence manufacturer design to improve recyclability, repair, and reuse; Reduce material use and toxicity; Improve recovery for reuse, repair, and recycling; Help create a sustainable and circular economy for the materials and products covered by specific EPR requirements; Manufacturers and others along the product chain share in the financial and physical responsibility for collection, reuse, and recycling of products at the end of their useful lives. This includes the role for consumers that must be responsible for ensuring that end-of-life products get into the collection system that's provided. For us to utilize this type of program, the Minnesota Legislature would have to create new laws with requirements for manufacturers and other parties that have a role in the cycle of commerce for the products and materials in question. The Partnership on Waste and Energy—which includes Hennepin, Ramsey, and Washington counties—are working on issues raised by MPP commenters regarding the need to address quantities, types, and management of packaging materials. EPR can provide a better pathway for compostable packaging to be collected and directed to a commercial composting facility. EPR can require proper labeling for reuse, recycling, or composting.</p>

Name	Affiliation	Comment	Response
Lucy Mullany	Minnesota Zero Waste Coalition	https://scs-public.s3-us-gov-west-1.amazonaws.com/env_production/oid333/did200071/pid_206566/assets/merged/7908ief_document.pdf	All 7-county metro HHW drop-off sites are open to residents of any county. Every site will collect the items you listed and many other types of household hazardous waste. The plan includes a strategy to provide additional drop sites or collection events for these items. Continuous end-market development is paramount to a functional recycling system. MPCA agrees that strong markets for glass and other challenging materials is something that needs constant attention from the State and our partners. The plan calls for residential curbside organics collection to be required region-wide in cities greater than 5,000. MPCA agrees that it must be more convenient for people to participate in greater numbers. The plan includes a strategy that would encourage the development of additional reuse infrastructure. The plan calls for waste composition to be conducted every 5 years, which is consistent with requirements that waste-to-energy facilities must follow. Consistency in requirements is important, so the 5-year time frame will remain. The counties rely on business data to track recycling information, and it is a county-level decision to require or ask for cooperation when they work to collect that information. Extended producer responsibility laws have been shown to be a very effective tool to achieve the following, provided the right incentives and requirements are included in the EPR legal framework: Influence manufacturer design to improve recyclability, repair, and reuse; Reduce material use and toxicity; Improve recovery for reuse, repair, and recycling; Help create a sustainable and circular economy for the materials and products covered by specific EPR requirements; Manufacturers and others along the product chain share in the financial and physical responsibility for collection, reuse, and recycling of products at the end of their useful lives. This includes the role for consumers that must be responsible for ensuring that end-of-life products get into the collection system that's provided. For us to utilize this type of program, the Minnesota Legislature would have to create new laws with requirements for manufacturers and other parties that have a role in the cycle of commerce for the products and materials in question. The Partnership on Waste and Energy—which includes Hennepin, Ramsey, and Washington counties—are working on issues raised by MPP commenters regarding the need to address quantities, types, and management of packaging materials. EPR can provide a better pathway for compostable packaging to be collected and directed to a commercial composting facility. EPR can require proper labeling for reuse, recycling, or composting. This plan does not have authority to make statewide changes. Any bans or policy recommendations from MPCA can be found in our statewide Solid Waste Policy Report to the Minnesota Legislature. Efforts to improve the e-waste EPR law that exists in Minnesota are underway. Minnesota has a rechargeable battery law. Updates to the law are needed to address the full scope of the lithium battery issue. The MPCA is working with partners on legislative proposals to improve the collection and recycling of batteries. A strategy has been added to the plan to implement education programs on proper battery management. Creating safe storage spaces that minimize fire risks at waste facilities is challenging. MPCA has been working with the Departments of Agriculture and Health to create content for inspectors to educate licensed facilities about financial assistance, donation, and opportunities to reduce wasted food. The plan has been revised to include the MPCA's commitment to continue work with partner agencies on improved food rescue and prevention efforts. A strategy encouraging county engagement with health inspectors in individual county plans will remain in the plan to help accelerate adoption of the practice but will not be required. MPCA received many comments of concern about the continued operation of the Hennepin Energy Recovery Center. We have re-examined our approach to the waste-to-energy (WTE) section of the plan. Changes include a comparison of the impacts of WTE and landfills and acknowledgement of the possible closure that will be determined by the Hennepin County Board. It is critical to ensure that large infrastructure decisions are being made with consideration to environmental and environmental justice impacts. MPCA supports minimizing disposal options of WTE and landfill as much as possible and the plan focuses on waste reduction, recycling, and composting to meet the 75% goal. Cumulative air impacts are outside of the scope of this document. Air quality impacts will be addressed as part of the cumulative air impact rule-making effort that is underway. Rulemaking for AD facilities has not yet occurred at the MPCA. Existing rules for similar facilities accepting similar materials exist, but we acknowledge that rules specific to AD facilities would be useful. With that said, MPCA has included guidance on AD in the Metro Plan for the time being and believe that we are able to permit AD facilities in a manner that is protective of the environment. The agency is responsible for ensuring compliance with state law. The Minnesota Zero Waste Coalition may contact elected officials to advocate for a change to Minnesota's state law. Minnesota already requires the most protective requirements on landfills. MPCA staff regularly evaluates landfill design to see if additional protections are needed and implement them as needed. Also, most landfills have air permits also to regulate air emissions, but more data is needed to assess the amount of fugitive emissions escaping off the working face. Source separation is the best way to recover materials and to ensure the highest value of those materials. However, despite our best efforts, human behavior is unpredictable. Preprocessing can recover additional recyclables, especially metals. The cost of collection is the primary driver of cost to residents, but historically tip fees have not been the driver for cost. The plan has been modified to extend the timeline so that facilities and counties have more time to prepare. The 5% waste reduction goal references the total generation of waste. Despite our best efforts, consumption influences waste generation. To truly be successful in waste reduction, upstream policies must be put into place by the legislature that result in fewer materials being generated. The 75% goal is determined by state statute as the disposal avoidance goal and MPCA intends to aggressively push for improvement in all areas that are feasible.
M T	Resident	https://scs-public.s3-us-gov-west-1.amazonaws.com/env_production/oid333/did200071/pid_206566/assets/merged/k90hirb_document.pdf	A fee can be an effective strategy to reduce single-use bags from the solid waste system. Those are instituted at a city-level through the passage of an ordinance. Collecting recyclables is one way for an organization to raise funds. Container deposits in other states have been very effective in collecting those materials. Financial incentives to inspire behavior change can be successful. In order for Minnesota to utilize this type of program, the Legislature would need to pass new laws. Contract for residential recycling and organics by 2030 is an optional strategy in the plan. Organized collection has numerous benefits and can lower costs for all types of service (i.e., MSW, recycling, organics) to residents of a community. Convenience is a critical component of success. The plan includes a strategy that would expand curbside collection of organics recycling to all cities with a population of 5,000 or greater. Dumpster diving is not illegal in Minnesota, but it's important to adhere to local laws and ordinances pertaining to trespassing. Minnesota charges a solid waste management tax for trash. It is 9.75% of the sales price for residential waste and 17% for self-haul and commercial. Recycling and composting are tax-exempt to support those services and encourage participation in those programs. Minnesota Statute 115A.93 requires haulers and recyclers to report to MPCA. The plan calls for added emphasis on compliance in this area. Minnesota Statute 115A.9301 requires that larger volume containers must cost more than small containers, but the difference in cost is not outlined. Overtime, pay-as-you-throw systems have been shown to reduce the total amount of waste. While a compostable bag being disposed of in a curbside organics collection is better than a plastic bag being landfilled, moving toward a reusable option is the best way to reduce waste. A requirement for compostable plastic produce bags would require legislative action. Most cities have litter ordinances. Solid waste facilities have requirements in their permits to ensure that litter is picked up. Additionally, industrial storm water permittees are required to clean and maintain all impervious areas where debris may accumulate. Counties may propose a strategy to address litter in their solid waste plans. The plan does not carry the authority to phase out or tax advertisements and promotions. The plan includes a strategy to require reusable containers at county events. Counties are free to expand this requirement within the scope of authority of their county solid waste plans. The plan includes many strategies to increase reuse activities. We encourage counties to identify any of their own ordinances that work as a barrier for reuse. This plan does not have authority to create a tax rebate, but removing barriers to properly dispose of e-waste is important.
Maggie Yauk and Jonelle Hubbard	Anoka County	https://scs-public.s3-us-gov-west-1.amazonaws.com/env_production/oid333/did200071/pid_206566/assets/merged/6w0xic8_document.pdf	County highway departments can incorporate SSOM compost in construction projects, which can be assured by creating a county policy. Cities can require the application of compost to help the site vegetation recover from the impact of the construction. MPCA is working in collaboration with DNR and local governments to create a cohesive plan for wood waste management. The plan has been modified to be inclusive of other tree disease issues, such as Oak Wilt. Wood waste is expected to increase and will require collaboration to find upstream solutions. Planning will be required to avoid open burning. Implementing the Building Material Management Plan strategy for county owned buildings was the intent of this strategy. The plan has been edited for clarity. Contract for residential recycling and organics by 2030 is an optional strategy in the plan. Organized collection has numerous benefits and can lower costs for all types of service (i.e., MSW, recycling, organics) to residents of a community.
Marco Fields	Resident	https://scs-public.s3-us-gov-west-1.amazonaws.com/env_production/oid333/did200071/pid_206566/assets/merged/960i0c_document.pdf	MPCA received many comments of concern about the continued operation of the Hennepin Energy Recovery Center. We have re-examined our approach to the waste-to-energy (WTE) section of the plan. Changes include a comparison of the impacts of WTE and landfills and acknowledgement of the possible closure that will be determined by the Hennepin County Board. It is critical to ensure that large infrastructure decisions are being made with consideration to environmental and environmental justice impacts. MPCA supports minimizing disposal options of WTE and landfill as much as possible and the plan focuses on waste reduction, recycling, and composting to meet the 75% goal. Cumulative air impacts are outside of the scope of this document. Air quality impacts will be addressed as part of the cumulative air impact rule-making effort that is underway. Thank you for your feedback.
Marcus Buckley	Resident	https://scs-public.s3-us-gov-west-1.amazonaws.com/env_production/oid333/did200071/pid_206566/assets/merged/660bil6_document.pdf	MPCA is working in collaboration with DNR and local governments to create a cohesive plan for wood waste management. The plan has been modified to be inclusive of other tree disease issues, such as Oak Wilt. Wood waste is expected to increase and will require collaboration to find upstream solutions. Planning will be required to avoid open burning.

