



Dakota County, Minnesota

2018-2038 Solid Waste Master Plan

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Acknowledgements

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PART ONE: INTRODUCTION

A. Introduction

The Dakota County 2018-2038 Solid Waste Master Plan (Master Plan) defines Dakota County’s plan for managing waste through 2038, in accordance with the State of Minnesota’s Solid Waste Management Hierarchy (Hierarchy) in preferred order: reduce, reuse, recycle, organics recovery, resource recovery (i.e., waste-to-energy), land disposal. And, with a state focus on organics recovery, this Master Plan is consistent with the U.S. Environmental Protection Agency’s (EPA) Food Waste Recovery Hierarchy (Figure 1) with attention to food waste prevention and food recovery for people.

The Master Plan builds on the strengths of the previous plan and identifies specific strategies to implement the Minnesota Pollution Control Agency’s (MPCA) 2016-2036 Metropolitan Solid Waste Management Policy Plan (Policy Plan). This Master Plan replaces the Solid Waste Master Plan adopted by the Dakota County Board of Commissioners on March 27, 2012.

The Master Plan was revised in accordance with Minn. Stat. §§ 473.803 and 115A, which govern waste management in Minnesota, and require Twin Cities Metropolitan Area (TCMA) counties (Figure 2) to revise their solid waste master plans following the MPCA’s adoption of a revised Policy Plan. The MPCA adopted a revised Policy Plan in April, 2017.

Public meetings, surveys, and a comprehensive stakeholder engagement process informed the Master Plan. Through this process, more than 1,500 residents, business and industry representatives, public entity (city, township, school) officials, and other stakeholders provided 1) input on solid waste issues, barriers, and solutions and 2) feedback on potential strategies to meet the aggressive new recycling goal for TCMA counties in state law and state waste management objectives. See Appendix B for more information on the stakeholder engagement effort.

In addition, the Master Plan aligns with Dakota County’s Strategic Plan goal for “A healthy environment with quality natural areas” that protects and maintains natural resources for the health and enjoyment of current and future residents. The goal reflects Environmental Resources Department’s mission to “Protect, preserve, and enhance the environment for the health, enjoyment, and benefit of current and future generations.”

This Master Plan is consistent with the Policy Plan and will be used to inform the 2040 Dakota County Comprehensive Plan (County Comprehensive Plan) and comprehensive plans for cities in Dakota County.

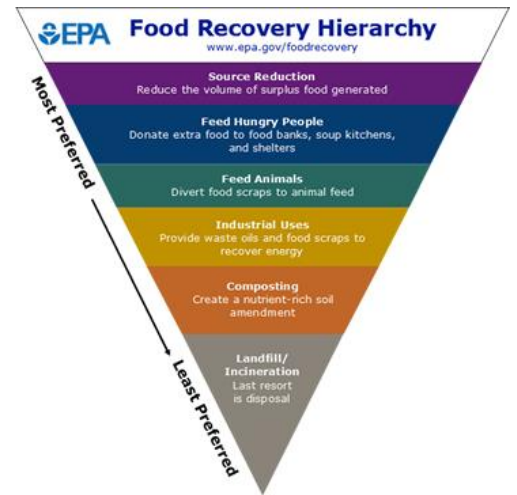


Figure 1: U.S. Environmental Protection Agency’s Food Recovery Hierarchy



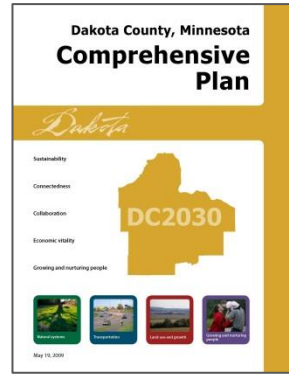
Figure 2: Counties in the Twin Cities Metropolitan Area (TCMA)



Policy Plan

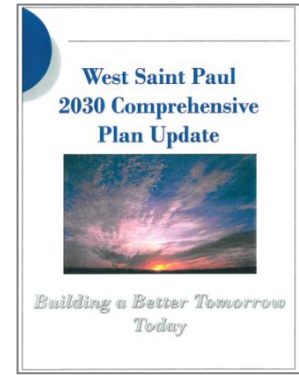


County Master Plan



County Comprehensive Plan

Required update in 2018



City Comprehensive Plan

Required update in 2018

County Comprehensive Plan: The County Comprehensive Plan establishes the long-range vision and high-level guidelines for key systems in Dakota County, including transportation, land use, environment and natural resources, and parks. It is currently under revision. The County Master Plan provides the next level of detail for solid waste management.

City Comprehensive Plans: The Master Plan and County Comprehensive Plan serve as a framework to inform revisions to comprehensive plans for cities in Dakota County. City Comprehensive Plans are also currently under revision.

B. Master Plan Purpose and Framework

Master Plan Purpose

The Master Plan communicates Dakota County's vision, policies, strategies, and tactics for solid waste management over the next twenty years. However, a revision is anticipated in six years following the next Policy Plan revision.

Master Plan Framework

The Master Plan provides a framework for the County, residents, businesses, municipalities, and others to properly manage solid waste; performance measures to assess progress; and reporting mechanisms for accountability. The Master Plan identifies Dakota County's approach to make progress toward Policy Plan objectives and the statutory 75 percent recycling rate goal, and achieve other statutory requirements.

Policy Plan Objectives

The Policy Plan identifies numeric objectives in five-year intervals (Figure 3). The Policy Plan objectives are percentages of total TCMA mixed municipal solid waste (MSW). Percentages generated in 2016 by the TCMA and Dakota County are provided as a comparison and baseline. The Policy Plan did not establish objectives for toxicity reduction or non-Municipal Solid Waste (non-MSW). **All stakeholders, including the MPCA, Dakota County, municipalities, waste generators, and system operators, will be held accountable for meeting these objectives.**

Figure 3: Policy Plan MSW Management System Objectives for the TCMA, 2020 - 2036						
	2016 TCMA	2016 County	2020	2025	2030	2036
Reduction & Reuse	Not measured*	Not measured*	1.5%	3%	4%	5%
Recycling	28%	30%	51%	54%	60%	60%
Organics Recovery	15%	18%	12%	14%	15%	15%
Resource Recovery	30%	11%	35%	31%	24%	24%
Landfilled	27%	41%	2%	1%	1%	1%

*Actual reduction and reuse measures have not yet been defined for measurement and reporting purposes.

Statutory Waste Management Goal and Requirements

The Policy Plan requirements are aggressive and reflect significant statutory changes for the TCMA since the last county master plans were adopted, including: mandatory commercial recycling for certain businesses, an increased recycling rate goal for TCMA counties, a sharps disposal ban, and increased SCORE (Select Committee on Recycling and the Environment) funding to counties with dedicated amounts to be used strictly on organics management.

The Waste Management Act (Minn. Stat. § 115A) was passed in 1980 to protect the state’s land, air, water, natural resources, and public health. It requires the County to reduce solid waste generation (Minn. Stat. § 115A.55). In 2014, State law was changed to require TCMA counties to achieve a 75 percent recycling rate goal (up from 50 percent) by 2030 (Minn. Stat. § 115A.551). Additional waste management statutory requirements for counties that are addressed in this Master Plan include:

- Ensure that residents have the opportunity to recycle (Minn. Stat. § 115A.552);
- Ensure at least one recycling center is available in the County to collect recyclable materials (Minn. Stat. § 115A.552);
- Provide information on how, when, and where materials may be recycled (Minn. Stat. § 115A.552);
- Develop a promotional program that publishes notices at least once every three months and encourages separation of recyclable materials (Minn. Stat. § 115A.552);
- Implement a Household Hazardous Waste (HHW) management plan including broad-based HHW education, reduction, separation from trash and collection, storage, and proper management (Minn. Stat. § 115A.96);
- Encourage building owners and managers to provide appropriate recycling services (Minn. Stat. § 115A.552);
- Ensure that materials separated for recycling are taken to markets for sale or to recyclable material processing centers (Minn. Stat. § 115A.553);
- Develop a Solid Waste Master Plan to implement the Policy Plan (Minn. Stat. § 473.803);
- Develop and implement – or require political subdivisions to develop and implement – programs, practices, or methods designed to meet the state-established recycling goal (Minn. Stat. § 115A.551).
- Include in its Master Plan a recycling implementation strategy for meeting the state-established recycling goal (Minn. Stat. § 115A.551);
- Provide for the recycling of problem materials and major appliances (Minn. Stat. §115A.552);

- Develop and implement a permanent program to manage household hazardous waste (Minn. Stat. § 473.804);
- Include in its Master Plan a hazardous waste management plan with a public education component, household hazardous waste reduction strategy, and a strategy for separation and proper management of household hazardous waste (Minn. Stat. § 115A.96);
- Establish and revise ordinances, rules, regulations, and standards for solid waste facilities within the county and ensure compliance (Minn. Stat. § 473.811); and
- Submit an annual certification report to the MPCA (Minn. Stat. § 473.848).

C. County Progress Toward Policy Plan Objectives

Waste management in the TCMA is an integrated system with many public and private entities having varying roles and responsibilities, ranging from direct service provision to regulation. Dakota County does not provide direct waste management services, but has regulatory oversight and waste programs to protect the environment and public health, and support waste management at the highest and best use in accordance with Minnesota’s waste management Hierarchy.

Substantial progress has been made since Dakota County issued its first solid waste plan in the 1980s; however, recycling is not at the level it could and should be. The MPCA conducted a statewide waste characterization study in 2013 to assist with planning efforts. Results identified diversion opportunities based on the largest quantities of recoverable materials found in the waste stream, including: organics (31 percent), paper (25 percent), and plastics (18 percent).

The following graphs show how waste generated in Dakota County was managed from 2008 to 2016.

2036 Policy Plan TCMA Reduction and Reuse Objective: 5 Percent

A Policy Plan objective for the TCMA counties is to reduce waste five percent by 2036; however, the MPCA has not defined actual reduction and reuse measures for reporting purposes. Measuring changes in the total amount of MSW managed is not sufficient in tracking progress for source reduction efforts because it does not take into account increases in the County’s population or trends in how much American households are purchasing.

2036 Policy Plan TCMA Recycling Objective (excludes organics): 60 Percent

Figure 4 shows that the County’s recycling rate (excludes organics) is not going in the direction needed to achieve the TCMA Recycling objective of 60 percent by 2036. The recycling rate is defined as total tons recycled divided by the total tons of MSW managed. Despite new technologies and processes that have improved the ability to handle, sort, and recycle materials, the recycling rate in Dakota County is declining. This is partly due to state changes in the recycling rate calculation methodology (e.g., removed source reduction and yard waste credits, no longer allowed to estimate commercial tonnages). It is also due to changes in the waste stream such as changes in material mix and packaging getting lighter. For example, recyclables such as plastics are becoming lighter so there is less weight being generated and less weight being recycled. In addition, less paper is being generated and therefore recycled as more information is consumed digitally. New approaches and greater system capacity are needed to maintain and maximize separation of recoverable materials from the trash.

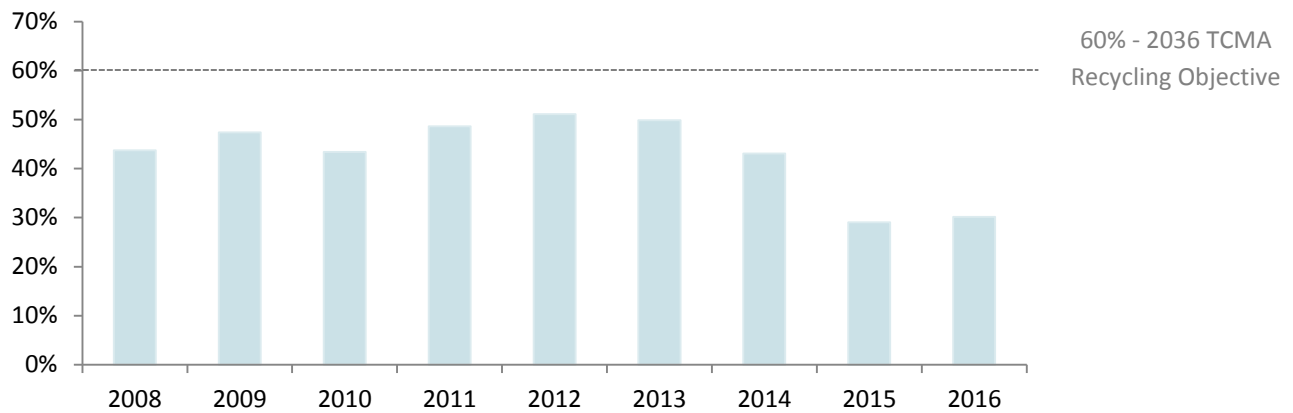


Figure 4: Recycling Rate, 2008-2016

2036 Policy Plan TCMA Organics Recovery Objective: 15 Percent

Figure 5 shows that the County’s organics recovery rate increased from 2008 to 2016. Organic materials include food waste, compostable products (e.g., non-recyclable paper), and yard waste. Organics are currently managed in four different ways: food-to-people (donation of excess food); food-for-livestock (animal feed); source-separated for composting (source-separated organics materials for commercial composting or SSOM); and yard waste composting. The organics recovery rate remained steady around three percent from 2008 to 2013. In 2015 and 2016, the County’s organics recovery rate exceeded the TCMA Organics Recovery objective of 15 percent by 2036; however, this is largely due to the MPCA’s decision to allow counties to count yard waste composted at commercial composting sites toward the organics recovery rate in 2014. The intent of the TCMA objective is to increase the amount of organics managed through source-separated programs (e.g., food-to-people, food-to-livestock, and food for composting). In 2016, only six percent of the MSW in Dakota County was managed through source-separated programs.

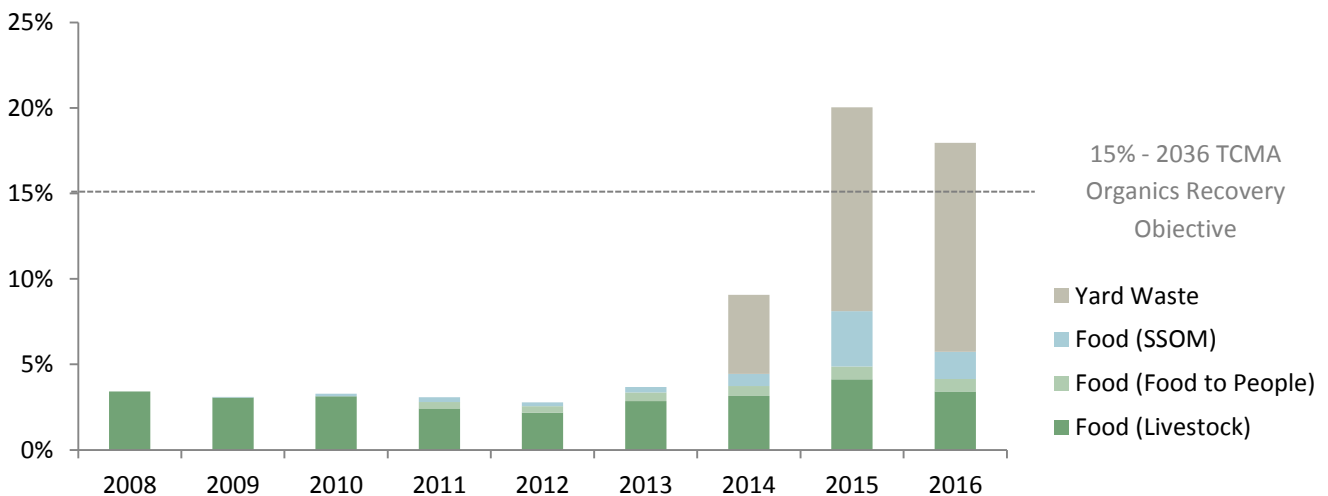


Figure 5: Organics Recovery Rate, 2008-2016

2036 Policy Plan TCMA Resource Recovery Objective: 24 Percent

The County’s resource recovery rate remains low at 11 percent (Figure 6). The County is not on track to make significant progress toward the TCMA Resource Recovery objective of 24 percent by 2036. Progress will remain difficult until new capacity is reasonably available for Dakota County waste.

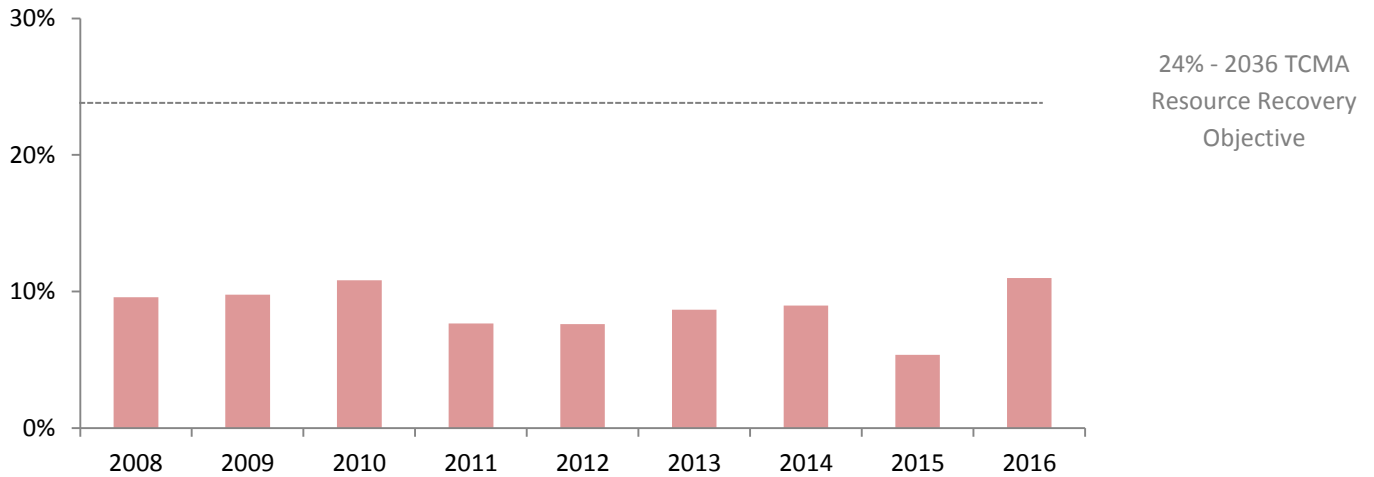


Figure 6: Resource Recovery Rate (For Energy Recovery), 2008-2016

2036 Policy Plan TCMA Landfill Objective: 1 Percent

The County’s landfill disposal rate is at 46 percent (Figure 7). Achieving the TCMA landfill objective of one percent by 2036 will be extremely challenging, unless aggressive, new approaches can influence and shift waste management to methods higher in the State’s Hierarchy.

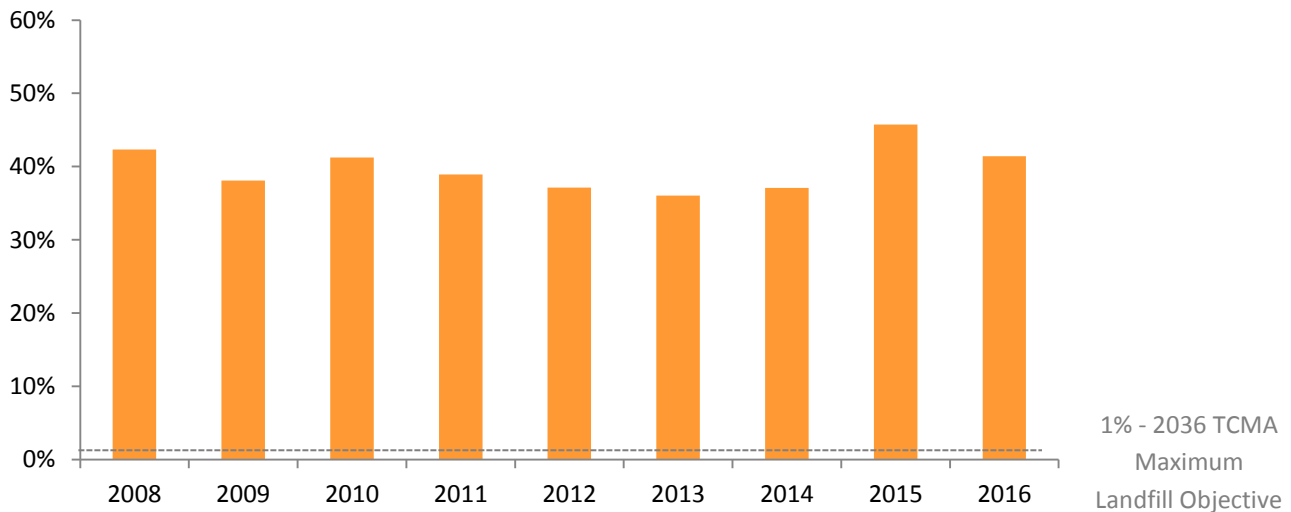


Figure 7: Landfill Disposal Rate, 2008-2016

D. Moving Forward

This revised Master Plan focuses on providing the strong start needed for better resource conservation and environmental protection, and to achieve, or make significant progress toward, the aggressive Policy Plan objectives and statutory waste management requirements.

PART TWO: SOLID WASTE LANDFILL ABATEMENT PLAN

This section outlines Dakota County's solid waste vision, policies, strategies, tactics, and timing. Policies, strategies, and tactics in the Master Plan are intended to implement the Policy Plan and make progress toward the MSW management system objectives identified in the Policy Plan for the region (i.e., TCMA counties).

A. County Solid Waste Vision

The following vision defines the desired solid waste management system to be implemented by the public and private sectors through efforts identified in the Master Plan:

A comprehensive waste management system that protects, preserves, and enhances the environment and public health.

B. County Solid Waste Policies

The following policies define the County's position on specific issues and roles or actions that the County generally will take:

1. Regulate waste in accordance with County ordinances.
2. Prioritize waste management in preferred order: waste and toxicity reduction, reuse, recycling and organics recovery/diversion (prevention, consumable food rescue for people, food scraps for livestock, food for industrial uses, and then composting), resource recovery, land disposal.
3. Implement projects and programs toward achieving state laws, rules, and Metropolitan Solid Waste Management Policy Plan goals and objectives.
4. Employ multiple approaches including educational, regulatory, and financial to efficiently and effectively meet the Metropolitan Solid Waste Management Policy Plan goals and objectives.
5. Collaborate with the private and public sectors to address waste management issues.
6. Hold all persons, including waste generators and waste system operators, accountable for proper waste management and for following the Master Plan.
7. Advocate for practical State and Federal product stewardship laws with an emphasis on products that pose a public health or safety risk.
8. Seek external sources of funding to implement this Master Plan and for long-term and post-closure care of landfills.

C. Strategies, Tactics, and Timing

Strategies are steps that will be taken to meet Policy Plan and statutory requirements.

This Master Plan includes three types of strategies:

1. **Selected Policy Plan Strategies** were chosen by the County from the list of strategy options identified as best management practices by the MPCA. Selected Policy Plan Strategies are written to precisely match Policy Plan language.

2. **Additional Strategies** have been identified to help achieve or make progress toward statutory waste management requirements (e.g., education, 75 percent recycling rate goal, household hazardous waste) and the Policy Plan MSW management system objectives.
3. **Continuing County Strategies** are existing County programs and practices (e.g., financial, regulatory, educational) that will be continued and refined, as necessary, to support new strategies. Appendix A provides detailed program descriptions.

For Selected Policy Plan Strategies, TCMA counties could choose strategies within ten topic areas that are most appropriate for them, identify alternatives acceptable to the MPCA, or both. Figure 8 identifies the ten topic areas, the number of MPCA-identified strategies, and the number of strategies TCMA counties are required to select in each topic area.

Figure 8: Policy Plan Strategies For Incorporation into County Master Plan

Topic Area	MPCA-Identified Strategies	TCMA Counties Must Select
1. Regional Solutions	3	2
2. Source Reduction and Reuse	4	2
3. Collection Best Practices	5	1
4. Recycling Management	4	1
5. Organics Management (Food Waste, Yard Waste)	7	3
6. Non-Municipal Solid Waste	5	1
7. Recycling Markets	4	4
8. Organics Markets	2	1
9. Emerging Technologies	2	2
10. Product Stewardship	2	2

Dakota County’s strategy selection was based on weighted calculations for anticipated new tons diverted, environmental protection, cost-effectiveness (\$/ton cost to County), public perspective, and waste industry perspective. The selection process is more fully described in Appendix B. Strategies that scored the highest in each topic area were presented to the Dakota County Planning Commission and County Board of Commissioners for consideration. Alternatives to the Policy Plan strategies were not developed during this process; however, additional strategies toward meeting statutory waste management were identified, scored, and presented to stakeholders and decision-makers.

Projected timing is provided for each Selected Policy Plan and Additional strategy. Strategy implementation timelines align with the general timelines identified in the Policy Plan.

Individual implementation and prioritization of County-led strategies are subject to County Board approval through annual budgeting and work planning processes and MPCA-led strategies are subject to MPCA’s budgeting and work planning.

The County will coordinate with state and regional partners to develop annual priorities and work plans. The MPCA and County will annually evaluate progress. Other influences, such as changes in industry and market conditions for materials, may also influence strategy timing and implementation. Therefore, the actual timing of

strategy implementation may be different than presented in this plan based on approved approaches, strategy phasing, future conditions, and interactions with other implemented strategies.

Tactics are specific actions or activities that will be taken to implement strategies. Strategies include a range of tactics that vary in degree of specificity. This reflects the uncertainty in predicting future conditions often seen with a long-range plan. For example, a more specific tactic identifies how it will be implemented if the mechanism for implementation is evident (e.g., County ordinance update) while other tactics are written more broadly to allow evaluation and implementation of the most effective implementation method (e.g., a County ordinance versus a city code versus a license agreement versus new programs). Implementation of a given tactic is also subject to County Board approval through annual budgeting and work planning processes.

1. Regional Solutions

The Policy Plan identified specific TCMA strategies best implemented collaboratively at the regional level for consistency.

The Policy Plan requires TCMA counties to select two from three MPCA-identified Regional Solutions strategies. Dakota County selected strategies that support current efforts for standardization of residential recycling messaging and collaborative regional practices for household hazardous waste reciprocity, hauler licensing, and reporting.

Regional Solutions Strategies	Continue	Expand	New	Projected Timing
Selected Policy Plan Strategies				
1. Standardize ordinances.	✓			2018
2. Implement standardized messaging regarding residential recycling in all seven TCMA counties.		✓		2019 - ongoing
Continuing County Strategies				
3. Collaborate with partners on education, research, planning, implementation, evaluation, and reporting of waste management projects and programs.	✓			Ongoing
4. Collaborate with partners to implement effective reporting for performance measurement purposes.	✓			Ongoing

Selected Policy Plan Strategies

1. Standardize ordinances by 2018.

- a. Collaborate with partners (e.g., MPCA, TCMA counties) to:
 - standardize reciprocity for household hazardous waste across all TCMA counties,
 - implement hauler licensing across all TCMA counties, and
 - standardize hauler reporting requirements.