Name	Affiliation	Comment	Response
Margaret Anderson Keliher	City of Minneapolis Department of Public Works	https://scs-public.s3-us-gov-west-1.amazonaws.com/env_production/oid333/did200071/pid_2/06566/assets/merged/ad01pyr_document.pdf	MPCA agrees that additional funding would benefit all levels of governance. Additional resources help create a better system, resulting in higher diversion rates. Compostable single-use products are a better option than conventional single-use products that cannot be recycled, but reuse is the best option. MPCA will look to counties to interpret or adjust this strategy to achieve the best outcome given their resources and residents. The strategy has been edited to incorporate the successful and vetted aspects of the Minneapolis ordinance. Congratulations on receiving the SWIFR grant to re-open the North Transfer Station. The residents will benefit from expanded reuse and recycling drop-off opportunities. Drop-off events hosted by the counties are popular with residents, but these events have been shown to be very expensive and time intensive for county staff to plan and execute. Advertising a special collection day at the existing permanent sites could have a similar impact to raise community awareness, perhaps outside of regular hours. Interested parties have raised many concerns about the undue burden weekly recycling would have on their operations. Accordingly, this now appears in the plan as an optional strategy. Minnesota has a rechargeable battery law. Updates to the law are needed to address the full scope of the lithium battery issue. The MPCA is working with partners on legislative proposals to improve the collection and recycling of batteries. A strategy has been added to the plan to implement education programs on proper battery management. Creating safe storage spaces that minimize fire risks at waste facilities is challenging. Source separation is the best way to recover materials and to ensure the highest value of those materials. However, despite our best efforts, human behavior is unpredictable. Preprocessing can recover additional recyclables, especially metals. The cost of collection is the primary driver of cost to residents, but historically tip fees have not been the driver for cost. The plan has been modified to extend the timeline to allow counties and facilities time to prepare. Thank you for the feedback. The plan has been edited to allow for more flexibility in how counties promote backyard composting activities. The plan has been amended to allow counties to provide alternative strategies. For required strategies, proposals must achieve comparable objectives. For optional strategies, counties should work with their PCA solid waste planner to determine the point value of the alternative strategy. The State of Minnesota has a "Green Meeting Policy" to reduce the waste associated with meetings. Additionally, our Office of Enterprise Sustainability addresses and promotes sustainability at affiliated events. This strategy has been revised to clarify intended outcomes and to limit the scope to the county. The vast number of strategies creates a wide range of possible systems/programs. It wouldn't be possible to estimate cost for all outcomes. It is expected that metro counties consider costs of implementation as they select strategies for their County Solid Waste Plans. This is an optional strategy that counties may choose to include in their solid waste plans. It is a good way to make reuse more convenient for residents. However, if any county wants to propose other reuse strategies, the provides them the freedom to do that. The plan includes a new strategy to require counties to promote their reuse outlets that are located in the county.
Margaret Oconnor	Resident	https://scs-public.s3-us-gov-west-1.amazonaws.com/env_production/oid333/did200071/pid_2/06566/assets/merged/630pkl_document.pdf	Most cities have litter ordinances. Solid waste facilities have requirements in their permits to ensure that litter is picked up. Additionally, industrial storm water permittees are required to clean and maintain all impervious areas where debris may accumulate. Counties may propose a strategy to address litter in their solid waste plans. Recycling refund legislation is very successful at increasing the collection of beverage containers. States with recycling refund often have capture rates greater than 80% for those materials that are covered by the redemption fee. MPCA does not have the authority to require this type of legislation through this plan, because it would require action by the MN Legislature to enact that requirement on beverage manufacturers. Extended producer responsibility (EPR) laws have been shown to be a very effective tool to achieve the following, provided the right incentives and requirements are included in the EPR legal framework: influence manufacturer design to improve recyclability, repair, and reuse; Reduce material use and toxicity; improve recovery for reuse, repair, and recycling; Help create a sustainable and circular economy for the materials and products covered by specific EPR requirements; Manufacturers and others along the product chain share in the financial and physical responsibility for collection, reuse, and recycling of products at the end of their useful lives. This includes the role for consumers that must be responsible for ensuring that end-of-life products get into the collection system that's provided. For us to utilize this type of program, the Minnesota Legislature would have to create new laws with requirements for manufacturers and other parties that have a role in the cycle of commerce for the products and materials in question. Packaging: The Partnership on Waste and Energy—which includes Hennepin, Ramsey, and Washington counties—are working on issues raised by MPP commenters regarding the need to address quantities, types, and management of packaging materials. EPR can provide a better pathway for compostable packaging to be collected and directed to a commercial composting facility. EPR can require proper labeling for reuse, recycling, or composting.
Marianne Brenckman	Resident	https://scs-public.s3-us-gov-west-1.amazonaws.com/env_production/oid333/did200071/pid_2/06566/assets/merged/pv01jga_document.pdf	The plan prioritizes education with strategies to educate residents. The plan also prioritizes reuse strategies. Reducing the amount of material being managed in the solid waste system provides the greatest environmental benefit. The draft plan did not include strategies for multi-family housing. Strategies for multi-family recycling, organics recycling, and reduction have been added to the final plan. Composting and recycling bins in public places tend to become contaminated. Several counties have designated drop sites for residents to self-haul their source-separated organics to locked bins. This remains the best practice for communities without curbside collection. The MPCA's Solid Waste Policy Report to the Legislature contains recommendations to introduce extended producer responsibility (EPR) laws. EPR laws have been shown to be a very effective tool to achieve the following, provided the right incentives and requirements are included in the EPR legal framework: • Influence manufacturer design to improve recyclability, repair and reuse • Reduce material use and toxicity • improve recovery for reuse, repair and recycling • Help create a sustainable and circular economy for the materials and products covered by specific EPR requirements • Manufacturers and others along the product chain share in the financial and physical responsibility for collection, reuse, and recycling of products at the end of their useful lives. This includes the role for consumers that must be responsible for ensuring that end-of-life products get into the collection system that's provided. In order for Minnesota to utilize this type of program, the Minnesota Legislature would have to create new laws with requirements for manufacturers and other parties that have a role in the cycle of commerce for the products and materials in question. Packaging: The Partnership on Waste and Energy (Hennepin, Ramsey, Washington), are working on issues raised by MPP commenters regarding the need to address quantities, types, and management of packaging materials. Compostable packaging: EPR can provide a better pathway for compostable packaging to be collected and directed to a commercial composting facility. Packaging labeling: EPR can require proper labeling for reuse, recycling, or composting.
Marissa Galan	Resident	https://scs-public.s3-us-gov-west-1.amazonaws.com/env_production/oid333/did200071/pid_2/06566/assets/merged/ee08ik5_document.pdf	Contract for residential recycling and organics by 2030 is an optional strategy in the plan. Organized collection has numerous benefits and can lower costs for all types of service (i.e., MSW, recycling, organics) to residents of a community.
Mark D'Alencar	Resident	https://scs-public.s3-us-gov-west-1.amazonaws.com/env_production/oid333/did200071/pid_2/06566/assets/merged/3h05ie8_document.pdf	MPCA received many comments of concern about the continued operation of the Hennepin Energy Recovery Center. We have re-examined our approach to the waste-to-energy (WTE) section of the plan. Changes include a comparison of the impacts of WTE and landfills and acknowledgement of the possible closure that will be determined by the Hennepin County Board. It is critical to ensure that large infrastructure decisions are being made with consideration to environmental and environmental justice impacts. MPCA supports minimizing disposal options of WTE and landfill as much as possible and the plan focuses on waste reduction, recycling, and composting to meet the 75% goal. Cumulative air impacts are outside of the scope of this document. Air quality impacts will be addressed as part of the cumulative air impact rule-making effort that is underway. Thank you for your feedback.
Mark Snyder	Resident	https://scs-public.s3-us-gov-west-1.amazonaws.com/env_production/oid333/did200071/pid_2/06566/assets/merged/k20f11r_document.pdf	MPCA received many comments of concern about the continued operation of the Hennepin Energy Recovery Center. We have re-examined our approach to the waste-to-energy (WTE) section of the plan. Changes include a comparison of the impacts of WTE and landfills and acknowledgement of the possible closure that will be determined by the Hennepin County Board. It is critical to ensure that large infrastructure decisions are being made with consideration to environmental and environmental justice impacts. MPCA supports minimizing disposal options of WTE and landfill as much as possible and the plan focuses on waste reduction, recycling, and composting to meet the 75% goal. Cumulative air impacts are outside of the scope of this document. Air quality impacts will be addressed as part of the cumulative air impact rule-making effort that is underway. The 5% waste reduction goal references the total generation of waste. Despite our best efforts, consumption influences waste generation. To truly be successful in waste reduction, upstream policies must be put into place by the MN Legislature that result in fewer materials being generated. The 75% goal is determined by state statute as the disposal avoidance goal and MPCA intends to aggressively push for improvement in all areas that are feasible. The plan includes required strategies for counties to reduce and divert food waste, launch bi-annual sustainable consumption challenges for residents, and to implement a formal county sustainable purchasing policy. There are also strategies to support reuse and repair through volunteer program, outreach, and grants. Additional capacity requirements to expand recycling and composting operations will be addressed in the Resource Management Report to the Minnesota Legislature. Waste composition studies are a requirement for WTE facilities via all current air permits. Thank you for your feedback.
Martha Henderson	Resident	https://scs-public.s3-us-gov-west-1.amazonaws.com/env_production/oid333/did200071/pid_2/06566/assets/merged/j60rinr_document.pdf	Increasing the types of materials collected in curbside programs and reducing/subsidizing costs would contribute to a higher recycling rate. One caveat is that curbside collection of textiles has been discontinued by municipal programs due to the exposure to weather and low quality materials. Textiles must be dry and clean for reuse and made from natural fibers for recycling. The Secondary Materials and Recycled Textiles (SMART) Association estimates that about half of new clothing are donated. Of the clothing that is donated, about 20% are sold in reuse outlets, 25% are shipped overseas, 50% are used as absorbents/rags/stuffing, and about 5% head to landfills or WTE facilities. That means that over half of all textiles end up in the garbage. For a material to be recycled, it needs to be used to create a new product. Fast fashion has resulted in an onslaught of low-quality textiles that have no reuse nor recycling value. Durable textiles made from natural fibers and extending the life via proper care and repair can help reduce personal impact. Private companies like Terracycle and Ridwell help fill the gaps by collecting materials that are difficult and costly for counties to process and manage.

Name	Affiliation	Comment	Response
Mary Allen	Resident	https://scs-public.s3-us-gov-west-1.amazonaws.com/env_production/oid333/did200071/pid_206566/assets/merged/jp04iiz_document.pdf	MPCA received many comments of concern about the continued operation of the Hennepin Energy Recovery Center. We have re-examined our approach to the waste-to-energy (WTE) section of the plan. Changes include a comparison of the impacts of WTE and landfills and acknowledgement of the possible closure that will be determined by the Hennepin County Board. It is critical to ensure that large infrastructure decisions are being made with consideration to environmental and environmental justice impacts. MPCA supports minimizing disposal options of WTE and landfill as much as possible and the plan focuses on waste reduction, recycling, and composting to meet the 75% goal. Cumulative air impacts are outside of the scope of this document. Air quality impacts will be addressed as part of the cumulative air impact rule-making effort that is underway. Thank you for your feedback.