2. Implement standardized messaging regarding residential recycling in all seven TCMA counties by 2019.

- a. Collaborate with partners (e.g., MPCA's Recycling Education Committee) to develop research-based, standardized messaging.
- b. Provide standardized educational, outreach, and communication resources to partners (e.g., program participants, commercial entities, public entities, residents).
- c. Require municipalities and regulated partners (e.g., waste haulers) to deliver standardized messaging within the community and to their customers.

Continuing County Strategies

Historically, the TCMA counties have worked together on many regional waste management activities, including research and policy development, education and outreach, project planning, data collection, reporting, and

legislative advocacy. The County will continue to work with state and regional partners on collaborative waste management activities, including the following:

- 3. Collaborate with state and regional partners on education, research, planning, implementation, evaluation, and reporting of waste management projects and programs.**
 - a. Collaborate with partners (e.g., MPCA, TCMA counties) to support effective policies in the region.
 - b. Collaborate with partners (e.g., MPCA, Associations, TCMA counties) on solid waste education and outreach, planning, research, implementation, and evaluation opportunities for regional consistency in County approaches.
 - c. Work with partners (e.g., MPCA, TCMA counties, municipalities) to engage the State Building Code Revisions Committee for new and retro-fit waste enclosure and signage requirements (e.g., for commercial establishments).

- 4. Collaborate with state and regional partners to implement effective reporting for performance measurement purposes.**
 - a. Collaborate with partners (e.g., MPCA, TCMA counties) to routinely evaluate and improve performance measures to track progress on all solid waste system objectives.
 - b. Work with partners (e.g., MPCA, TCMA counties) to identify and implement an effective measurement tool for source reduction and reuse.

2. Source Reduction and Reuse

Source reduction (also known as waste reduction) is the most preferred waste management method. The Policy Plan’s Reduction and Reuse objective is one and a half percent by 2020 and five percent by 2036 for TCMA counties. The MPCA is looking at a variety of methods to measure waste reduction, such as using economic indicators. The TCMA counties are not currently required to report on this objective.

The Policy Plan requires TCMA counties to select two from four MPCA-identified Source Reduction and Reuse strategies. Dakota County selected strategies that build on its current efforts to purchase sustainable products and reduce food waste in the commercial sector. Additional strategies will capture more unwanted materials (e.g., goods, equipment) in the commercial and residential sectors by increasing awareness of waste reduction options and increasing reduction and reuse opportunities.

Source Reduction and Reuse Strategies	Continue	Expand	New	Projected Timing
Selected Policy Plan Strategies				
1. Support the State’s Sustainable Purchasing Program.	✓			Ongoing
2. Implement a program for either businesses or residents to prevent food from being wasted.		✓		2021 - ongoing
Additional Strategies				
3. Implement public entity and commercial waste reduction and reuse programs.		✓		2021 - ongoing
4. Implement residential waste reduction and reuse programs.		✓		2021 - ongoing
Continuing County Strategies				
5. Collaborate with partners to develop environmentally-preferable procurement standards and practices and encourage their use by public entities.	✓			Ongoing
6. Support waste reduction and reuse opportunities in the community.	✓			Ongoing
7. Provide reuse opportunities for materials brought to County collection sites.	✓			Ongoing

Selected Policy Plan Strategies

1. Support the State’s Sustainable Purchasing Program (ongoing).

- a. Purchase sustainable products from state contracts for use in County operations and programs (e.g., recycled-content containers and bags for schools and businesses).
- b. Work with school districts to cooperatively purchase environmentally-preferable products (e.g., compostable serveware).
- c. Collaborate with partners (e.g., MPCA) to increase environmentally-preferable product access in state contracts.

- d. Implement standards for environmentally-preferable products and practices that reduce waste and increase reuse in County operations.
 - e. Notify state contract managers of non-compliance issues related to environmentally-preferable products offered in state contracts.
- 2. Implement a program for either businesses or residents to prevent food from being wasted by 2021.**
- a. Update current landfill abatement programs (e.g., resident, business, school) to include food waste prevention and food rescue as a first step to managing organics.
 - b. Provide resources (e.g., funding, technical assistance) to expand safe storage and transportation of surplus edible food to hunger relief agencies.
 - c. Provide resources (e.g., funding, technical assistance, best management tools) to encourage large commercial kitchen food purchasing and preparation practices to reduce waste.

Additional Strategies

- 3. Implement public entity and commercial waste reduction and reuse programs by 2021.**
- a. Provide information on buying used, renting, material exchanges, reuse, sharing, and repairing.
 - b. Provide resources (e.g., funding, technical assistance) to expand reuse opportunities for school and commercial establishment supplies and equipment.
 - c. Provide resources (e.g., funding, technical assistance) to expand programs within public entity, school, and commercial establishment operations to include waste reduction and reuse.
 - d. Provide reuse opportunities for public entities and commercial establishments at County collection sites (e.g., The Recycling Zone).
 - e. Implement County and municipality policies for reuse of surplus equipment in internal operations, sale, and through donation to non-profit organizations.
- 4. Implement residential waste reduction and reuse programs by 2021.**
- a. Provide information on buying used, renting, material exchanges, reuse, sharing, and repairing.
 - b. Provide reuse opportunities (e.g., partnerships with non-profits for on-site collections) for multi-unit tenants at move-in/move-out.
 - c. Provide support (e.g., technical assistance, funding, model language) to municipalities to provide reuse opportunities at municipality clean up events.
 - d. Collaborate with partners (e.g., non-profits) to develop sharing libraries (e.g., tools, equipment).
 - e. Increase residential reuse opportunities at County collection sites (e.g., The Recycling Zone).

Continuing County Strategies

The County has implemented waste reduction and reuse efforts for internal operations by procuring more sustainable products and reusing surplus materials. Reuse opportunities are provided at The Recycling Zone for residents and businesses, community programs have been developed (e.g., Fix-It-Clinics), and reuse businesses/organizations are promoted. The County will sustain the following:

- 5. Collaborate with state and regional partners to develop environmentally-preferable procurement standards and practices that reduce waste and encourage their use by public entities.**
- a. Implement environmentally-preferable practices and standards (e.g., reduced packaging, recycled-content materials) that support waste reduction and reuse in County operations.

- b. Share state, regional, and County environmentally-preferable procurement practices and standards with municipalities and encourage their adoption in municipal operations.
- 6. Support waste reduction and reuse opportunities in the community.**
- a. Implement Fix-It-Clinics to support repair of broken household items.
 - b. Promote private-sector (e.g., donation organizations) reuse efforts to the community.
- 7. Provide reuse opportunities for materials brought to County collection sites.**
- a. Accept and provide materials for reuse at County collection sites (e.g., The Recycling Zone).

3. Collection Best Practices

The Policy Plan identified best management practices for collection of recyclable materials, source-separated organics, and MSW. Dakota County’s strategies for waste collection best practices recognize the need to develop phased approaches with stronger financial influences.

The Policy Plan requires TCMA counties to select one from five MPCA-identified Collection Best Practices strategies. Dakota County selected a strategy that improves residential recycling through increased collection frequency, which was a recurring theme from stakeholder engagement. Additional strategies address consistency in collection, dis/incentives to divert more waste, and long-term funding needs for waste management programs as landfills in Dakota County near capacity.

Collection Best Practices Strategies	Continue	Expand	New	Projected Timing
Selected Policy Plan Strategy				
1. Collect recycling weekly.		✓		2020 - ongoing
Additional Strategies				
2. Improve the consistency and accountability of waste materials collection.			✓	2019 - ongoing
3. Institute generator fee schedules and funding incentives to prevent and divert waste from disposal.		✓		2022 - ongoing
4. Implement long-term revenue sources for landfill abatement programs that encourage waste diversion.		✓		2025 - ongoing
Continuing County Strategies				
5. Regulate solid waste haulers.	✓			Ongoing
6. Collect and manage fees to implement waste management programs.	✓			Ongoing

Selected Policy Plan Strategy

1. Collect recycling weekly in 2020.

- a. Update Dakota County Ordinance No. 110, Solid Waste Management (Ordinance 110) to require weekly residential curbside recycling collection.
- b. Update Ordinance 110 to ensure municipalities provide the opportunity to recycle for all residents and commercial establishments.
- c. Provide resources (e.g., funding, technical assistance, model language) for municipalities to update local practices.

Additional Strategies

2. Improve the consistency and accountability of waste materials collection in 2019.

- a. Establish and promote a standardized list of traditional recyclables with proven markets to be collected.
- b. Work with state and regional partners (e.g., TCMA counties) to improve waste collection billing practices, container sizing, and pricing requirements.
- c. Collaborate with the MPCA, regional TCMA counties, and regulated parties to improve waste management data collection and reporting.
- d. Provide research (e.g., economic, efficiency, GHG emissions) and funding for municipalities to consider best management collection options (e.g., zoned contract areas, hauler franchise agreements).
- e. Implement a cooperative hauling contract (e.g., trash, recycling, and organics) for public entities to use for waste collected from their operations.

3. Institute generator fee schedules and funding incentives to prevent and divert waste from disposal by 2022.

- a. Enhance volume-based pricing requirements in Ordinance 110 so that pay-as-you-throw fees are more proportional to the waste that is produced (e.g., larger gap between small and large trash cart sizes) and to increase waste reduction and recycling.
- b. Negotiate host fee agreements with waste management facilities to influence waste generators to manage waste in priority order: reduce, reuse, recycle, organics recovery, resource recovery, land disposal.
- c. Provide short-term financial assistance to make organics diversion competitive with disposal.
- d. Explore opportunities with industry to provide small business access to curbside recycling services and pricing.

4. Implement long-term revenue sources for landfill abatement programs that encourage waste diversion by 2025.

- a. Evaluate non-levy revenue models (e.g., generator fees) that sufficiently support solid waste programs and support waste management at the highest and best levels, anticipating facility closures and resulting host fee reduction or elimination.
- b. Work with municipalities to develop sustainable funding models for local abatement programs.
- c. Advocate that all collected Solid Waste Management Tax that is distributed to the State's general fund be redistributed to counties for landfill abatement.
- d. Advocate to fully fund the Metropolitan Landfill Contingency Action Trust Account (MLCAT) and Closed Landfill Investment Funds (CLIF).
- e. Advocate for continued funding from the Local Recycling Development Grant (LRDG).

Continuing County Strategies

The County regulates waste management and collects and manages waste fees from various sources (e.g., license fees, facility host agreements, permit, fees). The County will continue to:

5. Regulate solid waste haulers to protect public health and the environment in accordance with County ordinance.

- a. Provide oversight through regulation of the private sector as new initiatives are implemented, such as when haulers and facilities collect new materials.
- b. Prohibit licensed haulers from mixing source-separated materials with MSW.

6. Collect and manage waste fees to implement waste management programs.

- a. Negotiate and collect host fees for MSW and non-MSW facilities during the operational life of the facilities to support landfill abatement activities.
- b. Implement a fee structure to fully fund regulatory hazardous and solid waste programs and activities.
- c. Use state funding (e.g., SCORE, LRDG) to implement landfill abatement programs.

4. Recycling Management

Implementation of Recycling Management strategies make progress toward the Recycling objective (excludes organics) in the Policy Plan for TCMA counties to reach a 51 percent recycling rate by 2020 and 60 percent by 2030. Despite the requirement that Dakota County waste haulers offer recycling services to their trash customers, a significant amount of recyclables are being disposed. Results of a 2013 MPCA statewide waste characterization study identified the following in the trash: paper (25 percent), plastics (18 percent), metal (4.5 percent), and glass (2 percent). The County recognizes that involvement of all users and managers of the waste management system, from residents and businesses to the waste industry, will be required to move beyond the County’s 30 percent recycling rate in 2016. This section outlines Dakota County’s approach for capturing more traditional (e.g., paper, metal, plastic, glass) and non-traditional (e.g., mattresses, carpet) recyclable materials.

The Policy Plan requires TCMA counties to select one from four MPCA-identified Recycling Management strategies. Dakota County selected the strategy to support the collection of non-traditional materials when local recycling markets exist. Additional strategies focus on implementing changes to institutionalize practices and increase accountability with partners through defined responsibilities. The strategies address needs to capture more materials from all types of spaces (e.g., public entity, commercial, residential, multi-unit dwellings).

Recycling Management Strategies	Continue	Expand	New	Projected Timing
Selected Policy Plan Strategy				
1. Support the collection of non-traditional recyclables such as furniture, mattresses, carpet.		✓		2020 - ongoing
Additional Strategies				
2. Implement generator requirements to improve recycling.			✓	2019 - ongoing
3. Implement a multi-unit dwelling recycling program.			✓	2019 - ongoing
Continuing County Strategies				
4. Ensure the opportunity to recycle.	✓			Ongoing
5. Provide support to schools to improve recycling through the School Recycling and Organics Program.	✓			Ongoing
6. Provide support to commercial entities to improve recycling through the Business Recycling Incentive Program.	✓			Ongoing
7. Provide support to event coordinators to improve recycling at community events.	✓			Ongoing
8. Provide recycling in County operations.	✓			Ongoing

Selected Policy Plan Strategy

- 1. Support the collection of non-traditional recyclables such as furniture, mattresses, and carpet by 2020.**
 - a. Increase opportunities to drop off recyclable materials including mattresses, scrap metal, carpet, and textiles at current and future County drop-off sites and events.
 - b. Develop non-traditional recyclables collection program (e.g., mattresses, scrap metal, textiles) that includes opportunities for multi-unit dwelling tenants.
 - c. Incentivize commercial establishments and organizations that manage non-traditional recyclables for reuse and recycling to locate in Dakota County.
 - d. Provide implementation resources (e.g., funding, technical assistance, model contracts) to event sponsors and coordinators.