Mary Forte	Resident	https://scs-public.s3-us-gov-west-1.amazonaws.com/env_production/oid333/did200071/pid_206566/assets/merged/nc04i09_document.pdf	A fee can be an effective strategy to reduce single-use bags from the solid waste system. Those are instituted at a city-level through the passage of an ordinance. Access to quality compostable bags is important to the success of a curbside collection program. The plan has been revised to address this concern. Black plastics are not recyclable due to limitations of the sorting equipment at recycling facilities. The optical sorter cannot read the resin type. Reducing black plastic in packaging and plant containers would be more beneficial than recycling it. The plan includes a strategy that would expand curbside collection of organics recycling to all cities with a population of 5,000 or greater. Convenience is a critical component of success. Extended producer responsibility laws have been shown to be a very effective tool to achieve the following, provided the right incentives and requirements are included in the EPR legal framework: • Influence manufacturer design to improve recyclability, repair and reuse • Reduce material use and toxicity • Improve recovery for reuse, repair and recycling • Help create a sustainable and circular economy for the materials and products covered by specific EPR requirements • Manufacturers and others along the product chain share in the financial and physical responsibility for collection, reuse, and recycling of products at the end of their useful lives. This includes the role for consumers that must be responsible for ensuring that end-of-life products get into the collection system that's provided. For Minnesota to utilize this type of program, the Minnesota Legislature would have to create new laws with requirements for manufacturers and other parties that have a role in the cycle of commerce for the products and materials in question. Metro counties offer helpful guides for recycling, organics recycling, and household hazardous waste. Recycling advertising can be very effective, but is also expensive and requires consistency. Educating children about the solid waste system early on can build good habits. Counties, cities and industry have focused on school programs as a cost-effective way of reaching school-aged children. The plan has an optional strategy for counties to adopt an ordinance with a mandatory consumer charge for take-out single-use cups, containers, and utensils. These items can be collected and self-hauled to scrap metal recyclers or county environmental centers. In small quantities, these items can be discarded in the garbage.
Mary Holm	Resident	https://scs-public.s3-us-gov-west-1.amazonaws.com/env_production/oid333/did200071/pid_206566/assets/merged/880f995_document.pdf	All of the 7-county metro HHW drop-off sites—sometimes referred to as environmental center—are open to residents of any county. Many materials are collected for free, but some require a collection fee. Every collection program has varying implementation costs. In some communities, curbside organics will be absorbed into existing trash fees and compostable bags will be provided by their county. In other communities, a separate hauler collects the organics recycling. This is more expensive and residents experience higher fees for that type of service.
Mary Miller	Resident	https://scs-public.s3-us-gov-west-1.amazonaws.com/env_production/oid333/did200071/pid_206566/assets/merged/wp0i0if_document.pdf	Extended producer responsibility laws have been shown to be a very effective tool to achieve the following, provided the right incentives and requirements are included in the EPR legal framework: • Influence manufacturer design to improve recyclability, repair and reuse • Reduce material use and toxicity • Improve recovery for reuse, repair and recycling • Help create a sustainable and circular economy for the materials and products covered by specific EPR requirements • Manufacturers and others along the product chain share in the financial and physical responsibility for collection, reuse, and recycling of products at the end of their useful lives. This includes the role for consumers that must be responsible for ensuring that end-of-life products get into the collection system that's provided. In order for Minnesota to utilize this type of program, the Minnesota Legislature would have to create new laws with requirements for manufacturers and other parties that have a role in the cycle of commerce for the products and materials in question. The plan calls for residential curbside organics collection to be required region-wide in cities greater than 5,000. MPCA agrees that it must be more convenient for people to participate in greater numbers. The plan includes a strategy for the management of organics recycling from large commercial food generators by 2030. It was optional in the draft and has been changed to required, based on public comments.
Mary Sheehan	Resident	https://scs-public.s3-us-gov-west-1.amazonaws.com/env_production/oid333/did200071/pid_206566/assets/merged/ud0zi22_document.pdf	Extended producer responsibility laws have been shown to be a very effective tool to achieve the following, provided the right incentives and requirements are included in the EPR legal framework: • Influence manufacturer design to improve recyclability, repair and reuse • Reduce material use and toxicity • Improve recovery for reuse, repair and recycling • Help create a sustainable and circular economy for the materials and products covered by specific EPR requirements • Manufacturers and others along the product chain share in the financial and physical responsibility for collection, reuse, and recycling of products at the end of their useful lives. This includes the role for consumers that must be responsible for ensuring that end-of-life products get into the collection system that's provided. In order for Minnesota to utilize this type of program, the Minnesota Legislature would have to create new laws with requirements for manufacturers and other parties that have a role in the cycle of commerce for the products and materials in question.
Mary Ann Hood McCann	Resident	https://scs-public.s3-us-gov-west-1.amazonaws.com/env_production/oid333/did200071/pid_206566/assets/merged/k00migs_document.pdf	Residents of Minnesota are not required to recycle. However, state law requires that residents have an opportunity to recycle. Our elected officials have deemed requirements to participate in recycling a step too far. Education is incorporated into several strategies in the plan. The plan calls for residential curbside organics collection to be required region-wide in cities greater than 5,000. MPCA agrees that it must be more convenient for people to participate in greater numbers.
Matt Clark	Hennepin GRE	https://scs-public.s3-us-gov-west-1.amazonaws.com/env_production/oid333/did200071/pid_206566/assets/merged/lk0eibp_document.pdf	MPCA supports the waste hierarchy and values the role of waste-to-energy in the system. Due to the unfolding events in Hennepin County, MPCA re-examined our approach to the waste-to-energy section of the plan. Included in those changes is a comparison of the impacts of waste-to-energy and landfills and acknowledgement of the possible closure that will be determined by the Hennepin County Board. It is critical to ensure that there is a good plan in place when large infrastructure decisions occur to ensure that waste is managed with the least environmental impact. MPCA supports minimizing disposal options (WTE and landfill) as much as possible and the plan focuses on waste reduction, recycling, and composting in an effort to meet the 75% goal.
Meghan Kosowski	Resident	https://scs-public.s3-us-gov-west-1.amazonaws.com/env_production/oid333/did200071/pid_206566/assets/merged/cd0pikg_document.pdf	MPCA received many comments of concern about the continued operation of the Hennepin Energy Recovery Center. We have re-examined our approach to the waste-to-energy (WTE) section of the plan. Changes include a comparison of the impacts of WTE and landfills and acknowledgement of the possible closure that will be determined by the Hennepin County Board. It is critical to ensure that large infrastructure decisions are being made with consideration to environmental and environmental justice impacts. MPCA supports minimizing disposal options of WTE and landfill as much as possible and the plan focuses on waste reduction, recycling, and composting to meet the 75% goal. Cumulative air impacts are outside of the scope of this document. Air quality impacts will be addressed as part of the cumulative air impact rule-making effort that is underway. The 5% waste reduction goal references the total generation of waste. Despite our best efforts, consumption influences waste generation. To truly be successful in waste reduction, upstream policies must be put into place by the MN Legislature that result in fewer materials being generated. The 75% goal is determined by state statute as the disposal avoidance goal and MPCA intends to aggressively push for improvement in all areas that are feasible. The plan includes required strategies for counties to reduce and divert food waste, launch bi-annual sustainable consumption challenges for residents, and to implement a formal county sustainable purchasing policy. There are also strategies to support reuse and repair through volunteer program, outreach, and grants. The Metro Plan has 14 strategies dedicated to reduction of waste and reuse efforts. There are also many strategies focused on recycling and organics collection - all of which will reduce the need for both WTE and landfilling if implemented.
Merle Davis Matthews	Resident	https://scs-public.s3-us-gov-west-1.amazonaws.com/env_production/oid333/did200071/pid_206566/assets/merged/180i79g_document.pdf	MPCA received many comments of concern about the continued operation of the Hennepin Energy Recovery Center. We have re-examined our approach to the waste-to-energy (WTE) section of the plan. Changes include a comparison of the impacts of WTE and landfills and acknowledgement of the possible closure that will be determined by the Hennepin County Board. It is critical to ensure that large infrastructure decisions are being made with consideration to environmental and environmental justice impacts. MPCA supports minimizing disposal options of WTE and landfill as much as possible and the plan focuses on waste reduction, recycling, and composting to meet the 75% goal. Cumulative air impacts are outside of the scope of this document. Air quality impacts will be addressed as part of the cumulative air impact rule-making effort that is underway. The 5% waste reduction goal references the total generation of waste. Despite our best efforts, consumption influences waste generation. To truly be successful in waste reduction, upstream policies must be put into place by the MN Legislature that result in fewer materials being generated. The 75% goal is determined by state statute as the disposal avoidance goal and MPCA intends to aggressively push for improvement in all areas that are feasible. The plan includes required strategies for counties to reduce and divert food waste, launch bi-annual sustainable consumption challenges for residents, and to implement a formal county sustainable purchasing policy. There are also strategies to support reuse and repair through volunteer program, outreach, and grants. Thank you for your feedback.

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Michael O'BRIEN	Resident	https://scs-public.s3-us-gov-west-1.amazonaws.com/env_production/oid333/did200071/pid_206566/assets/merged/iq0n7r_document.pdf	The MPCA can support reuse efforts through grants and no- or low-interest loans. Counties are required by this plan to offer grants for waste reduction, reuse, and repair. There are many scrap metal recycling collection points available in the metro area, including at each county-run environmental center and household hazardous waste drop-off site. County outreach and education strategies have been revised to increase awareness of this. This plan does not have authority to make changes like eliminating plastic bags. However, there is an optional strategy for counties to adopt an ordinance with a consumer charge or ban on disposable single-use items, which is open for a county to interpret as including plastic shopping bags. Extended producer responsibility laws have been shown to be a very effective tool to achieve the following, provided the right incentives and requirements are included in the EPR legal framework: Influence manufacturer design to improve recyclability, repair, and reuse; Reduce material use and toxicity; Improve recovery for reuse, repair, and recycling; Help create a sustainable and circular economy for the materials and products covered by specific EPR requirements. Manufacturers and others along the product chain share in the financial and physical responsibility for collection, reuse, and recycling of products at the end of their useful lives. Consumers must be responsible for ensuring that products at end-of-life are routed to the proper collection system. The Solid Waste Policy Report includes recommendations to the Minnesota Legislature to create new laws with requirements for manufacturers and other parties that have a role in the cycle of commerce for the products and materials in question. SCORE and LRDG funds are provided to counties for recycling programs and to support waste reduction and management of household hazardous wastes and problem materials. This funding is often passed through to cities and associated programs. The costs of curbside collection are determined by haulers. However, fees and taxes are placed on trash to support recycling, organics, and reuse programs. Organized collection systems have greater power to set volume-based costs for residents. The plan advocates for communities that have not yet done so to transition to organized collection.
Michele Fluhr Fraser	Resident	https://scs-public.s3-us-gov-west-1.amazonaws.com/env_production/oid333/did200071/pid_206566/assets/merged/sy0lam_document.pdf	Minnesota has some of the best recycling rates in the nation. There are many systems and requirements in place that assure the materials in resident bins are routed to their intended place. MN statute 115A.95 does not allow for haulers to deliver source-separated recyclable materials to a disposal facility unless the MPCA determines that no other recycling options are available. The plan includes education requirements that should help create more informed residents. The plan prioritizes reuse and reusable water bottles are a great substitute for throw-away bottles.