Additional Strategies

- 2. Implement generator requirements to improve recycling by 2019.**
 - a. Effectuate Ordinance 110 Sec. 16.04 to implement mandatory residential recycling of a minimum list of recyclable materials, including at multi-unit dwellings.
 - b. Effectuate Ordinance 110 Sec. 16.05 to implement mandatory commercial recycling of a minimum list of recyclable materials, including for public entities.
 - c. Update Ordinance 110 to include requirements for select generators (i.e., large commercial generators, multi-unit dwellings, public entities) to recycle at least three materials.
 - d. Develop a registration and reporting program for regulated generators to evaluate compliance.
 - e. Update Ordinance 110 and 112 (Assemblage of Large Numbers of People) to include required use of best waste management practices (e.g., paired color-coded, labeled containers).

- 3. Implement a multi-unit dwelling recycling program by 2019.**
 - a. Develop a multi-unit (four or more units) recycling program (e.g., funding, technical assistance, infrastructure and educational resources) to support municipalities and multi-unit property owners/managers.
 - b. Work with municipalities to ensure building planning and construction supports recycling (e.g., internal chutes; adequate internal and external space).
 - c. Work with municipalities to require multi-unit dwelling property owners and managers to: ensure tenants have recycling hauling services; implement recycling best practices (e.g., convenient, co-located with trash); and distribute resources to tenants.
 - d. Provide support (e.g., funding, technical assistance, educational resources) to municipalities to manage and regulate (e.g., recycling conditions in rental agreements/licensing/other) property owners and managers.

Continuing County Strategies

The County will sustain the following strategies:

- 4. Ensure the opportunity to recycle.**
 - a. Provide technical assistance and educational resources (e.g., messages, images, labels) to municipalities and other partners to support recycling.

- b. Provide a year-round drop-off facility (e.g., The Recycling Zone) to collect recyclables (e.g., paper, plastic, metal/scrap metal, glass) from residents, commercial establishments, and public entities.
- c. Require MSW haulers to offer recycling collection to their customers in accordance with Ordinance 110.
- d. Provide support (e.g., technical assistance, funding) to municipalities to implement drop offs for recyclable materials (e.g., cardboard).

5. Provide support to schools to improve recycling in their operations through the School Recycling and Organics Program.

- a. Provide containers, labels, and technical assistance to implement best management practices to increase recycling at school locations.
- b. Provide recycling communications and educational resources for use at schools.
- c. Implement waste sorts to report landfill abatement progress resulting from County support.
- d. Provide a venue for schools to share and learn from each other about program successes and challenges (e.g., workshop).
- e. Provide recognition for schools that implement successful landfill abatement programs.
- f. Notify public schools annually of their obligation to comply with state public entity recycling requirements and report non-compliance to the MPCA.

6. Provide support to commercial entities to improve recycling within their operations through the Business Recycling Incentive Program.

- a. Provide funding, technical assistance, infrastructure and educational resources, and container labels to implement best management practices to increase recycling at commercial properties.
- b. Provide recycling communications and educational messages for employee training.
- c. Require commercial entities to report landfill abatement progress resulting from County support.
- d. Provide recognition for commercial entities that implement successful landfill abatement projects.

7. Provide support to event coordinators to improve recycling at community events that generate large volumes of recyclable materials.

- a. Provide a check-out container program and assistance (e.g., technical assistance, infrastructure and educational resources, container labels) to implement a uniform system of well-labeled, paired trash and recycling containers at community events.
- b. Facilitate a group of volunteers to implement best management practices at community events and document event diversion results.

8. Provide recycling opportunities in County operations, including in public and employee areas.

- a. Use model contracts, such as a resource management contracts, to manage waste from County operations.
- b. Implement a uniform system of well-labeled, paired trash and recycling containers in County operations.

5. Organics Management

This section outlines Dakota County’s approach for preventing unnecessary food waste and managing organic materials. Organic material includes food waste, compostable products (e.g., non-recyclable paper) and yard waste. Organics makes up 31 percent of the waste being disposed (18 percent is food waste and 13 percent is other organic materials). Diversion of food waste and compostable paper provides the County’s greatest opportunity to increase diversion. In 2016, only six percent of the waste in Dakota County was managed through source-separated programs (e.g., food-to-people, food-to-livestock, commercial composting of food waste, and compostable products).

Implementation of Organics Management strategies make progress toward the Organics Recovery objectives in the Policy Plan for TCMA counties to reach a 12 percent organics recovery rate by 2020 and 15 percent by 2030.

The Policy Plan requires TCMA counties to select three from seven MPCA-identified Organics Management strategies. Dakota County will focus on preventing the waste of surplus food as a first step. For organic waste that cannot be prevented, strategy implementation will focus on improving organics capture in accordance with the EPA’s Food Recovery Hierarchy with attention to food recovery for people. Additional selected strategies improve access to organics recycling in multi-unit dwellings and public spaces and support new organics capacity.

Organics Management Strategies	Continue	Expand	New	Projected Timing
Selected Policy Plan Strategies				
1. Support community-based social marketing campaigns that educate residents on ways to reduce the amount of food that is not eaten.		✓		2018 - ongoing
2. Require organics diversion by large generators of organics by 2022.			✓	2022 - ongoing
3. Implement organics diversion at public entity facilities and in large event venues.		✓		2022 - ongoing
Additional Strategies				
4. Implement a multi-unit dwelling recycling and organics recovery program.			✓	2019 - ongoing
5. Expand opportunities for residential organics recovery.		✓		2019 - ongoing
6. Support private and public sector efforts in the region to develop new or expanded organics transfer and management capacity.		✓		2022 - ongoing

Continuing County Strategies				
7. Provide drop off opportunities to collect organics from residents.	✓			Ongoing
8. Lease County-owned land to support organics capacity.	✓			Through 2032
9. Provide funding and resources to municipalities to implement landfill abatement programs.	✓			Ongoing
10. Provide support to schools to implement organics recovery through the School Recycling and Organics Program.	✓			Ongoing
11. Provide support to implement organics recovery through the Business Recycling Incentive Program.	✓			Ongoing
12. Provide support to event coordinators for organics recovery at community events.	✓			Ongoing
13. Provide organics recovery/diversion in County operations.	✓			Ongoing
14. Regulate yard waste to ensure proper waste management.	✓			Ongoing

Selected Policy Plan Strategies

- 1. Support community-based social marketing campaigns that educate residents on ways to reduce the amount of food that is not eaten in 2018.**
 - a. Implement a community-based social marketing campaign that uses a variety of social marketing tools to influence residential behaviors that prevent food waste.
 - b. Provide food reduction/prevention resources (e.g., tools, education materials) to residents.

- 2. Require organics diversion by large generators of organics by 2022.**
 - a. Collaborate with state and regional partners (e.g., TCMA counties) to define large organics generators.
 - b. Update Ordinance 110 to implement a time-phased requirement for organics diversion, starting with the largest generators (e.g., food processors, grocery stores, schools, institutions with kitchens).
 - c. Facilitate conversations with haulers and commercial compost facilities on ways to increase organics collection, to promote organics collection options, and to resolve implementation and contamination issues.
 - d. Provide support (e.g., funding, technical assistance, infrastructure and educational resources) to commercial generators implementing best management practices for organics recovery.

- 3. Implement organics diversion at public entity facilities and in large event venues by 2022.**
 - a. Update Ordinance 110 and 112 to define conditions that require recyclables and organics collection at public entity facilities and in large event venues.
 - b. Work with schools and municipalities to implement event recycling requirements in public entity practices (e.g., standards in facility rental agreements, policies, codes, ordinances) to support separation and collection of recyclables and organics.
 - c. Provide support (e.g., technical assistance, infrastructure and educational resources, waste diversion measurement tools) to municipalities to implement event recycling to increase collection of recyclable and organics materials.

Additional Strategies

- 4. Implement a multi-unit dwelling recycling and organics recovery program by 2019.**
 - a. Develop a model multi-unit (four or more units) recycling program (e.g., funding, technical assistance, infrastructure and educational resources) that includes organics diversion for multi-unit property owners/managers.
 - b. Work with municipalities to ensure building planning and construction supports (e.g., internal chutes; adequate internal and external space) for organics recycling in development projects, as appropriate.
 - c. Work with municipalities to require multi-unit dwelling property owners and managers to: ensure tenants have recycling hauling services; implement organics recovery and recycling best practices (e.g., convenient, co-located with trash), as appropriate; and distribute resources to tenants.
 - d. Provide support (e.g., funding, technical assistance, educational resources) to municipalities (e.g., recycling and organics recovery conditions in rental agreements/licensing/other) for property owners and managers.
- 5. Expand opportunities for residential organics recovery in 2019.**
 - a. Co-develop and provide assistance (e.g., start-up funding, resident education, training) for residential organics drop-off sites with priority municipalities and/or partners until curbside organics collection is widely available.
 - b. Provide start-up resources (e.g., funding, technical assistance, kitchen buckets, and educational resources) to interested municipalities to implement source-separated curbside organics collection programs that follow best management practices.
 - c. Evaluate and implement residential generator fee structures that support increased participation in organics recovery programs.
- 6. Support private and public sector efforts in the region to develop new or expanded organics (including yard waste) transfer and management capacity by 2022.**
 - a. Explore options for working with private transfer stations to accept organics or add transfer capacity where none currently exists.
 - b. Provide support (e.g., technical assistance, funding) to encourage proposals from private and public entities to add or expand organics capacity in the County.
 - c. Work with the MPCA to increase organics composting capacity in the region.
 - d. Collaborate with partners (e.g., municipalities, private sector) and provide support (e.g., funding, technical assistance) to expand drop off opportunities for residents to properly manage yard waste.

Continuing County Strategies

The County will sustain the following strategies:

- 7. Provide drop off opportunities to collect organics from residents.**
 - a. Implement drop off opportunities (e.g., drop sites) to collect source-separated organics from residents.
 - b. Provide resources (e.g., compostable bags, kitchen buckets, educational materials) to residents to remove participation barriers.

- 8. Manage the lease for County-owned land in Empire Township to support organics capacity.**
 - a. Manage the lease for private-sector commercial organics composting operations (e.g. source-separated organics, yard waste composting) through June 2022, with possible extensions available through 2032.

- 9. Provide performance-based grant funding and resources to municipalities to implement landfill abatement programs within their operations and in the community.**
 - a. Annually provide funding, technical assistance, and infrastructure and educational resources to support city and township recycling and landfill abatement programs and require cities and townships to annually report progress in achieving landfill abatement goals in accordance with Ordinance 110.
 - b. Provide municipalities with standardized organics recovery messages that support the EPA's Food Recovery Hierarchy for use in municipal outreach.

- 10. Provide support to schools to implement organics recovery in their operations through the School Recycling and Organics Program.**
 - a. Provide technical assistance, infrastructure, and educational resources to implement best management practices to recover organics at school locations.
 - b. Provide organics recovery/diversion communications and educational resources for use at schools.
 - c. Implement waste sorts to report landfill abatement progress resulting from County support.
 - d. Provide a venue for schools to share and learn from each other about program successes and challenges (e.g., workshop).
 - e. Provide recognition for schools that implement successful landfill abatement programs.

- 11. Provide support to commercial entities to implement organics recovery within their operations through the Business Recycling Incentive Program.**
 - a. Provide funding, technical assistance, infrastructure and educational resources, and container labels to implement best management practices to recover organics at commercial properties.
 - b. Provide organics recovery/diversion communications and educational messages for employee training.
 - c. Require commercial entities to report landfill abatement progress resulting from County support.
 - d. Provide recognition for commercial entities that implement successful landfill abatement projects.

- 12. Provide support to event coordinators to implement organics recovery at community events that generate large volumes of recyclable materials.**
 - a. Provide a check-out container program and assistance (e.g., technical assistance, infrastructure and educational resources, container labels) to implement a uniform system of well-labeled, paired trash, recycling, and organics containers at community events.
 - b. Facilitate a group of volunteers to implement best management practices at community events and document event diversion results.

13. Provide organics recovery/diversion opportunities in County operations, including in public and employee areas.

- a. Use model contracts, such as a resource management contracts, to manage waste from County operations.
- b. Implement a uniform system of well-labeled, paired trash, recycling, and organics containers in County operations.

14. Regulate yard waste to ensure proper waste management.

- a. Continue to prohibit yard waste from land disposal.
- b. Continue to require use of reusable containers, compostable bags for bagged yard waste, or both.

6. Non-Municipal Solid Waste

Non-municipal solid waste (non-MSW) includes industrial, construction, and demolition debris. The Policy Plan does not include TCMA numeric objectives for non-MSW management; however, non-MSW requires attention because there are limited reuse and recycling opportunities to reduce the annual 3.5 million tons of non-MSW disposed in landfills that serve the TCMA.

The Policy Plan requires TCMA counties to select one from five MPCA-identified non-MSW management strategies. Dakota County selected a strategy for waste composition studies which will improve data for policy and program planning.

Non-Municipal Solid Waste Strategies	Continue	Expand	New	Projected Timing
Selected Policy Plan Strategy				
1. Waste composition studies must be conducted at all disposal facilities that accept waste from the TCMA.			✓	2025, 2030, 2035
Continuing County Strategies				
2. Implement reuse and recycling of non-MSW in County and public entity infrastructure projects.	✓			Ongoing
3. Provide opportunities to recycle and properly manage non-MSW that is banned from disposal.	✓			Ongoing
4. Regulate non-MSW haulers and facilities.	✓			Ongoing

Selected Policy Plan Strategy

1. **Waste composition studies must be conducted at all disposal facilities that accept waste from the TCMA in 2025.**
 - a. Support MPCA-led efforts to develop a rotating schedule at all landfills that accept non-MSW waste from the TCMA to conduct waste sorts.
 - b. If the MPCA does not implement a waste sort schedule, update Ordinance 110 to require waste sorts be conducted at a minimum every five years, at non-MSW landfills located in Dakota County to determine if banned, recoverable, and recyclable materials are being land disposed, and develop a plan to address the findings.
 - c. Collaborate with non-MSW disposal facilities and provide support (e.g., funding assistance, technical assistance) to conduct waste sorts in accordance with Ordinance 110 requirements.

Continuing County Strategies

The County will sustain the following strategies:

- 2. Implement reuse and recycling of non-MSW in County and public entity infrastructure and remodeling projects.**
 - a. Use the County’s Sustainable Design and Building Standards for County building construction, demolition, and remodeling projects.
 - b. Consider the use of shingle scrap in County paving projects, and encourage public entities to do the same.
 - c. Share information regarding non-MSW waste reduction, reuse, and recycling opportunities with public entities and encourage public entity adoption of such practices.

- 3. Provide opportunities to recycle and properly manage non-MSW that is banned from disposal.**
 - a. Collect tires at County collection sites (e.g., The Recycling Zone) and encourage municipalities to offer tire collections at community clean-up events.

- 4. Regulate non-MSW haulers and facilities to protect public health and the environment in accordance with County Ordinance.**
 - a. Regulate waste haulers that collect and transport non-MSW and work with the region to evaluate licensing of non-MSW waste haulers as part of the regional hauler licensing program, and implement findings.
 - b. Regulate facilities that manage non-MSW.

7. Recycling Market Development

The Policy Plan does not include an overall TCMA numeric objective for Recycling Market Development; however, it does include a focus on strengthening recycling markets to create and maintain demand for recyclable materials. Recycling market development looks at the highest and best use of post-consumer materials and supports the economy and jobs.

The Policy Plan requires TCMA counties to actively participate in four MPCA-led Policy Plan strategies. Initiatives focus on research, rely on MPCA funding, and depend on public and private sector investments in recycling facilities and equipment that have not yet been identified and/or approved.

Recycling Market Development Strategies	Continue	Expand	New	Projected Timing
MPCA-Led Policy Plan Strategies; County Participation Expected				
1. Expand the capacity for existing markets, specifically glass, paper, and film.	✓			Ongoing
2. Establish a shared vision to build and improve local market development infrastructure and capacity.			✓	2018 - 2019
3. Research best practices for Material Recovery Facility (MRF – recycling facility) optimization.			✓	2021 - ongoing
4. Invest in new technologies and equipment for sorting.			✓	2022 - ongoing

MPCA-led Policy Plan Strategies, County Participation Expected

1. **Expand the capacity for existing markets, specifically glass, paper, and film (ongoing).**
 - a. Collaborate with state and regional partners to provide stability in recyclable materials markets.
 - b. Support collection of waste agricultural and marina film plastic until private sector efforts are widely available.
2. **Establish a shared vision to build and improve local market development infrastructure and capacity in 2018.**
 - a. Participate in a MPCA-led group to focus on infrastructure development, funding, and assistance to advance state priorities.
3. **Research best practices for MRF optimization by 2021.**
 - a. Implement educational messages to the community as Material Recovery Facilities (MRFs) implement operational changes and markets expand.
 - b. Participate in MPCA and stakeholder efforts to determine the best equipment available and best operational practices to increase the recyclables yield and reduce contamination.
4. **Invest in new technologies and equipment for sorting by 2022.**
 - a. Support MPCA development of loans and grant fund priorities and promote them to possible grantees for consideration.

8. Organics Markets

The Policy Plan does not include an overall TCMA numeric objective for Organics Markets; however, it does include actions to support local organics markets. A strong end market for composted materials will help to drive expansion of organics programs.

The Policy Plan requires TCMA counties to select one from two MPCA-identified Organics Markets strategies. Dakota County selected a strategy to use compost in local government transportation projects to build the end market.

Organics Markets Strategies	Continue	Expand	New	Projected Timing
Selected Policy Plan Strategy				
1. Expand the use of compost in the Minnesota Department of Transportation's (MnDOT) and in local government transportation infrastructure projects.		✓		2021-ongoing
Continuing County Strategy				
2. Use compost derived from yard waste in County transportation and park projects.	✓			Ongoing

Policy Plan Strategy

1. **Expand the use of compost in the Minnesota Department of Transportation's (MnDOT) and in local government transportation infrastructure projects by 2021.**
 - a. Use MnDOT specifications for compost use as appropriate in roadside construction and landscaping projects.
 - b. Update the Dakota County Sustainable Design and Building Standards Guidelines to include MnDOT specification for external building grounds.
 - c. Encourage municipalities, schools, and commercial entities that participate in County organics recycling projects to use compost.

Continuing County Strategy

The County will sustain the following:

2. **Use compost derived from yard waste in County transportation and park projects.**
 - a. Use MnDOT specifications to allow compost derived from yard waste as appropriate in roadside construction and landscaping projects.

9. Emerging Technology

The Policy Plan does not include an overall TCMA numeric objective for Emerging Technology, but it does address the need to develop a system for evaluating, not only new technologies, but also existing technologies for policy and regulatory provisions.

The Policy Plan requires TCMA counties to actively participate in two MPCA-led Emerging Technology strategies. An additional strategy supports new technology to manage the changing waste stream. Strategies focus on research and process development for new waste management technologies. The MPCA is currently evaluating how anaerobic digestion technology will fit into the Food Waste Recovery Hierarchy. The County will prioritize waste management approaches in accordance with the MPCA’s anticipated decision.

Emerging Technology Strategies	Continue	Expand	New	Projected Timing
MPCA-Led Policy Plan Strategies; County Participation Expected				
1. Evaluate anaerobic digestion for the region.			✓	2018 - 2019
2. Develop a process for gathering the information necessary to make timelier and consistent policy decisions.			✓	2019 - ongoing
Additional Strategy				
3. Support private and public sector efforts in the region to develop new or expanded landfill abatement-related facilities.		✓		Ongoing

MPCA-led Policy Plan Strategies, County Participation Expected

1. **Evaluate anaerobic digestion for the region in 2018.**
 - a. Participate in a MPCA-led evaluation of the environmental impacts of different methods of anaerobic digestion.
2. **Develop a process for gathering the information necessary to make timelier and consistent policy decisions in 2019.**
 - a. Participate in MPCA-led efforts to evaluate various waste management methods using a life cycle analysis, develop life-cycle policy recommendations, and develop a framework for preferred technology.

Additional Strategy

3. **Support private and public sector efforts in the region to develop new or expanded landfill abatement-related facilities.**
 - a. Provide support (e.g., technical assistance, funding) to encourage proposals for new or expanded waste management options (e.g., anaerobic digestion, gasification) that result in managing waste at the highest levels of the State’s Hierarchy and improve recycling and organics diversion.

10. Product Stewardship

The Policy Plan does not include an overall TCMA numeric objective for Product Stewardship; however, it does recognize a key waste management approach through product stewardship. Product stewardship requires all parties involved in the design, manufacture, sale, and use of a product to share financial responsibility for collecting and managing products in an environmentally-sound manner at every stage of that product's life.

The Policy Plan requires TCMA counties to participate in both MPCA-identified Product Stewardship strategies that focus on the development of a regional committee and reporting.

Product Stewardship Strategies	Continue	Expand	New	Projected Timing
Selected Policy Plan Strategies; MPCA Expects County Participation				
1. Create a regional Product Stewardship Committee.		✓		2018 - 2019
2. Counties report annually on the management of priority materials.			✓	2020 - ongoing
Continuing County Strategy				
3. Support product stewardship initiatives with an emphasis on products that pose a public health or safety risk.	✓			Ongoing

Selected Policy Plan Strategies

1. Create a regional Product Stewardship Committee in 2018.

- a. Actively participate in a regional product stewardship committee to expand practical product stewardship initiatives with an emphasis on products that address public health or public safety risks.

2. Counties report annually on the management of priority materials for product stewardship by 2020.

- a. Annually report to the MPCA the amount of priority materials managed by the County's participation in product stewardship initiatives, including paint and electronics.

Continuing County Strategy

The County will sustain the following:

3. Support state and regional product stewardship efforts and legislation requiring manufacturers to reduce the amount and toxicity of waste in their products and take back products at the end of their useful lives.

- a. With regional partners (e.g., TCMA counties), lobby, and support practical product stewardship efforts with an emphasis on products that pose a public health or safety risk.
- b. Provide data for legislative changes that improve product stewardship initiatives (e.g., for paint, electronics).

11. Landfill Abatement

Landfill Abatement addresses strategies for education, resource recovery, and other landfill abatement efforts that are not specifically identified in the Policy Plan.

Additional Landfill Abatement strategies address needs for comprehensive waste disposal data for policy and program planning, and support practical efforts to maximize resource recovery capacity, such as taking into account geographic distance and environmental impacts for Dakota County waste generators. Resource recovery capacity available for Dakota County waste generators is limited when considering geography and environmental impacts. The Policy Plan does not require construction of new resource recovery facilities during this planning period.

Landfill Abatement Strategies	Continue	Expand	New	Projected Timing
Additional Strategies				
1. Conduct waste composition studies at MSW land disposal facilities in the County.			✓	2025, 2030, 2035
2. Support state efforts to maximize the use of existing resource recovery facility capacity serving the TCMA while considering geography and environmental impacts.		✓		Ongoing
Continuing County Strategies				
3. Provide consistent, broad-based education to the community on proper waste management.	✓			Ongoing
4. Provide messages and education programs using communications methods most effective for the intended audience.	✓			Ongoing
5. Regulate solid waste generators, haulers, and facilities to protect the environment and public health.	✓			Ongoing
6. Collaborate with partners to develop long-term strategies for landfills to protect the environment and public health.	✓			Ongoing
7. Manage the lease for County-owned land in Empire Township to support transfer capacity to a resource recovery facility.	✓			Through 2032
8. Provide performance-based grant funding and resources to municipalities to implement landfill abatement programs within their operations and in the community.	✓			Ongoing

Additional Strategies

1. **Conduct waste composition studies at MSW land disposal facilities located in Dakota County by 2025.**
 - a. Support MPCA-led efforts to develop a rotating schedule at all landfills that accept MSW waste from the TCMA to conduct waste sorts.
 - b. If the MPCA does not implement a waste sort schedule, update Ordinance 110 to require that waste sorts be conducted at a minimum every five years, at MSW disposal facilities located in Dakota County

to determine if banned, recoverable, and recyclable materials are being land disposed, and develop a plan to address the findings.

- c. Collaborate with MSW disposal facilities and provide support (e.g., funding assistance, technical assistance) to conduct waste sorts in accordance with Ordinance 110 requirements.

2. Support state efforts to maximize the use of existing resource recovery facility capacity serving the TCMA while considering geography and environmental impacts (ongoing).

- a. Work cooperatively with the MPCA as the State enforces provisions found in Minn. Stat. § 473.848 while considering distance to resource recovery facilities, sustainable materials management principles, and related environmental impacts (e.g., facility air quality permits, GHG emissions/equivalent).
- b. Notify public entities of their obligations to comply with state waste delivery obligations and refer non-compliance issues to the MPCA.
- c. Annually gather and submit information and data for the MPCA's annual certification report.

Continuing County Strategies

The County will sustain the following strategies:

3. Provide consistent, broad-based education to the community on proper waste management options.

- a. Provide information on how, when, and where to properly manage solid waste and encourage source-separation of materials to support management of materials and waste at the highest levels of the State of Minnesota's Hierarchy and the EPA Food Recovery Hierarchy to all persons in Dakota County.
- b. Provide technical assistance and educational resources to improve management of waste.
- c. Leverage existing resources by incorporating state and regionally-developed communications materials.
- d. Promote County programs and collection services (e.g., The Recycling Zone) to promote proper management of solid waste.
- e. Promote disposal and recycling drop off opportunities (e.g., plastic bag and film recycling) provided at retailers.
- f. Promote the benefits of the use of compost.

4. Provide messages and education programs to all audiences using communication methods most effective for the intended audience.

- a. Develop engagement methods using innovative, evidence-based approaches proven to motivate behavior change.
- b. Deliver messages using mass communications methods (e.g., print, online, mobile) most effective for each intended audience.
- c. Use a variety of learning engagement methods (e.g., presentations, tours, multilingual/multicultural outreach).
- d. Require municipalities to use elements of County outreach, educational, and promotional program materials.
- e. Use the Master Recycler/Composter program to engage more audiences (e.g., teachers, municipal staff) to increase waste management awareness and waste diversion actions in the community.

- 5. Regulate solid waste generators, haulers, and facilities to protect public health and the environment, in accordance with County Ordinances.**
 - a. Regulate solid waste generators, solid waste facilities, and waste haulers to achieve compliance with County licenses and ordinances.
 - b. Enforce waste and material bans and restrictions.
 - c. Provide oversight through regulation of the private sector as new initiatives are implemented, such as when haulers and facilities collect new materials.

- 6. Collaborate with the state, landfill owners/operators, and municipalities that host landfills to develop post-closure monitoring and mitigation plans.**
 - a. Work with private and public entities, as necessary, to develop long-term strategies for landfills to protect public health and the environment, and to develop post-closure monitoring and mitigation plans.