Molly Libra	Resident	https://scs-public.s3-us-gov-west-1.amazonaws.com/env_production/oid333/did200071/pid_206566/assets/merged/im0gldv_document.pdf	MPCA received many comments of concern about the continued operation of the Hennepin Energy Recovery Center. We have re-examined our approach to the waste-to-energy (WTE) section of the plan. Changes include a comparison of the impacts of WTE and landfills and acknowledgement of the possible closure that will be determined by the Hennepin County Board. It is critical to ensure that large infrastructure decisions are being made with consideration to environmental and environmental justice impacts. MPCA supports minimizing disposal options of WTE and landfill as much as possible and the plan focuses on waste reduction, recycling, and composting to meet the 75% goal. Cumulative air impacts are outside of the scope of this document. Air quality impacts will be addressed as part of the cumulative air impact rule-making effort that is underway. The 5% waste reduction goal references the total generation of waste. Despite our best efforts, consumption influences waste generation. To truly be successful in waste reduction, upstream policies must be put into place by the MN Legislature that result in fewer materials being generated. The 75% goal is determined by state statute as the disposal avoidance goal and MPCA intends to aggressively push for improvement in all areas that are feasible. The plan includes required strategies for counties to reduce and divert food waste, launch bi-annual sustainable consumption challenges for residents, and to implement a formal county sustainable purchasing policy. There are also strategies to support reuse and repair through volunteer program, outreach, and grants. Thank you for your feedback.
Nadine Teisberg	Resident	https://scs-public.s3-us-gov-west-1.amazonaws.com/env_production/oid333/did200071/pid_206566/assets/merged/ma0kim_k_document.pdf	MPCA received many comments of concern about the continued operation of the Hennepin Energy Recovery Center. We have re-examined our approach to the waste-to-energy (WTE) section of the plan. Changes include a comparison of the impacts of WTE and landfills and acknowledgement of the possible closure that will be determined by the Hennepin County Board. It is critical to ensure that large infrastructure decisions are being made with consideration to environmental and environmental justice impacts. MPCA supports minimizing disposal options of WTE and landfill as much as possible and the plan focuses on waste reduction, recycling, and composting to meet the 75% goal. Cumulative air impacts are outside of the scope of this document. Air quality impacts will be addressed as part of the cumulative air impact rule-making effort that is underway. Thank you for your feedback.
Nan Roberts	Resident	https://scs-public.s3-us-gov-west-1.amazonaws.com/env_production/oid333/did200071/pid_206566/assets/merged/jc0gi7n_document.pdf	Extended producer responsibility laws have been shown to be a very effective tool to achieve the following, provided the right incentives and requirements are included in the EPR legal framework: Influence manufacturer design to improve recyclability, repair and reuse; Reduce material use and toxicity; Improve recovery for reuse, repair and recycling; Help create a sustainable and circular economy for the materials and products covered by specific EPR requirements; Manufacturers and others along the product chain share in the financial and physical responsibility for collection, reuse, and recycling of products at the end of their useful lives. This includes the role for consumers that must be responsible for ensuring that end-of-life products get into the collection system that's provided. In order for Minnesota to utilize this type of program, the Minnesota Legislature would have to create new laws with requirements for manufacturers and other parties that have a role in the cycle of commerce for the products and materials in question. Packaging: The Partnership on Waste and Energy (Hennepin, Ramsey, Washington), are working on issues raised by MPP commenters regarding the need to address quantities, types, and management of packaging materials. Compostable packaging: EPR can provide a better pathway for compostable packaging to be collected and directed to a commercial composting facility. Packaging labeling: EPR can require proper labeling for reuse, recycling, or composting. MPCA is working in collaboration with DNR and local governments to create a cohesive plan for wood waste management. The plan has been modified to be inclusive of other tree disease issues, such as Oak Wilt. Wood waste is expected to increase and will require collaboration to find upstream solutions. Planning will be required to avoid open burning. Organized collection systems provide many overall benefits to residents if implemented properly. MPCA views the establishment of an organized collection system as a local decision and therefore, this strategy will remain optional. The plan calls for residential curbside organics collection to be required region-wide in cities greater than 5,000. MPCA agrees that it must be more convenient for people to participate in greater numbers. The plan includes a strategy to diversify and expand mobile collection sites for household hazardous waste. The plan includes many waste reduction strategies that incorporate financial incentives. This is a significant contributor to our waste system and has long been considered inert, which we now know to be false. Setting up systems to reuse a greater amount of building materials would reduce the amount of useful materials that are otherwise wasted. Websites that facilitate the free exchange of goods remove many barriers to waste reduction. Household hazardous waste collection centers are located throughout the metro area. Residents of any county may visit any of these locations to dispose of items not collected in curbside programs.
Nancy Williams	Resident	https://scs-public.s3-us-gov-west-1.amazonaws.com/env_production/oid333/did200071/pid_206566/assets/merged/kp0mi1_g_document.pdf	This plan seeks to manage waste and materials at their highest and best use. Strategies to encourage restaurants to adopt a system of reuse is the main goal.
Nathan Wunrow	Resident	https://scs-public.s3-us-gov-west-1.amazonaws.com/env_production/oid333/did200071/pid_206566/assets/merged/jw0mir_d_document.pdf	Most of the waste-to-energy facilities are exempt from the Carbon-Free by 2040 bill. HERC is the one facility that is not exempt from the bill.
Nell Pierce	Resident	https://scs-public.s3-us-gov-west-1.amazonaws.com/env_production/oid333/did200071/pid_206566/assets/merged/tw01iiv_document.pdf	MPCA received many comments of concern about the continued operation of the Hennepin Energy Recovery Center. We have re-examined our approach to the waste-to-energy (WTE) section of the plan. Changes include a comparison of the impacts of WTE and landfills and acknowledgement of the possible closure that will be determined by the Hennepin County Board. It is critical to ensure that large infrastructure decisions are being made with consideration to environmental and environmental justice impacts. MPCA supports minimizing disposal options of WTE and landfill as much as possible and the plan focuses on waste reduction, recycling, and composting to meet the 75% goal. Cumulative air impacts are outside of the scope of this document. Air quality impacts will be addressed as part of the cumulative air impact rule-making effort that is underway. The 5% waste reduction goal references the total generation of waste. Despite our best efforts, consumption influences waste generation. To truly be successful in waste reduction, upstream policies must be put into place by the MN Legislature that result in fewer materials being generated. The 75% goal is determined by state statute as the disposal avoidance goal and MPCA intends to aggressively push for improvement in all areas that are feasible. The plan includes required strategies for counties to reduce and divert food waste, launch bi-annual sustainable consumption challenges for residents, and to implement a formal county sustainable purchasing policy. There are also strategies to support reuse and repair through volunteer program, outreach, and grants. MPCA is still learning how best to engage with impacted communities with our planning processes and there is a long way to go to get the levels of engagement that we'd like. However, MPCA received six times the comments received for the prior plan. Most of these comments were from community members rather than our usual industry/county contacts. MPCA will continue to improve community outreach, but we are pleased with the progress made between this plan and the prior plan. Thank you for your feedback.

Name	Affiliation	Comment	Response
Nick Klisch	Cottonwood County	https://scs-public.s3-us-gov-west-1.amazonaws.com/env_production/oid333/did200071/pid_206566/assets/merged/w806in8_document.pdf	MPCA supports the waste hierarchy and values the role of waste-to-energy in the system. Due to the unfolding events in Hennepin County, MPCA re-examined our approach to the waste-to-energy section of the plan. Included in those changes is a comparison of the impacts of waste-to-energy and landfills and acknowledgement of the possible closure that will be determined by the Hennepin County Board. It is critical to ensure that there is a good plan in place when large infrastructure decisions occur to ensure that waste is managed with the least environmental impact. MPCA supports minimizing disposal options (WTE and landfill) as much as possible and the plan focuses on waste reduction, recycling, and composting in an effort to meet the 75% goal.
Pam Bain	Resident	https://scs-public.s3-us-gov-west-1.amazonaws.com/env_production/oid333/did200071/pid_206566/assets/merged/fd05iqe_document.pdf	Minnesota Statute 115A.93 Subd. 3 prohibits haulers from imposing a greater charge on residents who recycle than on residents who do not recycle. The plan includes a strategy to diversify and expand mobile collection sites for household hazardous waste and bulky items. Organics recycling curbside collection requirements are included in this plan as well.
Pam Peterson	Resident	https://scs-public.s3-us-gov-west-1.amazonaws.com/env_production/oid333/did200071/pid_206566/assets/merged/gc0qif9_document.pdf	Organized collection (the city contracts with one hauler) has numerous benefits and can lower costs for all types of service (i.e., MSW, recycling, organics) to residents of a community. Contract for residential recycling and organics by 2030 is an optional strategy in the plan.
Pat Medford	Resident	https://scs-public.s3-us-gov-west-1.amazonaws.com/env_production/oid333/did200071/pid_206566/assets/merged/ja02lqx_document.pdf	Available science does not suggest that separating dry and wet waste would provide beneficial results. However, the MPCA agrees that all recoverable material should be diverted from disposal for recycling and composting. Keeping organics and slimy waste out of the trash, could help with pulling additional recycling from the waste stream on the back end.
Paul Gardner	Resident	https://scs-public.s3-us-gov-west-1.amazonaws.com/env_production/oid333/did200071/pid_206566/assets/merged/c50b9y_document.pdf	Extended producer responsibility laws have been shown to be a very effective tool to achieve the following, provided the right incentives and requirements are included in the EPR legal framework: • Influence manufacturer design to improve recyclability, repair and reuse • Reduce material use and toxicity • Improve recovery for reuse, repair and recycling • Help create a sustainable and circular economy for the materials and products covered by specific EPR requirements • Manufacturers and others along the product chain share in the financial and physical responsibility for collection, reuse, and recycling of products at the end of their useful lives. This includes the role for consumers that must be responsible for ensuring that end-of-life products get into the collection system that's provided. In order for Minnesota to utilize this type of program, the Minnesota Legislature would have to create new laws with requirements for manufacturers and other parties that have a role in the cycle of commerce for the products and materials in question.
Peter Butler	Resident	https://scs-public.s3-us-gov-west-1.amazonaws.com/env_production/oid333/did200071/pid_206566/assets/merged/dk0qim9_document.pdf	The costs of curbside collection are determined by haulers. However, fees and taxes are placed on trash to support recycling, organics, and reuse programs. Organized collection systems have greater power to set volume-based costs for residents. The plan advocates for communities that have not yet done so to transition to organized collection. Minnesota Statute 115A.9301 requires that larger volume containers must cost more than small containers, but the difference in cost is not outlined. Overtime, pay-as-you-throw systems have been shown to reduce the total amount of waste.
Rachel Jongeward	City of Saint Paul Parks & Recreation Department/Forestry	https://scs-public.s3-us-gov-west-1.amazonaws.com/env_production/oid333/did200071/pid_206566/assets/merged/zb05i17_document.pdf	Wood waste is expected to increase and will require collaboration to find upstream solutions. MPCA is working in collaboration with DNR and local governments to create a cohesive plan for wood waste management. Existing wood yards are often inundated with materials and the absence of a tip fee may not be feasible as more wood material is introduced. We will be looking to the county solid waste plans to propose solutions for supporting the continued operation of wood yards within their counties. The plan has been modified to be inclusive of other tree disease issues, such as Oak Wilt. As this plan is a roadmap for county solid waste plans, the wood burning ordinance strategy is for counties to review and update open burning ordinances they have. Counties may require cities to do the same. MPCA staff will work with counties on their solid waste plans and will evaluate if the inclusion of certain optional strategies are realistic and feasible. As the language of the wood waste section was revised to be inclusive of tree diseases and insect infestations, tree maintenance and treatment has a more solid role in supporting tree cover and reducing wood waste. The strategy to allow for assessments on property taxes is an optional strategy. We trust that counties will only include this if there is community buy-in for this approach.
Rachel Lindholm	City of Richfield	https://scs-public.s3-us-gov-west-1.amazonaws.com/env_production/oid333/did200071/pid_206566/assets/merged/kq0xi10_document.pdf	The draft plan did not include strategies for multi-family housing. Strategies for multi-family recycling, organics recycling, and reduction have been added to the final plan. The plan includes a strategy for the management of organics recycling from large commercial food generators by 2030. It was optional in the draft and has been changed to required, based on public comments. Continuous end market development is paramount to a functional recycling system. The MPCA has been working to develop local end markets since the 1990's and continues to look for ways to strengthen local markets for recyclables. Minnesota has good, stable end markets for recyclable materials because of the investments made over the last 30+ years. Recycling is important to Minnesota's local economy. Overall, recycling helps support nearly 78,000 jobs in Minnesota. Over 330 manufacturers in Minnesota use recycled material in their products. In the 1990's private companies and the public sector made investments in the recycling system to make recycling more desirable. When overseas markets closed their borders to recyclable materials in 2017, Minnesota companies made even more investments to make sure material was clean and ready for end markets. Cleaner material and less contamination in bales of recyclable material mean companies will buy Minnesota's recyclable material over others and at a better price. Interested parties have raised many concerns about the undue burden weekly recycling would have on their operations. Accordingly, this now appears in the plan as an optional strategy. The most effective way to reduce waste is to not create it in the first place. Making a new product emits greenhouse gases that contribute to climate change and requires a lot of materials and energy - raw materials must be extracted from the earth, and the product must be fabricated then transported to wherever it will be sold. As a result, reduction and reuse are the most effective ways you can save natural resources, protect the environment, and save money. Source separation is the best way to recover materials and to ensure the highest value of those materials. However, despite our best efforts, human behavior is unpredictable. Preprocessing can recover additional recyclables, especially metals. The cost of collection is the primary driver of cost to residents, but historically tip fees have not been the driver for cost. The plan has been modified to extend the timeline to allow facilities and counties time to plan. We have considered bans on various materials over time, but often bans are not effective for materials that are easily hidden in garbage bags. They work quite well for large items like televisions because those can be diverted at the tip floor of facilities. The plan has been amended to allow counties to provide alternative strategies. For required strategies, proposals must achieve comparable objectives. For optional strategies, counties should work with their PCA solid waste planner to determine the point value of the alternative strategy. Partner organizations are identified when they can contribute to the effectiveness of a strategy. The organics section of the plan has been edited to include MNCC. MPCA is working in collaboration with DNR and local governments to create a cohesive plan for wood waste management. The plan has been modified to be inclusive of other tree disease issues, such as Oak Wilt. Wood waste is expected to increase and will require collaboration to find upstream solutions. Planning will be required to avoid open burning. In 2019, the Minnesota Environmental Quality Board prepared an Emerald Ash Borer report with coordination from several state agencies. It can be found at this link. Emerald Ash Borer (EAB) Minnesota Environmental Quality Board (state.mn.us)
Rachel Wormer	Resident	https://scs-public.s3-us-gov-west-1.amazonaws.com/env_production/oid333/did200071/pid_206566/assets/merged/f40yic9_document.pdf	MPCA received many comments of concern about the continued operation of the Hennepin Energy Recovery Center. We have re-examined our approach to the waste-to-energy (WTE) section of the plan. Changes include a comparison of the impacts of WTE and landfills and acknowledgement of the possible closure that will be determined by the Hennepin County Board. It is critical to ensure that large infrastructure decisions are being made with consideration to environmental and environmental justice impacts. MPCA supports minimizing disposal options of WTE and landfill as much as possible and the plan focuses on waste reduction, recycling, and composting to meet the 75% goal. Cumulative air impacts are outside of the scope of this document. Air quality impacts will be addressed as part of the cumulative air impact rule-making effort that is underway. Thank you for your feedback.

Name	Affiliation	Comment	Response
Randy Cameron	Resident	https://scs-public.s3-us-gov-west-1.amazonaws.com/env_production/oid333/did200071/pid_206566/assets/merged/8f0961_document.pdf	The Hennepin County HHW drop-off facilities in Bloomington and Brooklyn Park accept cast iron sinks. The reciprocal use agreement among the metro counties allows residents of any county to use any of the 7-metro county sites. The MPCA website has a list of 450 medication collection sites with a site locator: https://www.pca.state.mn.us/news-and-stories/dont-flush-medicines-down-the-drain Prescription drugs can also be discarded in the trash. The label should be removed and the contents should be made unappealing by adding something inedible such as cat litter to the bottle. Your county, city, and hauler can provide resources for understanding how to use your curbside collection properly.
Rebecca Boyer	Resident	https://scs-public.s3-us-gov-west-1.amazonaws.com/env_production/oid333/did200071/pid_206566/assets/merged/jr0312n_document.pdf	While drop-off sites have served some, MPCA agrees that it must be more convenient for people to participate in greater numbers. The plan requires residential curbside organics collection region-wide in cities greater than 5,000. If your home is in a city with a population of at least 5,000, this service will be available to you within the timeframe of this plan.
Rebecca Gaida	Resident	https://scs-public.s3-us-gov-west-1.amazonaws.com/env_production/oid333/did200071/pid_206566/assets/merged/5q0uiq1_document.pdf	MPCA agrees that it must be more convenient for people to participate in composting in greater numbers. The plan calls for residential curbside organics collection to be required region-wide in cities greater than 5,000. Many counties offer organics drop-off sites, which have been successful at capturing food waste for households without curbside collection. Planning and establishing additional drop-off sites for the collection of organics recycling has been added as an optional strategy to the plan. Fix-it clinics are effective at reducing waste by extending the life of existing items. Strategies to promote repair include establishing a Repair Ambassador program, bi-annual sustainable consumption challenges for residents, requiring a formal county sustainable purchasing policy that prioritizes reparability of goods, and grants that support repair operations. Thank you for your support of strategies that promote reuse and repair. County environmental centers and household hazardous waste (HHW) drop-off sites expand the scope of materials accepted based on a variety of factors. Some items require a fee for disposal due to the cost of safely disassembling and disposing of certain materials. Another approach is to establish disposal fees at the time of purchase, requiring legislative regulation. Thank you for your support of some of our most impactful strategies. We appreciate the feedback. The single-use container fee is an optional strategy that counties may choose to add to their plans. We will look to the counties to select an approach that will best serve the needs of their residents. Counties will be required to offer grants or rebates for organizations to transition to reusable food and beverage service ware.
Regina Kurandina	Resident	https://scs-public.s3-us-gov-west-1.amazonaws.com/env_production/oid333/did200071/pid_206566/assets/merged/m30411_document.pdf	The plan calls for residential curbside organics collection to be required region-wide in cities greater than 5,000. MPCA agrees that it must be more convenient for people to participate in greater numbers. Recycled Textiles (SMART) Association estimates that about half of new clothing end up donated. Of the clothing that is donated, about 20% are sold in reuse outlets, 25% are shipped overseas, 50% are used as absorbents/rags/stuffing, and about 5% head to landfills or WTE facilities. That means that over half of all textiles end up in the garbage. For a material to be recycled, it needs to be used to create a new product. Fast fashion has resulted in an onslaught of low-quality textiles that have no reuse nor recycling value. Durable textiles made from natural fibers and extending the life via proper care and repair can help reduce personal impact. Many of our metro counties have recycling ambassador programs. If your county has a program, you may sign up for the 6-week training, which will prepare you to volunteer at community events. MPCA is working in collaboration with DNR and local governments to create a cooperative plan for wood waste management. The plan has been modified to be inclusive of other tree disease issues, such as Oak Wilt. Wood waste is expected to increase and will require collaboration to find upstream solutions. The plan includes strategies to avoid open burning, incentivize treatment, and ease the financial burden on homeowners. Removing barriers to recycling and composting is the goal. The plan includes strategies for this and we'll look to the metro counties to develop solutions that are effective for their residents. Most of the TCMA counties have a Recycling Ambassador program that uses volunteers to help people recycle more effectively. We are sure they would love to have you as a volunteer.
Richard Olson	Resident	https://scs-public.s3-us-gov-west-1.amazonaws.com/env_production/oid333/did200071/pid_206566/assets/merged/x60q4n_document.pdf	Reducing waste is a keystone theme in this plan. Replacing single-use containers with reusable containers is an effective way to reduce waste. We encourage counties to address solutions to reduce reliance on single-use waste through several optional strategies.
Robert LeClaire	Resident	https://scs-public.s3-us-gov-west-1.amazonaws.com/env_production/oid333/did200071/pid_206566/assets/merged/ok021qg_document.pdf	Children can be powerful change agents, encouraging their families to properly use curbside collection services. The plan addresses several strategies to increase education and outreach. While this strategy won't eliminate contamination, it should help to increase proper disposal among residents. MPCA received many comments of concern about the continued operation of the Hennepin Energy Recovery Center. We have re-examined our approach to the waste-to-energy (WTE) section of the plan. Changes include a comparison of the impacts of WTE and landfills and acknowledgement of the possible closure that will be determined by the Hennepin County Board. It is critical to ensure that large infrastructure decisions are being made with consideration to environmental and environmental justice impacts. MPCA supports minimizing disposal options of WTE and landfill as much as possible and the plan focuses on waste reduction, recycling, and composting to meet the 75% goal. Cumulative air impacts are outside of the scope of this document. Air quality impacts will be addressed as part of the cumulative air impact rule-making effort that is underway. MPCA is able to issue CON as needed and does not need a no-HERC scenario in the Plan to issue future CON. Organics recycling is easily contaminated by even the well-intentioned individuals. Strategies to expand organics collection work best when paired with education, outreach, and guidance. The Minnesota State Legislature has enacted laws to maintain the integrity of the recycling system. MN Statute 115A.95 was written to ensure that once material is collected for recycling, it must be taken to a recycling processing facility or end market. This law prohibits material that is collected as recycling from being taken to a landfill. This ensures that once material is collected for recycling, it is getting recycled. In addition, Minnesota imposes a solid waste tax on every ton of solid waste disposed. Counties also impose a separate solid waste tax if material is disposed of in their county. Minnesota does not tax material that is taken to a recycling facility. If the facility exceeds 15% residual, the residual is subject to the solid waste management tax. Most facilities stay below that rate meaning that more than 85% of what is collected goes to new products. In the 1990s private companies and the public sector made investments in the recycling system to make recycling more desirable. When overseas markets closed their borders to recyclable materials in 2017, Minnesota companies made even more investments to make sure material was clean and ready for end markets. Cleaner material and less contamination in bales of recyclable material mean companies will buy Minnesota's recyclable material over others and at a better price. Minnesota has good, stable end markets for recyclable materials because of the investments made over the last 30+ years. Recycling is important to Minnesota's local economy. Overall, recycling helps support nearly 78,000 jobs in Minnesota. Over 330 manufacturers in Minnesota use recycled material in their products.