- 7. Manage the lease for County-owned land in Empire Township to support transfer capacity to a resource recovery facility.**
 - a. Manage the lease to continue transfer station capacity through June 2022, with possible extensions available through 2032.

- 8. Provide performance-based grant funding and resources to municipalities to implement landfill abatement programs within their operations and in the community.**
 - a. Adjust the Community Funding grant program to implement landfill abatement programs within municipal operations and the community in accordance with the Solid Waste Master Plan.
 - b. Annually provide funding, technical assistance, infrastructure, and educational resources to support municipal landfill abatement programs
 - c. Require municipalities to annually report progress in achieving program requirements and landfill abatement goals in accordance with Ordinance 110.
 - d. Notify municipalities annually of their obligation to comply with state public entity recycling requirements and report non-compliance to the MPCA.

12. Toxicity Reduction and Hazardous Waste Management

The Policy Plan does not include a TCMA numeric objective for Toxicity Reduction and Hazardous Waste Management; however, Minn. Stat. § 115A requires TCMA master plans to include strategies for household hazardous waste reduction, separation, and management. This section includes strategies for problem materials, hazardous waste, and household hazardous waste.

The Additional strategy addresses the need for improved access to household hazardous waste and problem materials management as the waste stream evolves (e.g., more electronics).

Toxicity Reduction and Hazardous Waste Management Strategies	Continue	Expand	New	Projected Timing
Additional Strategy				
1. Increase opportunities for proper management of problem materials, hazardous waste, and household hazardous waste.		✓		2020 - ongoing
Continuing County Strategies				
2. Provide consistent, broad-based education to the community on proper waste management options.	✓			Ongoing
3. Provide drop off opportunities for problem materials and hazardous waste management.	✓			Ongoing
4. Provide consistent and cost-effective household hazardous waste, hazardous waste, and problem material management services.	✓			Ongoing
5. Regulate hazardous waste generators and facilities.	✓			Ongoing

Additional Strategy

1. Increase opportunities for proper management of problem materials, hazardous waste, and household hazardous waste by 2020.

- a. Provide additional year-round and/or mobile hazardous and household hazardous waste and problem material collection site/drop-off opportunities.
- b. Implement toxicity reduction practices in schools and public entity operations.

Continuing County Strategies

The County will sustain the following strategies:

2. Provide consistent, broad-based education to the community on proper waste management options.

- a. Provide information on how, when, and where to properly manage problem materials, hazardous waste, and household hazardous waste.
- b. Promote County programs and collection services (e.g., The Recycling Zone) to promote proper management of hazardous waste, household hazardous waste, and problem materials.
- c. Promote disposal and recycling drop off opportunities (e.g., battery recycling, CFL bulb recycling, paint recycling) provided at retailers.

- 3. Provide drop off opportunities for problem materials and hazardous waste management.**
 - a. Provide at least one year-round drop-off site (e.g., The Recycling Zone) to collect problem materials and hazardous and household hazardous waste from residents.
 - b. Provide opportunities for proper hazardous waste management for public entities, commercial entities, and hazardous waste generators.
 - c. Collaborate with municipalities to provide interim collection opportunities for proper management of materials (e.g., pharmaceutical waste) as state and private sector product stewardship initiatives develop.
 - d. Evaluate public roles and expansion opportunities for household hazardous waste and problem material collections in communities.

- 4. Provide consistent and cost-effective household hazardous waste, hazardous waste, and problem material management services.**
 - a. Provide reuse opportunities at the County year-round drop-off site (e.g., The Recycling Zone) and household hazardous waste/problem material collections to reduce the amount of hazardous waste disposal.
 - b. Use reciprocal use agreements to recover funds for household hazardous waste that is generated in other counties and managed by the County.
 - c. Participate in agreements, partnerships, or both with private and public sectors to reduce costs, liability for managing hazardous waste and problem materials, or both (e.g., Department of Agriculture, PaintCare, Dakota Electric, Xcel Energy, State).

- 5. Regulate hazardous waste generators and facilities to protect public health and the environment, in accordance with County Ordinances.**
 - a. Regulate hazardous waste generators and facilities.
 - b. Work with hazardous waste generators to reduce the volume and toxicity of their waste while ensuring the remaining waste is properly managed.
 - c. Continue partnerships with the County Sheriff's Department and public entities (e.g., rural towns, townships) to reduce toxic releases caused by mismanagement of waste (e.g., burning waste).

D. Implementation

1. Public Education

Public education will be critical in implementing each strategy in the Master Plan, whether it is a continuing, expanded, or new effort. Public education is shifting beyond traditional information-sharing to a more robust engagement that develops community awareness of solid waste issues and individual roles and responsibilities to properly manage waste. To move more waste up the waste management Hierarchy, community outreach will need to leverage partnerships more effectively, use proven science-based educational messages and methods, enhance message delivery and consistency, and apply multiple communication methods that best reach the intended audience.

A communications work plan will be developed annually by the Environmental Resources Department and County Communications to identify priority messages and venues to promote waste messages to the community.

2. Environmental Justice

Environmental justice is the fair treatment and meaningful involvement of all people as environmental laws, rules, and policies are developed, implemented, and enforced. Previous Master Plans and resulting solid waste plans have not formally addressed environmental justice beyond the siting of solid waste facilities. This Master Plan establishes a framework to incorporate environmental justice throughout solid and hazardous waste program areas upon which Dakota County can continuously improve. The County will continue inclusive engagement efforts for strategy implementation. See Appendix C for more details on Dakota County's environmental justice review for the development of this Master Plan and how the County plans to use environmental justice as Master Plan strategies are implemented.

3. Phasing and Collaboration

Collaboration between County staff and stakeholder groups will be fundamental for successful strategy implementation. In Dakota County there has been a long history of solid waste service provided by private businesses and nonprofits. Therefore, the private sector, nonprofits, and other stakeholders play a significant role in implementing the Master Plan. County staff will build on stakeholder engagement approaches developed during the Master Plan revision process, continuing to nurture existing and develop new relationships so the County can consider additional tools to influence change. County staff will engage stakeholders on the more aggressive plan strategies to develop implementation approaches that are achievable, consider stakeholder perspectives, and help the County meet state objectives. County staff will apply multiple methods to engage stakeholders in a meaningful and equitable way, such as through local community cultural events and reaching home-bound residents.

County staff recognizes the need to phase in certain approaches over multiple years (see proposed timing in Part Two and also Appendix E). Collaborative efforts with interested stakeholders are anticipated to help develop time-phased approaches, refine and strengthen existing programs, and develop new programs.

Stakeholders include:

State: The County will actively work with the MPCA on emerging technology efforts, recycling and organics market development approaches, continued waste reduction measurement, support for product stewardship

initiatives, and efforts to improve Non-MSW management data and increase reuse and recycling of construction and demolition waste. The County will collaborate with the MPCA on work planning and annual priority setting.

Region: The County will work with TCMA counties to strengthen and refine regional programs (e.g., hauler licensing and reporting, HHW reciprocal use) and collaborate with interested counties on implementation phasing for similar program approaches. The County will actively look for stakeholder groups to participate in that improve regional consistency and advance the objectives of the Master Plan.

Waste Industry: The waste industry provides collection and management services. It will be essential to engage haulers and facility operators as new or expanded approaches are being considered to address potential collection and capacity issues, develop effective implementation approaches, and implement effective transitions in program approaches.

Municipalities (Cities and Townships): The County will actively work with cities and townships to explore strategy approaches and timing that addresses the needs of each community. The County will work to engage decision-makers to further identify roles and responsibilities that best align with municipal goals while also meeting County goals. The County will continue collaborating with municipal staff for landfill abatement work planning, project implementation, and to share information.

Waste Generators: The County will engage underserved (e.g., using environmental justice framework) and interested waste generators (e.g., residents, businesses, public entities, multi-unit dwellings) to refine plans for new strategy approaches and implementation timing.

4. Performance and Accountability

Proper waste management and successfully meeting Policy Plan and statutory requirements requires new strategies and increased accountability. Because everyone makes decisions about and produces waste, the Master Plan includes strategies to be implemented in whole or in part by various stakeholders, including the state, County, public entities, residents, businesses, non-profit organizations, and the waste community.

Performance evaluation is undertaken at the project/program level (e.g., pounds of materials reused and number of participants at a Fix-It Clinic; number of inspections and compliance actions). Formal performance evaluation and reporting is required annually at the program level (e.g., diverted tons, costs, participants in the Business Recycling Incentive Program) to establish work plans and budgets, from regulated parties (e.g., hauler and facility reports) and through multiple state reports to measure progress on Policy Plan and statutory requirements. Appendix D describes the required annual reports, program reporting requirements, and contains tables with the Master Plan strategies, key entities for implementation, measures, and primary mechanisms for measurement.

APPENDIX A: EXISTING WASTE MANAGEMENT SYSTEM AND COUNTY PROGRAMS

This appendix identifies waste management roles and responsibilities, demographics, waste projections and composition, waste amounts and management methods, facilities, and Dakota County's programs and activities.

A. Waste Management Governance, Roles, and Responsibilities

State and local government and the private sector all have roles in implementing solid waste policies and operating the TCMA waste management system. The public sector is responsible for establishing policies, quantifiable waste management objectives, and programs to conserve natural resources and protect public health and the environment. The private sector largely owns and operates the Twin Cities Metropolitan Area (TCMA) solid waste service provisions and infrastructure.

The extent and complexity of the TCMA's solid waste system has required coordination among the following groups:

State – Minnesota Pollution Control Agency (MPCA): The MPCA regulates solid waste facilities and sets solid waste policy through the Policy Plan to meet goals and requirements prescribed in State law. The Policy Plan establishes waste management objectives and the framework for TCMA counties and municipalities to follow. The MPCA reviews and approves county master plans to ensure the Policy Plan is implemented. The MPCA also distributes State funding to TCMA counties for solid waste abatement activities.

Region: On September 1, 1993, the Solid Waste Management Coordinating Board (SWMCB) was established through a joint powers agreement (JPA) with Anoka, Carver, Dakota, Hennepin, Ramsey, Scott, and Washington counties to increase the efficiency and environmental effectiveness of solid waste management in the TCMA, through coordinated communications and outreach, policy development, and collaborative activities. In 2017, an evaluation of the SWMCB's roles and responsibilities was conducted, and resulted in termination of the SWMCB effective in 2018. New JPAs between TCMA counties continue for household hazardous waste (HHW) reciprocity and regional hauler licensing.

County: In accordance with State law (Minn. Stat. §§ 115A and 473), county governments play the primary role in planning, implementing, and maintaining solid waste programs for proper management of waste generated within their respective jurisdictions. Dakota County collaborates with the state, region, public entities, residents, businesses, community groups, and the waste industry to develop a Master Plan and programs to meet state goals. Dakota County licenses and regulates haulers and facilities for collection, management, and related services. Dakota County does not own or operate waste management facilities; however, does lease land in Empire Township for waste management purposes.

Municipalities (Cities and Townships): Cities and townships play an integral role in implementing local waste management programs and providing education to residents and businesses. Minn. Stat. § 115A.551 allows political subdivisions within the County to develop and implement programs and practices designed to meet County Master Plan requirements. Ordinance 110 Section 16 requires cities to implement programs and activities for local abatement and to report on achievement of performance standards. Municipalities are required to comply with the Master Plan, ensure solid waste collection in their community, and have authority to license waste haulers for collection of waste and recycling.

Rural Solid Waste Commission (RSWC): In Dakota County, a RSWC was formed in 1988 through a JPA between the 13 townships and six rural cities (Coates, Hampton, Miesville, New Trier, Randolph, Vermillion) as the responsible political subdivision to develop and manage waste abatement programs in rural Dakota County. The RSWC was the first entity to administer a curbside collection program serving an entire rural area of a Minnesota county.

Public Entities: State laws hold public entities, including counties, cities, townships, and public schools to a higher standard in managing their waste. Public entities are responsible for carrying out proper waste reduction, recycling, and disposal activities as part of business operations. Public entities are required by statute to recycle a minimum of three materials and manage their MSW in accordance with the County Master Plan's preferred MSW management method(s).

Waste Industry (Private Sector): For decades, State law has included a preference for private-sector waste management and waste facility operation. In Dakota County, the private sector is primarily responsible for the collection, processing, and brokering of waste and materials. The private sector establishes fees for these services.

Waste Generators (Residents, Businesses, and Organizations): Residents, businesses, and organizations generate waste either as private individuals or as contributors to business, industrial, construction, or demolition activities. Waste management choices reflect various influences and situations, including having the opportunity for waste management options, cost, knowledge, and responsibility. Residents and businesses drive the amount of waste that is generated and discarded, and thus needs to be managed.

B. Demographics

With a population of 418,432, as estimated by the Metropolitan Council for 2016, Dakota County remains Minnesota's third most populous County, growing five percent since the 2010 Census. Between 2010 and 2016, cities in Dakota County with the largest population increases were Lakeville (5,011 new residents, 9.0 percent growth), Eagan (4,017 new residents, 6.3 percent growth), Apple Valley (2,254 new residents, 4.6 percent growth), and Rosemount (1,685 new residents, 7.7 percent growth). The State Demographer projects Dakota County's population at nearly half a million by 2035.

Because this County Master Plan is a long-range planning document, it is important to bear in mind demographic changes that are underway and consider their potential implications for waste management. Dakota County's waste management system and programs will need to respond to projected growth and changes in population.