Robert Sieber	Resident	https://scs-public.s3-us-gov-west-1.amazonaws.com/env_production/oid333/did200071/pid_206566/assets/merged/op0sklt_document.pdf	Educational requirements appear throughout the plan, most importantly a requirement for counties to standardize these messages. Our metro counties are tasked with assuring that information reaches all their residents. HHW sites are located in every metro county and accept all the materials you mention. Public space collection of waste that requires sorting has always been a challenge. However, resources exist that could help. We will work with our metro counties on their plans to assure we are regionally improving public education.
Rochelle Michel	Resident	https://scs-public.s3-us-gov-west-1.amazonaws.com/env_production/oid333/did200071/pid_206566/assets/merged/200licl_document.pdf	As a school administrator, MPCA encourages you to work with your county and city to explore existing programs and funding opportunities.
Ruth Shaw	Resident	https://scs-public.s3-us-gov-west-1.amazonaws.com/env_production/oid333/did200071/pid_206566/assets/merged/a40widv_document.pdf	MPCA received many comments of concern about the continued operation of the Hennepin Energy Recovery Center. We have re-examined our approach to the waste-to-energy (WTE) section of the plan. Changes include a comparison of the impacts of WTE and landfills and acknowledgement of the possible closure that will be determined by the Hennepin County Board. It is critical to ensure that large infrastructure decisions are being made with consideration to environmental and environmental justice impacts. MPCA supports minimizing disposal options of WTE and landfill as much as possible and the plan focuses on waste reduction, recycling, and composting to meet the 75% goal. Cumulative air impacts are outside of the scope of this document. Air quality impacts will be addressed as part of the cumulative air impact rule-making effort that is underway. Thank you for your feedback.

Name	Affiliation	Comment	Response
Ryan O'Gara	SKB Waste Connections	https://scs-public.s3-us-gov-west-1.amazonaws.com/env_production/oid333/did200071/pid_206566/assets/merged/eo0ki90_document.pdf	Contamination is a serious issue plaguing the recycling stream. The plan focuses on education strategies. This issue will require several solutions and preprocessing can play an important role. Source separation is the best way to recover materials and to ensure the highest value of those materials. However, despite our best efforts, human behavior is unpredictable. Preprocessing can recover additional recyclables, especially metals. The cost of collection is the primary driver of cost to residents, but historically tip fees have not been the driver for cost. The plan has been modified to extend the timeline to allow for facilities and counties to plan. In addition, the plans states that pre-processing needs to happen, not that it must be done at each location. Weekly recycling collection was identified as a strategy that would be costly. In response, this strategy was moved from required to optional.
Sabrina Thompson	Resident	https://scs-public.s3-us-gov-west-1.amazonaws.com/env_production/oid333/did200071/pid_206566/assets/merged/dw06iin_document.pdf	A state-wide bag fee would require a legislative change.
Sandra Dascalos	Resident	https://scs-public.s3-us-gov-west-1.amazonaws.com/env_production/oid333/did200071/pid_206566/assets/merged/r8opi8x_document.pdf	Resident education is addressed in this plan with a strategy that calls for a commitment to standardized outreach and education. We agree that the messaging reaching residents should be easy to understand. Piecemeal efforts by counties, cities, haulers, and other organizations are rarely collaboratively developed and therefore can lead to confusion over what materials can be recycled or composted. Assuring a consistent message from those within the solid waste system would help bring clarity to the users of the system. Strategies to promote repair include establishing a Repair Ambassador program, bi-annual sustainable consumption challenges for residents, requiring a formal county sustainable purchasing policy that prioritizes repairability of goods, and grants that support repair operations. Thank you for your support of strategies that promote reuse and repair.
Sandra Wolfe wood	Resident	https://scs-public.s3-us-gov-west-1.amazonaws.com/env_production/oid333/did200071/pid_206566/assets/merged/pp0xipr_document.pdf	MPCA received many comments of concern about the continued operation of the Hennepin Energy Recovery Center. We have re-examined our approach to the waste-to-energy (WTE) section of the plan. Changes include a comparison of the impacts of WTE and landfills and acknowledgement of the possible closure that will be determined by the Hennepin County Board. It is critical to ensure that large infrastructure decisions are being made with consideration to environmental and environmental justice impacts. MPCA supports minimizing disposal options of WTE and landfill as much as possible and the plan focuses on waste reduction, recycling, and composting to meet the 75% goal. Cumulative air impacts are outside of the scope of this document. Air quality impacts will be addressed as part of the cumulative air impact rule-making effort that is underway. The 5% waste reduction goal references the total generation of waste. Despite our best efforts, consumption influences waste generation. To truly be successful in waste reduction, upstream policies must be put into place by the MN Legislature that result in fewer materials being generated. The 75% goal is determined by state statute as the disposal avoidance goal and MPCA intends to aggressively push for improvement in all areas that are feasible. The plan includes required strategies for counties to reduce and divert food waste, launch bi-annual sustainable consumption challenges for residents, and to implement a formal county sustainable purchasing policy. There are also strategies to support reuse and repair through volunteer program, outreach, and grants. Thank you for your feedback.
Sara Hollie	Ramsey County	https://scs-public.s3-us-gov-west-1.amazonaws.com/env_production/oid333/did200071/pid_206566/assets/merged/og0bidi_document.pdf	Thank you for your support of this plan and for the clarifications you provided. Counties are required to complete an environmental justice review when developing their own solid waste plans. The requirements are laid out in Appendix B. With the addition of multi-family strategies in the plan, we believe this supports a solid waste system that strives for fair treatment and meaningful involvement of all people. The plan has been amended to allow for counties to propose optional strategies. We encourage all our metro counties to propose strategies that would directly address environmental justice. Thank you for calling attention to the importance of being mindful of the words we choose. We have amended to plan to replace the words identified in your letter. The plan went through a plain language review to increase accessibility. Based on comments received, it's clear that the MPCA needs to play a role in creating regional consistency. As the leading state agency, MPCA is committed to coordinating and facilitating regional meetings to discuss solid waste issues. The counties are responsible for submitting data to MPCA in a timely matter. Ultimately, the counties have a responsibility to ensure that their data sources provide information when needed. MPCA provides facility data to counties as soon as it is available after the March 1st deadline. Wood waste is expected to increase and will require collaboration to find upstream solutions. MPCA is working in collaboration with DNR and local governments to create a cohesive plan for wood waste management. The Environmental Quality Board released the Emerald Ash Borer in Minnesota report in 2019. This report provides many strategies that were incorporated into this plan. Existing wood yards are often inundated with materials and the absence of a tip fee may not be feasible as more wood material is introduced. We will be looking to the county solid waste plans to propose solutions for supporting the continued operation of wood yards within their counties. The plan has been modified to be inclusive of other tree disease issues, such as Oak Wilt. As this plan is a roadmap for county solid waste plans, the wood burning ordinance strategy is for counties to review and update open burning ordinances they have. MPCA promotes the use of compost to MNDOT and enterprise wide. Food-derived compost requirements in some metro counties and cities has bolstered markets. The region's food waste can have a beneficial use in metro construction projects. MPCA must promote robust markets for compost. One avenue is through partnerships with other state agencies. However, the MNDOT specification may not be the right tool for a statewide market development strategy for food-derived compost. In much of Greater Minnesota, food-derived compost is not established. Facilities and compost sites may be remote. Current MNDOT specifications do allow for use of food-derived compost. However, requiring only food-derived compost statewide is not currently feasible. The volume of compost used under MNDOT specifications exceeds the supply of food-derived compost. Additionally, some projects are located far from sources of food-derived compost. These statewide specifications must be achievable through a variety of feedstocks. MPCA has been working with the Departments of Agriculture and Health to create content for inspectors to educate licensed facilities about financial assistance, donation, and opportunities to reduce wasted food. The plan has been revised to include the MPCA's commitment to continue work with partner agencies on improved food rescue and prevention efforts. A strategy encouraging county engagement with health inspectors in individual county plans will remain in the plan to help accelerate adoption of the practice but will not be required. Points were awarded to strategies based on its place on the waste hierarchy and our best estimate of the level of difficulty. We appreciate the feedback on this strategy's point value and have adjusted it accordingly. As mentioned above, counties may propose optional strategies when developing their solid waste plans. Rulemaking for AD facilities has not yet occurred at the MPCA. Existing rules for similar facilities accepting similar materials exist, but we acknowledge that rules specific to AD facilities would be useful. The MPCA is working to incorporate our use to SMM and lifecycle analysis in our approach to emerging technology. While the waste hierarchy is a useful tool, we acknowledge it may be limited in its ability to assess the nuance of complicated and novel technologies.
Shane McCaldran	Hennepin CRA	https://scs-public.s3-us-gov-west-1.amazonaws.com/env_production/oid333/did200071/pid_206566/assets/merged/a90xih0_document.pdf	MPCA has added strategies to the plan to address multi-family housing units.
Sharon Hansen	Resident	https://scs-public.s3-us-gov-west-1.amazonaws.com/env_production/oid333/did200071/pid_206566/assets/merged/el0ilhi_document.pdf	A fee or ban on bags can be an effective strategy to reduce single-use bags from the solid waste system. Those are instituted at a city-level through the passage of an ordinance. Minnesota charges a solid waste management tax for trash. It is 9.75% of the sales price for residential waste and 17% for self-haul and commercial. Recycling and composting are tax-exempt to support those services and encourage participation in those programs. MPCA advises the MN Legislature in the Solid Waste Policy Report to implement a statewide deposit refund program. TCMA residents are able to use any household hazardous waste drop-site in any 7-metro county. The plan also calls to expand access via temporary drop-sites that rotate and cater to different areas throughout each county.