Demographic Summary (U.S. Census Bureau, 2015 American Community Survey)

<u>Land area:</u>	587 square miles
<u>Land Use:</u>	1/3 urban/suburban, with 95 percent of the County population; 2/3 rural, with 5 percent of the County population
<u>Median age:</u>	37.8 years, a slight increase over the 2010 Census
<u>Populations of Color:</u>	20.9 percent
<u>Total households:</u>	160,890
<u>Median annual household income:</u>	\$77,196

As the County’s population grows, increased waste generation will place additional stress on the waste management system, requiring an aggressive focus on waste reduction and reuse. Population changes include a shift from a young, family-centric population to an older retiree population. It is possible that waste composition could be somewhat different than projected (e.g., increased pharmaceuticals). Dakota County’s population is also becoming more diverse. For the 2016-2017 school year, the Minnesota Department of Education reported that 15.5 percent of students enrolled in Dakota County schools spoke one of 125 different non-English languages as their primary language at home. As the trend for growing diversity continues through this County Master Plan horizon, it is important to understand audience language and cultural needs when developing effective communications on waste management.

C. Waste Projection and Composition

For purposes of this Plan, mixed municipal solid waste (MSW) includes garbage, refuse, and other solid waste from residential, commercial, and community activities, with exclusions as defined in State law. To effectively plan solid waste management to address the expected increases in waste generation, it is necessary to project the amount of MSW likely to be generated in the future. It is also important to have complete and current data on the types and quantities of waste for good planning, implementation, and evaluation of solid waste programs.

Projected MSW Growth: Dakota County’s waste projection is shown in Figure A-1, with 2016 annual reporting data as the base year. Assuming the MSW per capita rate remains fairly constant with minor yearly fluctuations, waste generation is expected to increase by roughly 15 percent from 2016-2037, driven by an anticipated population increase of 15 percent, based on Minnesota State Demographer data. In 2016, 460,115 tons of MSW was collected and managed. MSW is projected to increase to 529,000 tons by 2038.

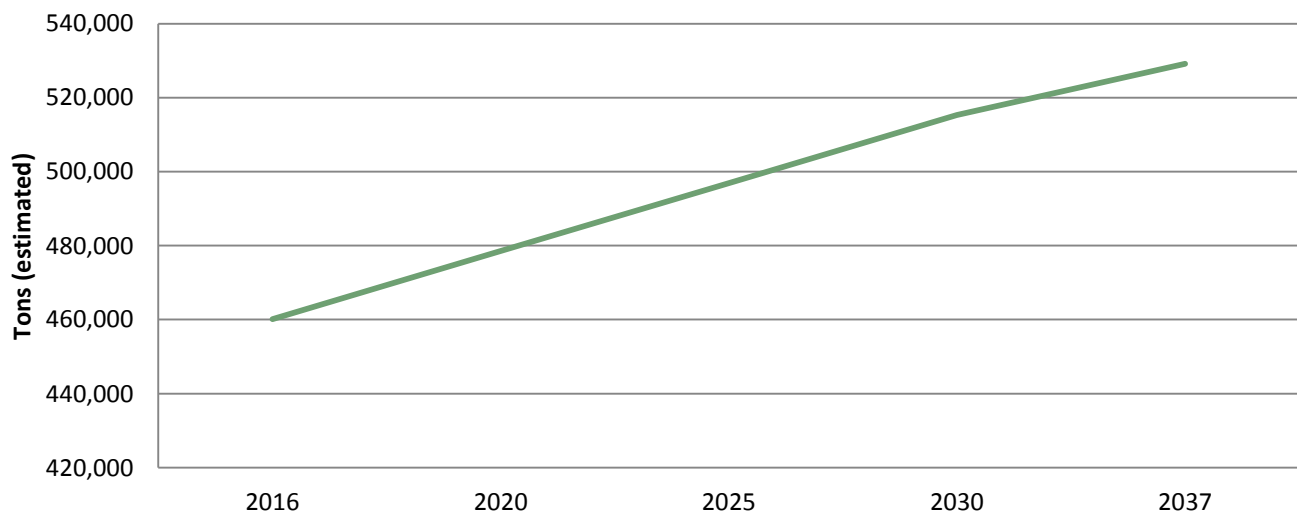
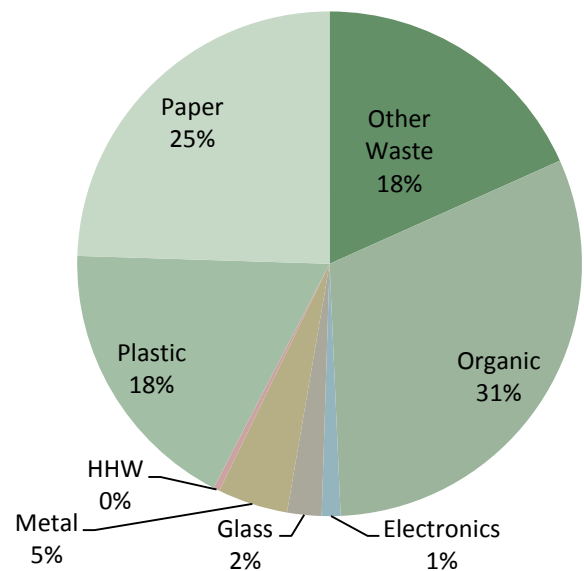


Figure A-1: Projected Growth of MSW Managed in Dakota County 2016-2038

Composition of Municipal Solid Waste

The MPCA conducted a statewide waste characterization study in 2013 to assist the MPCA and local governments with planning efforts for managing MSW. Results of the waste composition study are shown in Figure A-2. The study identified potential diversion opportunities based on the largest quantities of recoverable materials found in the waste stream, including organic waste (food, non-recyclable paper, yard waste), paper, and plastic.

Figure A-2: Statewide MSW Composition (2013)



D. Waste Management in Dakota County

This section looks at the amount of MSW generated in the County from residents, businesses, and public entities over time and how it has been managed.

Total MSW Managed

Total Dakota County MSW managed fluctuates from year to year, but has remained relatively constant in the County from 2010 – 2016 (Figure A-3).

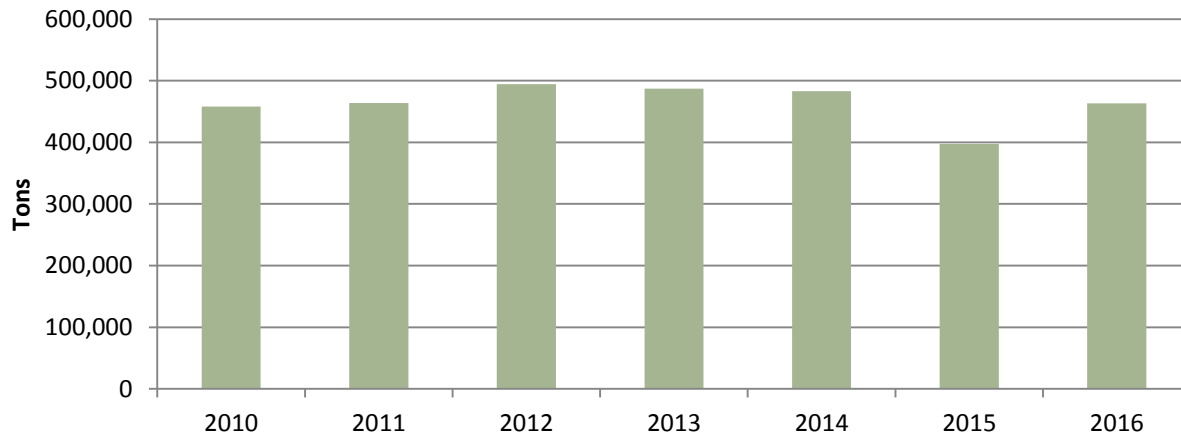


Figure A-3: Total Dakota County MSW Managed (Tons)

Annual variations in the amount of waste managed may be due to several factors, such as prevailing economic conditions or reporting methods provided by haulers and facilities. A modest increase in waste managed may be related to Dakota County’s nearly five percent growth in population between 2010 and 2016.

Waste Managed by Predominant Management Method

Dakota County tracks the amount of waste managed through recycling, organics recovery, resource recovery, and land disposal.

The amount of MSW managed by each method is calculated from data reported by licensed organics and recycling facilities, MSW landfills, and resource recovery facilities, and is dependent on the waste hauler properly claiming county-of-origin at the time the waste is delivered to the respective facility. Figure A-4 provides trend data over the past seven years for recycling (includes organics), resource recovery, and land disposal for waste generated in the County.

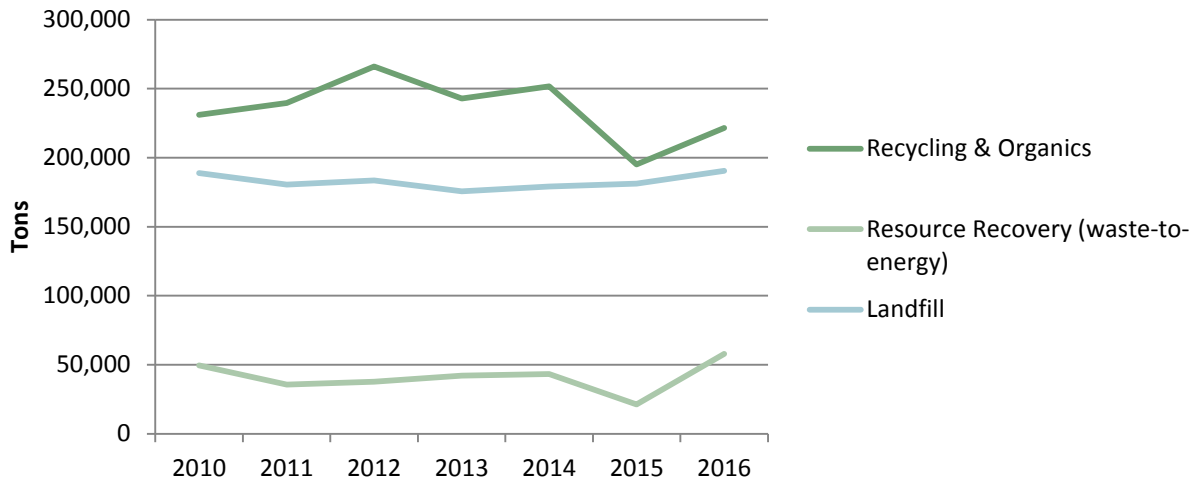


Figure A-4: Management of MSW Generated by Dakota County Residents and Businesses (Tons)

E. Dakota County’s Waste Programs and Activities

Dakota County’s Environmental Resources Department has responsibility for developing and implementing waste management programs to protect, preserve, and enhance the environment and public health in the County. Department responsibilities include:

- Providing communications, education, and outreach on waste management with County, municipality, hauler, and community partners.
- Providing technical assistance to cities, partners, and the regulated community.
- Providing financial assistance, infrastructure, or both to support municipalities, schools, businesses and non-profit community organizations.
- Coordinating the collection and management of recyclables and household and business hazardous waste at The Recycling Zone.
- Establishing and collecting solid waste landfill host fees, license, and other fees.
- Leasing County-owned land as a transfer station, yard waste composting site, and a fully-permitted source-separated organics composting facility that serves the region.
- Enforcing County Ordinances covering licensing and disposal restrictions for solid waste facilities, hazardous and solid waste generators, and waste haulers.

1. Regional Solutions

Regional Resources Promoted by the County: County staff works with TCMA county peers and the Association of Recycling Managers to share ideas, techniques, and successes. Members of these organizations have developed terminology for recycling and organics to provide consistent education across the TCMA, making it easier for residents and businesses to learn and understand the messages. Rethink Recycling (RethinkRecycling.com) is the online regional “go-to guide for waste and recycling in the Twin Cities.” Dakota County’s website links to RethinkRecycling.com, so residents and businesses can find additional services throughout the region.

Reciprocal Residential Use: Convenience is inherent to a successful household hazardous waste (HHW) collection program. Although The Recycling Zone is within 10 miles of 70 percent of Dakota County residents, it can be more convenient to use another regional HHW facility during business hours. Dakota County maintains reciprocal use agreements with all TCMA counties to accept hazardous waste from TCMA residents at any TCMA facility.

County Hauler Licensing System: Dakota County participates in a regional hauler licensing program with Anoka, Carver, Hennepin, Ramsey, and Washington counties. Approximately 90 haulers are licensed to haul MSW in Dakota County. Of these, 36 are based in Dakota County, and the others are based in other metro counties. In 2018, Scott County will participate in the regional hauler licensing program.

2. Source Reduction and Reuse Programs and Activities

Dakota County’s efforts in reduction and reuse have focused on reuse opportunities at The Recycling Zone, demonstrating waste reduction and reuse in County operations, and providing education and resources on reuse to residents and businesses.

Projects and Programs in the Community

Reuse at The Recycling Zone: Residents and businesses can drop off or take usable materials, such as paint, fertilizers, household cleaners, and other household items at no charge. Reuse reduces County costs by offering materials that would otherwise need to be managed through disposal methods.

Fix-It Clinics: Dakota County began sponsoring monthly Fix-It Clinics in 2016, with events organized with volunteers and Neighbors Inc. through a grant from the SWMCB’s Community POWER program. Residents bring clothes, small electronics, and other household items that need repair and receive free guided assistance from skilled volunteers.

Reuse Guide: Dakota County maintains a *Reuse in Dakota County Guide*, available on Dakota County’s website for residents to download, print, or access through an online map-based format. Residents have access to 40 drop-off outlets and 68 second-hand businesses within the County.

Preventing Wasted Food: In 2016, the County hosted a MN GreenCorps Member to explore opportunities to decrease the amount of food thrown away by residents. Expiration dates, poor planning, and buying in bulk at warehouse stores contribute to waste. Through this project, residents received educational tools to simplify meal planning, shopping, food storage, and kitchen inventories.