Sheree' Bochenek	Resident	https://scs-public.s3-us-gov-west-1.amazonaws.com/env_production/oid333/did200071/pid_206566/assets/merged/tu0dai5_document.pdf	A fee can be an effective strategy to reduce single-use bags from the solid waste system. Those are instituted at a city-level through the passage of an ordinance. Exposing e-waste to weather could result in transporting contaminants via stormwater and reduced usability of components/materials. These items are accepted at all HHW sites throughout the 7-county metro. All household hazardous waste (HHW) sites throughout the metro collect batteries and plastics (1, 2, and 5). Curbside collection of textiles has been discontinued by municipal programs due to the exposure to weather. Textiles must be dry and clean for both reuse and recycling. The Secondary Materials and Recycled Textiles (SMART) Association estimates that about half of new clothing end up donated. Of the clothing that is donated, about 20% are sold in reuse outlets, 25% are shipped overseas, 50% are used as absorbents/rags/stuffing, and about 5% head to landfills or WTE facilities. That means that over half of all textiles end up in the garbage. For a material to be recycled, it needs to be used to create a new product. Fast fashion has resulted in an onslaught of low-quality textiles that have no reuse nor recycling value. Durable textiles made from natural fibers and extending the life via proper care and repair can help reduce personal impact. If a partnership with a private company like Ridwell can help counties to divert more materials from landfills and WTE facilities at a price that isn't burdensome to residents, the MPCA supports that approach. The MPCA cannot require stores to post signs that remind customers to bring along bags. However, customers can request this of management at stores. Trader Joe stores have a reminder sign.

Name	Affiliation	Comment	Response
Sherri Nichols	Resident	https://scs-public.s3-us-gov-west-1.amazonaws.com/env_production/oid333/did200071/pid_206566/assets/merged/740wir_m_document.pdf	Retail drop off is far from ideal, but is currently the best option for plastic film recycling. We can encourage retailers to monitor their collection bins more closely to optimize collection efforts.
Sheryl Lewis	Resident	https://scs-public.s3-us-gov-west-1.amazonaws.com/env_production/oid333/did200071/pid_206566/assets/merged/vm0hit_document.pdf	Collecting bulky items from curbsides is challenging to coordinate and execute. We do encourage counties to follow the lead of several metro cities to establish curbside set-out days for items that can be reused through a strategy.
Soren Stevenson	Resident	https://scs-public.s3-us-gov-west-1.amazonaws.com/env_production/oid333/did200071/pid_206566/assets/merged/520kidl_document.pdf	Minnesota Statute 609.671 subd. 13. outlines the solid waste disposal violations to be enforced by the MPCA. This is outside the scope of this plan and statute. MPCA received many comments of concern about the continued operation of the Hennepin Energy Recovery Center. In response, we have re-examined our approach to the waste-to-energy section of the plan. Included in those changes is a comparison of the impacts of waste-to-energy and landfills and acknowledgement of the possible closure that will be determined by the Hennepin County Board. It is critical to ensure that there is a good plan in place when large infrastructure decisions occur to ensure that waste is managed with the least environmental impact. MPCA supports minimizing disposal options (WTE and landfill) as much as possible and the plan focuses on waste reduction, recycling, and composting in an effort to meet the 75% goal. Cumulative air impact is outside of the scope of this solid waste document. Air quality impacts will be addressed as part of the cumulative air impact rule-making effort that is underway. The costs of curbside collection are determined by haulers. Organized collection can provide cities a chance to negotiate more favorable pricing to incentivize collection of materials higher on the waste hierarchy. Minnesota requires volume-based pricing, so smaller containers are less expensive. However, the current price breaks are not very significant. Larger price breaks have the potential to create a significant incentive. The plan requires residential curbside organics collection to be offered region-wide in cities with populations greater than 5,000. Organics recycling and food scrap programs must be more convenient for people to participate in greater numbers.
Stephani Booker	Resident	https://scs-public.s3-us-gov-west-1.amazonaws.com/env_production/oid333/did200071/pid_206566/assets/merged/pv0zih6_document.pdf	MPCA received many comments of concern about the continued operation of the Hennepin Energy Recovery Center. We have re-examined our approach to the waste-to-energy (WTE) section of the plan. Changes include a comparison of the impacts of WTE and landfills and acknowledgement of the possible closure that will be determined by the Hennepin County Board. It is critical to ensure that large infrastructure decisions are being made with consideration to environmental and environmental justice impacts. MPCA supports minimizing disposal options of WTE and landfill as much as possible and the plan focuses on waste reduction, recycling, and composting to meet the 75% goal. Cumulative air impacts are outside of the scope of this document. Air quality impacts will be addressed as part of the cumulative air impact rule-making effort that is underway. Thank you for your feedback.
Stephanie Abbas	Resident	https://scs-public.s3-us-gov-west-1.amazonaws.com/env_production/oid333/did200071/pid_206566/assets/merged/6y02iaz_document.pdf	Compostable single-use products are a better option than conventional single-use products that cannot be recycled, but reuse is the best option. MPCA will look to counties to interpret or adjust this strategy to achieve the best outcome given their resources and residents. The strategy has been edited to incorporate the successful and vetted aspects of the Minneapolis ordinance. Ramsey County will soon roll out curbside pick-up for food scraps: https://www.ramseycounty.us/residents/recycling-waste/collection-sites/food-scraps . Making this an easier option for residents should increase participation and divert more food waste from landfills.
Steven Bern	Resident	https://scs-public.s3-us-gov-west-1.amazonaws.com/env_production/oid333/did200071/pid_206566/assets/merged/gd0vipd_document.pdf	Burning plastic does produce CO2. Logistically, it would be difficult to divert only plastic to landfills. However, landfills would still allow plastics to degrade, which produces two greenhouse gases, methane and ethylene. The best way to avoid this would be to reduce or ban plastic at it's source entirely, which is outside of the purview of this plan.
Susan J Sperl	Resident	https://scs-public.s3-us-gov-west-1.amazonaws.com/env_production/oid333/did200071/pid_206566/assets/merged/ph0nidw_document.pdf	MPCA received many comments of concern about the continued operation of the Hennepin Energy Recovery Center. We have re-examined our approach to the waste-to-energy (WTE) section of the plan. Changes include a comparison of the impacts of WTE and landfills and acknowledgement of the possible closure that will be determined by the Hennepin County Board. It is critical to ensure that large infrastructure decisions are being made with consideration to environmental and environmental justice impacts. MPCA supports minimizing disposal options of WTE and landfill as much as possible and the plan focuses on waste reduction, recycling, and composting to meet the 75% goal. Cumulative air impacts are outside of the scope of this document. Air quality impacts will be addressed as part of the cumulative air impact rule-making effort that is underway. Thank you for your feedback.
t k readio	Resident	https://scs-public.s3-us-gov-west-1.amazonaws.com/env_production/oid333/did200071/pid_206566/assets/merged/ee0aiek_document.pdf	The Minnesota State Legislature has enacted laws to maintain the integrity of the recycling system. MN Statute 115A.95 was written to ensure that once material is collected for recycling, it must be taken to a recycling processing facility or end market. This law prohibits material that is collected as recycling from being taken to a landfill. This ensures that once material is collected for recycling, it is getting recycled. In addition, Minnesota imposes a solid waste tax on every ton of solid waste disposed. Counties also impose a separate solid waste tax if material is disposed of in their county. Minnesota does not tax material that is taken to a recycling facility. In the 1990's private companies and the public sector made investments in the recycling system to make recycling more desirable. When overseas markets closed their borders to recyclable materials in 2017, Minnesota companies made even more investments to make sure material was clean and ready for end markets. Cleaner material and less contamination in bales of recyclable material mean companies will buy Minnesota's recyclable material over others and at a better price. Minnesota has good, stable end markets for recyclable materials because of the investments made over the last 30+ years. Recycling is important to Minnesota's local economy. Overall, recycling helps support nearly 78,000 jobs in Minnesota. Over 330 manufacturers in Minnesota use recycled material in their products.
Tess Dornfeld	Resident	https://scs-public.s3-us-gov-west-1.amazonaws.com/env_production/oid333/did200071/pid_206566/assets/merged/bs08ioy_document.pdf	MPCA received many comments of concern about the continued operation of the Hennepin Energy Recovery Center. We have re-examined our approach to the waste-to-energy (WTE) section of the plan. Changes include a comparison of the impacts of WTE and landfills and acknowledgement of the possible closure that will be determined by the Hennepin County Board. It is critical to ensure that large infrastructure decisions are being made with consideration to environmental and environmental justice impacts. MPCA supports minimizing disposal options of WTE and landfill as much as possible and the plan focuses on waste reduction, recycling, and composting to meet the 75% goal. Cumulative air impacts are outside of the scope of this document. Air quality impacts will be addressed as part of the cumulative air impact rule-making effort that is underway. The 5% waste reduction goal references the total generation of waste. Despite our best efforts, consumption influences waste generation. To truly be successful in waste reduction, upstream policies must be put into place by the MN Legislature that result in fewer materials being generated. The 75% goal is determined by state statute as the disposal avoidance goal and MPCA intends to aggressively push for improvement in all areas that are feasible. The plan includes required strategies for counties to reduce and divert food waste, launch bi-annual sustainable consumption challenges for residents, and to implement a formal county sustainable purchasing policy. There are also strategies to support reuse and repair through volunteer program, outreach, and grants. Thank you for your feedback.
Thea Ulen	Resident	https://scs-public.s3-us-gov-west-1.amazonaws.com/env_production/oid333/did200071/pid_206566/assets/merged/2f0njp6_document.pdf	Curbside collection of textiles has been discontinued by municipal programs due to the exposure to weather. Textiles must be dry and clean for both reuse and recycling. The Secondary Materials and Recycled Textiles (SMART) Association estimates that about half of new clothing end up donated. Of the clothing that is donated, about 20% are sold in reuse outlets, 25% are shipped overseas, 50% are used as absorbents/rags/stuffing, and about 5% head to landfills or WTE facilities. That means that over half of all textiles end up in the garbage. For a material to be recycled, it needs to be used to create a new product. Fast fashion has resulted in an onslaught of low-quality textiles that have no reuse nor recycling value. Durable textiles made from natural fibers and extending the life via proper care and repair can help reduce personal impact. County HHW drop-off sites and many retail outlets collect clean, dry plastic bags for recycling. Reusable produce bags are a great option if you are looking to reduce your reliance on plastic.

Name	Affiliation	Comment	Response
Thomas Picquet	Resident	https://scs-public.s3-us-gov-west-1.amazonaws.com/env_production/oid333/did200071/pid_206566/assets/merged/gr0k9i1_document.pdf	Extended producer responsibility laws have been shown to be a very effective tool to achieve the following, provided the right incentives and requirements are included in the EPR legal framework: • Influence manufacturer design to improve recyclability, repair and reuse • Reduce material use and toxicity • Improve recovery for reuse, repair and recycling • Help create a sustainable and circular economy for the materials and products covered by specific EPR requirements • Manufacturers and others along the product chain share in the financial and physical responsibility for collection, reuse, and recycling of products at the end of their useful lives. This includes the role for consumers that must be responsible for ensuring that end-of-life products get into the collection system that's provided. In order for Minnesota to utilize this type of program, the Minnesota Legislature would have to create new laws with requirements for manufacturers and other parties that have a role in the cycle of commerce for the products and materials in question. Packaging: The Partnership on Waste and Energy (Hennepin, Ramsey, Washington), are working on issues raised by MPP commenters regarding the need to address quantities, types, and management of packaging materials. Compostable packaging: EPR can provide a better pathway for compostable packaging to be collected and directed to a commercial composting facility. Packaging labeling: EPR can require proper labeling for reuse, recycling, or composting.
Tony Kwilas	Minnesota Chamber of Commerce	https://scs-public.s3-us-gov-west-1.amazonaws.com/env_production/oid333/did200071/pid_206566/assets/merged/3p07fd_document.pdf	Minnesota Statute 473.149 Subd 3 (b) states that revisions to the plan are exempt from rulemaking. The plan includes a robust public comment process, which provides interested parties an opportunity to provide feedback. The vast number of strategies creates a wide range of possible systems/programs. It wouldn't be possible to estimate cost for all outcomes. Metro counties should consider costs of implementation as they draft their County Solid Waste Plans. WasteWise is an important player in the metro area to assist businesses with waste reduction expertise.
Tracy Goetz	Resident	https://scs-public.s3-us-gov-west-1.amazonaws.com/env_production/oid333/did200071/pid_206566/assets/merged/tm0ria1_document.pdf	Styrofoam is difficult to transport and has low market value. These qualities make styrofoam an challenging feedstock for recycling. The plan contains an optional strategy to discourage use of single-use items such as plastic bags.
Whitney Khan	Resident	https://scs-public.s3-us-gov-west-1.amazonaws.com/env_production/oid333/did200071/pid_206566/assets/merged/8029z_document.pdf	Maggots and flies play a very important role in the decomposition process, but the lifecycle from maggot to fly takes 3-4 weeks. Assure that your BPI-compostable bags are tied shut and that your bin is set out every week for pick-up. If maggots continue to be a nuisance, try cleaning your bin with vinegar occasionally. Many waste reduction requirements and suggestions appear in the plan. The incorporation of many different waste reduction approaches will provide the best outcome. The Minnesota State Legislature has enacted laws to maintain the integrity of the recycling system. MN Statute 115A.95 was written to ensure that once material is collected for recycling, it must be taken to a recycling processing facility or end market. This law prohibits material that is collected as recycling from being taken to a landfill. This ensures that once material is collected for recycling, it is getting recycled. In addition, Minnesota imposes a solid waste tax on every ton of solid waste disposed. Counties also impose a separate solid waste tax on material disposed of in their county. Minnesota does not tax material accepted at a recycling facility. In the 1990s, private and public investments in the recycling system made recycling more desirable and viable. When overseas markets closed their borders to recyclable materials in 2017, Minnesota companies made even more investments to make sure material was clean and ready for end markets. Cleaner material and less contamination in bales of recyclable material mean companies will buy Minnesota's recycled feedstock over others and at a better price. Minnesota has good, stable end markets for recyclable materials because of the investments made over the last 30+ years. Recycling is important to Minnesota's local economy. Overall, recycling helps support nearly 78,000 jobs in Minnesota. Over 330 manufacturers in Minnesota use recycled material in their products. Your county, city, and hauler can provide resources for understanding what is and is not recyclable for curbside collection. It can be confusing and the MPCA along with local governments is working on etter education materials.
Darla Evanosky	Resident	https://scs-public.s3-us-gov-west-1.amazonaws.com/env_production/oid333/did200071/pid_206566/assets/merged/o90sij1_document.pdf	MPCA received many comments of concern about the continued operation of the Hennepin Energy Recovery Center. We have re-examined our approach to the waste-to-energy (WTE) section of the plan. Changes include a comparison of the impacts of WTE and landfills and acknowledgement of the possible closure that will be determined by the Hennepin County Board. It is critical to ensure that large infrastructure decisions are being made with consideration to environmental and environmental justice impacts. MPCA supports minimizing disposal options of WTE and landfill as much as possible and the plan focuses on waste reduction, recycling, and composting to meet the 75% goal. Cumulative air impacts are outside of the scope of this document. Air quality impacts will be addressed as part of the cumulative air impact rule-making effort that is underway. Thank you for your feedback.

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Catherine Zimmer MS, BSMT	HEARRT Midwest & Zimmer Environmental Improvement LLC	<p>RE: Comments to the 2023 – 2043 Metropolitan Solid Waste Policy plan (MPP) Dear Mr. Sandhei, Thank you for the opportunity to submit comments to the 2023-2043 Metropolitan Solid Waste Policy plan (MPP). I have worked in, and with, the healthcare sector for almost forty years. Ten to twelve years in nursing and the clinical laboratory and, approximately thirty years providing pollution prevention and waste reduction assistance both at MnTAP and as a consultant. I also was a RCRA inspector for Anoka County for four years. The healthcare sector generates considerable and complicated waste: infectious, hazardous, pathological, pharmaceutical, radioactive and recyclables/solid. According to Practice Greenhealth, a national organization that collects data as part of their awards process, the median hospital solid waste generated is 42 pounds per patient day. The average is 124 pounds per patient day.¹ Seventy to ninety percent of healthcare waste is solid waste; the percentage varies depending on how well the facility is segregating their waste. The majority of the waste is generated in the surgical suites with the bulk of the waste related to packaging, single use personal protective equipment, surgical drapes and instrument wraps. Practice Greenhealth's data indicate approximately 300 pounds of waste is generated per procedure. A great deal of this waste could be reusable. However, healthcare also generates a great deal of waste associated with administration and operation of their facilities, much like other businesses and the hospitality industry. The healthcare sector is also a significant generator of greenhouse gas emissions contributing to 8.5% of the U.S. carbon footprint. The majority of emissions are Scope 3, associated with products used and disposed. This past year, in recognition of the healthcare sector's contribution to climate change, the Biden administration's Health and Human Services' Office of Climate Change and Health Equity encouraged, with a pledge program, the sector to reduce their greenhouse gas emissions 50% by 2030 and achieve net zero by 2050. As you know, source reduction is the best method to minimize waste and greenhouse gases. The EPA's WARM tool estimates for every pound of waste reduced two pounds of greenhouse gases are also reduced.</p> <p>¹ Practice Greenhealth's data is collected from healthcare facilities that have been working to reduce their solid waste as well as facilities that are just starting to work on waste reduction. Those of us working on environmental improvement in the healthcare sector support the MPP's focus on waste reduction, due to the greatly enhanced economic, environmental and public health benefits associated with this practice. I encourage MPCA and county solid waste staff to use both incentives and regulation to move beyond recycling and planning, to implement true source reduction. Locally, a number of metro healthcare systems are working on environmental improvement and have instituted recycling programs and "greening the OR" initiatives. To assist with furthering source reduction efforts, a staff person, with clinical experience, dedicated to supporting the healthcare sector would be very helpful. Also, regulatory incentives such as extended producer responsibility for reduced packaging would also bring desired results for both the healthcare sector and other businesses such as retail. HEARRT Midwest could advise in these efforts. I/we look forward to continuing the conversation and implementing strategies to reduce waste within the healthcare sector and overall. I may be reached at zenllc@usfamily.net or via phone at 651.645.7509. Please note these comments are strictly derived from my knowledge and work with this industry and have not been vetted through HEARRT Midwest's steering committee.</p>	Thank you for your attention to the waste created by healthcare in both operations and administration. The plan includes many source reduction strategies for our metro counties. The MPCA's Solid Waste Policy Report includes a recommendation to the MN Legislature to update and expand EPR laws.
Audua Pugh	MN EJ Table and MCEA	Transcribed verbal comment: Supports improved labeling of hazardous wastes to improve education and communication on proper disposal. Improved collection will also reduce the volume of hazardous material that is improperly disposed of at HERC or elsewhere. Fees should not be charged for hazardous waste disposal. Important not to label neighbors who help collect HHW from other neighbors as HHW facility to allow for accessible service in circumstances where residents don't have vehicles to transport HHW to collection sites.	Properly labeling of hazardous materials is a critical component of educating the public on proper disposal. The MPCA will continue to advocate for mandatory and voluntary efforts for clear and effective labeling paired with supporting education. Extended Producer Responsibility laws can support ongoing operation of household hazardous waste collection programs, while reducing disposal fees for residents. Depending on the quantity, collecting and transporting household quantities of HHW by residents for neighbors typically does not require licensing.
leexx201@gmail.com	Resident	We are having a lot of trouble in Uptown Minneapolis with people (unhoused/homeless) going through alley garbage and making a mess and also the constant churn of renters moving out each month in a neighborhood that is 82% rental—leaving mountains of trash, furniture, you-name-it, in the alleys for the garbage and recycling staff to pick up. I am about to try to encourage more of my neighbors to do organics recycling, which really cut down on our weekly garbage amounts, but not everyone has a container for compostable items (I am going to suggest old ice cream containers or yogurt containers), and the compostable bags are expensive. Plus, now the homeless/unhoused are going through people's garbage looking for food, which creates a huge mess (photo attached—someone went through a resident's garbage and dumped it in the middle of the street, as far as I can tell). But they must not have been very hungry, as they didn't eat the huge piles of French Fries. I'm not sure that I or anyone else on my block is going to have time to read through a 64-page document, but I want to say that there needs to be an organized effort to communicate to Minnesota residents WHERE they can bring items to donate or WHO would be willing to pick them up. The mountains of trash at the end of the months, mostly left by young renters, speak to the fact that unless someone makes it very easy, then electronics, clothes, furniture, will continue to be left in the trash. There need to be more fix-it clinics, particularly in the city's core (why would I drive from Minneapolis to Maple Grove to fix a lamp?) and more money needs to be put into programs that encourage people to repair instead of throwing away. Or perhaps locations where people can drop off items that could be easily repaired and then sold for a program to make money.	All of the 7-county metro HHW drop-off sites are open to residents of any county. Aside from textile recycling, every site will collect the items you listed and many other types of household hazardous waste. The plan includes a strategy to provide additional drop sites or collection events for these items. Curbside collection of textiles has been discontinued by municipal programs due to the exposure to weather. Textiles must be dry and clean for both reuse and recycling. The Secondary Materials and Recycled Textiles (SMART) Association estimates that about half of new clothing end up donated. Of the clothing that is donated, about 20% are sold in reuse outlets, 25% are shipped overseas, 50% are used as absorbents/rags/stuffing, and about 5% head to landfills or WTE facilities. That means that over half of all textiles end up in the garbage. For a material to be recycled, it needs to be used to create a new product. Fast fashion has resulted in an onslaught of low-quality textiles that have no reuse nor recycling value. Durable textiles made from natural fibers and extending the life via proper care and repair can help reduce personal impact. The draft plan did not include strategies for multi-family housing. Strategies for multi-family recycling, organics recycling, and reduction have been added to the final plan. The final plan includes an optional strategy for counties to establish repair ambassador programs. The strategies of the plan seek to reduce barriers to residents to participate in organics recycling. The Ramsey-Washington Food Scraps program provides free compostable bags to residents who wish to participate.
Sheila Sims	Resident	Transcribed verbal comment: Offer more flexibility in how and when comments can be submitted to guide plans or other important decisions. Open ended opportunities would be better than specific deadline dates so input could be provided when community members have input to offer.	MPCA staff welcome public input on plans, projects, permits or other work. Deadlines are needed to ensure agency staff has time to respond to comments before issuing final reports and permits.