Projects and Programs in County Operations

Waste reduction and reuse are emphasized in County buildings and on County grounds, including:

- Promoting reuse as a first step in County asset disposal.
- Providing a green meeting toolkit, guidance, and resources to help reduce waste at County-sponsored events.
- Providing recurring reuse messages for employees on DakotaWorks (employee website).
- Promoting the Employee Reuse, Recycling, and Disposal Guide to educate employees on reusing office items.
- Using an Electronic Document Management System (EDMS) to convert many processes from paper-based to electronic-based applications. EDMS manages contracts, financial documents, employee benefits, and other types of documents.
- Using a Managed Print Service (MPS) program throughout the County to reduce paper use and wasted supplies. MPS allows the County to define processes, run reports, and optimize supply and service fulfillment.
- Implementing Dakota County's Resource Management program allows collaboration between County staff and the County's hauler to evaluate data and implement changes to reduce waste and increase diversion.
- Applying Environmentally-Preferable Practices: the County's Procurement Policy requires purchasing of environmentally-preferable products beyond what State statute requires, including acquiring products and services that reduce waste or reduce toxins and pollution, reusing, supporting recycling markets, rewarding manufacturer responsibility, and reducing water and energy use. For example, all County departments must purchase 100 percent recycled-content copy paper and buy reusable, recyclable, or certified compostable tableware (plates, cups, bowls, service ware).

3. Collection Best Practices

Solid Waste Hauler Licenses: Hauling companies that collect MSW generated in the County or transport MSW within County boundaries must obtain a MSW hauler license. Dakota County participates in a regional MSW hauler licensing program.

Cost and Finance: Figure A-5 illustrates the funding distribution for Dakota County's waste abatement activities (including the Hazardous Waste and Solid Waste regulatory programs) in 2016. Specific amounts budgeted toward waste abatement activities within each of these funding categories can vary widely from year to year.

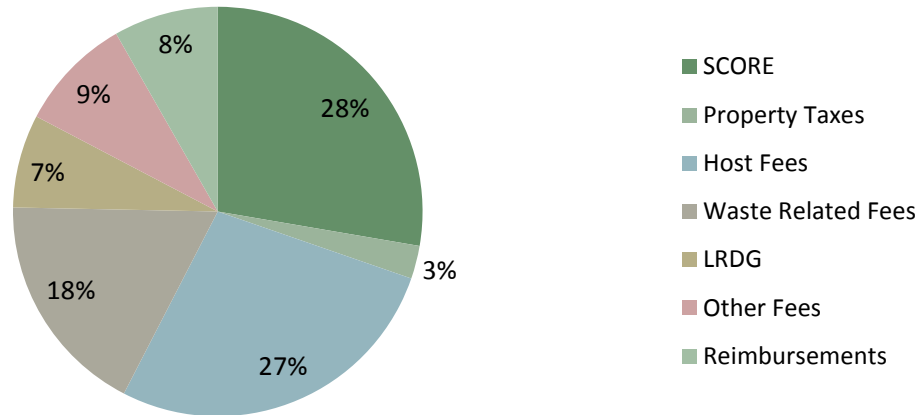


Figure A-5: 2016 Waste Abatement Program Funding Sources

Revenue Sources: Dakota County’s waste abatement and HHW management programs are funded by a combination of state grants, negotiated landfill host fees, waste-related fees, reimbursements, and property taxes (Figure A-6).

- Select Committee on Recycling and the Environment (SCORE) Funding:** SCORE funds are derived from a percentage of the State tax for MSW and non-MSW management services (Solid Waste Management Tax- SWMT). Services subject to this tax include collection, transportation, processing, and disposal of waste materials. Service providers (haulers and disposal facility operators) who directly bill generators or customers are responsible for collecting and remitting the tax to the State. Over \$70 million is generated annually through the tax statewide. In 2016, roughly 50 percent of the SWMT was allocated to the MPCA’s Environmental Fund for solid waste and landfill cleanup activities, 30 percent was allocated to the State General Fund, and 20 percent was distributed to Minnesota counties as SCORE allocations to support local waste reduction and recycling programs. In state FY 2016, Dakota County received \$1,206,804 in SCORE funding and provided the required 25 percent match.
- Local Recycling Development Grant (LRDG) Funding and Metropolitan Landfill Abatement Account (MLAA):** LRDG is a grant program (Minn. Stat. § 473.844) funded by the MLAA and used for landfill abatement projects in the TCMA. The focus of the program is consistent with the Waste Management Act, and implements the policies and programs outlined in the Policy Plan. Funding for the MLAA program is generated from a \$2.00 per cubic yard (or \$6.66 per ton) surcharge on MSW disposed of at Metropolitan landfills. Paid by solid waste facilities, three-quarters of the surcharge proceeds were deposited into the MLAA in 2016. The MLAA funds the LRDG program, with grants offered to the TCMA counties. The LRDG Program is designed for planning, developing, and implementing new, enhanced, or more effective waste reduction, yard waste composting, and recycling programs for residential, commercial, industrial, and institutional generators of MSW. Counties must support and maintain effective municipal recycling as a condition of receiving LRDG funds and must match LRDG funds with an equal county contribution. LRDG funds are distributed from the MLAA and administered by the MPCA.

In state FY 2016, Dakota County received \$320,847 in LRDG funding and provided the required 100 percent match.

- Landfill Host Fees:** In accordance with negotiated agreements, Dakota County collects host fees from the six landfills located in the county, including two MSW Landfills, an industrial waste landfill, and three construction/demolition landfills. Host Fee revenues are deposited in Dakota County’s Environmental Legacy Fund (ELF) along with Gravel Tax revenues. The ELF was established by the Dakota County Board of Commissioners on December 15, 2015, to protect, preserve, or enhance the environment (Resolution No. 15-663). ELF supports environmental activities related to brownfield redevelopment, environmental capital projects, Environmental Resources Department operations, gravel pit remediation, natural area and shoreland conservation, Parks/Greenway Master Plan improvements, and implementation of the Natural Resources Management Plan and Solid Waste Master Plan.
- Fees:** The County collects fees from solid and hazardous waste facilities and haulers that it regulates. Fees vary depending on the facility type, and the type and volume of waste managed. Additional fees are collected for specific services, such as electronics recycling and use of the business services at The Recycling Zone.
- Reimbursements:** Reimbursements include payments from organizations for product stewardship initiatives (e.g., architectural paint) and through agreements with organizations (e.g., Excel Energy for fluorescent bulbs, MN Department of Agriculture for pesticides, TCMA counties for HHW reciprocity).
- Property Taxes:** In 2016, Dakota County had the lowest per capita property tax rate of any Minnesota county. Property taxes support essential County functions, including transportation and transit, safety, parks, libraries, and waste management programs all to support and improve the health of residents and protect the environment.

Program	SCORE	LRDG	Host Fees	Fees	Property Taxes
Waste Abatement Program Staff Salaries, Benefits and Administration	◆		◆		◆
School Recycling and Organics Programs	◆		◆	◆	
City and Township Waste Abatement Programs		◆	◆	◆	
Organics Programs	◆		◆		
Business Recycling Programs			◆		
Program Support (Consulting Services, Public Education campaigns, etc.)	◆	◆	◆		
County Office Recycling				◆	
Household Hazardous Waste Disposal and Site Related Expenses	◆		◆	◆	
Solid Waste Management Coordinating Board Activities					◆

Figure A-6: 2016 Funding Sources for Landfill Abatement Activities

4. Recycling Management Programs and Activities

Dakota County launched its recycling program in 1988 to ensure that residents would have the opportunity to recycle.

Projects and Programs in the Community

Curbside Collection: Dakota County's residential curbside recyclables collection program began in 1989. Curbside recycling collection programs generally are provided by subscription service (e.g. open hauling system). Residents of Hastings and Farmington are served by a city/hauler contract-provided service and city-provided service, respectively. Haulers collect paper, glass, metal, and plastics. Some haulers have expanded the list of materials accepted when markets become available. Residential curbside pickup of recyclable materials occurs in all cities and townships.

Community Funding Program: The Community Funding Program operates as a Dakota County partnership with the 13 largest cities and the RSWC to advance Master Plan objectives through programs, practices, or methods designed to meet waste abatement requirements. Dakota County provides performance-based funding for waste abatement education and recycling infrastructure and enters into JPAs with communities. These agreements require that a specified level of service be offered to residents, and that communities annually submit a work plan, itemized budget, and final report. The purpose of the Community Funding Program relates to Dakota County Solid Waste Master Plan objectives, as described in the 2016 JPA:

5.1 PROGRAM PURPOSE. The Dakota County Board of Commissioners adopted the 2012-2030 Solid Waste Master Plan (Master Plan) on March 27, 2012, as required, to implement the Minnesota Pollution Control Agency's (MPCA) 2010-2030 Metropolitan Solid Waste Management Policy Plan. The Master Plan identifies performance-based funding for Municipalities to develop and implement waste abatement programs, education, and outreach. The Community Funding Program's primary purposes are to: ensure that residents have the opportunity to recycle; and to develop, implement, and maintain projects, programs, practices, and methods to meet waste abatement objectives as described in the Master Plan. The Community Funding Program supports the County's efforts for broad-based education and implementation of local programs and projects for waste reduction, reuse, recycling, hazardous waste management, and organics diversion as described in the Master Plan.

Eligible activities relate to government leadership, operational needs, community education, and targeted priorities identified by the County. Dakota County provides landfill abatement education to residents in collaboration with the cities and the RSWC, using electronic and print newsletters, websites, utility bill inserts, educational presentations, and pilot projects. The County also provides best practices guidance, assistance with measuring diversion weights and rates, and other types of technical assistance to support municipal Community Funding activities. In 2016, Dakota County distributed approximately \$450,000 to the cities and the RSWC. Some communities also contribute their own funds to support their recycling programs and thereby increase the total amount spent on recycling programs.

Recycling at Municipal Parks: Beginning in 2014, Dakota County emphasized municipal park and public area recycling. The Community Funding JPA between Dakota County and each city requires use of a consistent set of

best practices to help park visitors know what to recycle (e.g., paired trash and recycling, color-coded, labeled, top-opening). Additional city parks are assessed and prioritized each year based on use, with cities and townships ordering containers from a pre-approved list. As a result, 105 city parks have strong recycling programs that meet best management practices.

Recycling at Municipal Events: Dakota County enhances recycling at city-sponsored public events through technical assistance, education, and on-site support, in partnership with city staff and volunteers. Dakota County encourages event organizers to implement recycling best management practices, and to collect waste diversion data for reporting.

Recycling Drop-Off Locations

The Recycling Zone: As required by Minn. Stat. § 115A.552, the County provides for at least one recycling center – The Recycling Zone. At no charge, residents can drop off traditional recyclable materials such as paper, cardboard, cans, and bottles and non-traditional materials such as cooking oil, and holiday lights. Businesses can also drop off recyclables at no charge.

Hastings Paper and Cardboard Drop-Off: Since 2006, the waste hauler for the City of Hastings has provided a centrally-located recycling container for businesses and residents to drop off paper materials, including cardboard, magazines, newspapers, junk mail, and box board.

Farmington Cardboard Drop-Off: Since 1993, the City of Farmington has strategically placed collection bins (e.g., dumpsters) across the city for business and residential drop-off of corrugated cardboard.

Commercial, Industrial, Institutional (CII): CII entities include businesses, manufacturers, schools, and local governments. Private waste haulers serve CII entities and collect recyclable materials, such as newspaper, glass, metal cans, magazines, cardboard, mixed paper, and plastics.

5. Organics Management Programs and Activities (Includes Programs Combined With Recycling)

The County's primary roles in supporting organics recovery include regulation, managing a lease on County-owned land for waste management purposes, education, and promoting collection at community events.

Organics Regulation: The County regulates organics and yard waste management and facilities. The County prohibits land disposal of yard waste, Christmas trees, and holiday plant decorations. Collected yard waste must be placed in a compostable bag, and yard waste self-hauled to a facility must be dropped off in a reusable container or in a compostable bag. The State and County prohibit mixing yard waste with MSW; however, yard waste can be collected by MSW haulers using separate collection vehicles or by special yard waste collectors, such as lawn services, and delivered to yard waste sites.

Lease for Food and Yard Waste Capacity: County-owned land in Empire Township is actively managed through a lease with a private firm to operate both source-separated organics composting and yard waste composting facilities. This lease was recently extended for another five year period with extensions possible through June of 2032.

Projects and Programs in the Community

Composting at Home: Dakota County promotes residential backyard bin composting. The County website informs residents where to purchase a backyard composting bin or how to build their own, a recipe to create the right mix of materials, and how to use compost in home projects.

Residential Organics Drop-Off: In October 2016, Dakota County launched its first residential organics drop site at Thompson County Park in West St. Paul. In November 2017, a second residential organics drop site opened in Egan at Holland Lake in Lebanon Hills Regional Park. The County provides education, compostable bags to participating residents, and collection of organics. Collected organics are delivered to a local commercial compost facility.

Yard Waste Disposal: Yard waste, such as grass clippings, leaves, and twigs are prohibited from weekly trash collection. Residents have several options for managing yard waste, including composting, collection by a licensed hauler, or delivery to a yard waste compost facility.

Zero Waste at Public Space Venues: Dakota County was awarded an Environmental Assistance Grant through the MPCA for a zero waste pilot project at four municipal ice arenas and three high school stadiums to assess and implement organics collection; update containers, labels and signage following best management practices; introduce certified compostable food service supplies; and educate staff and patrons. The project goal was to increase total waste diversion from baseline to 60 percent. The project concluded that school stadiums may have greater zero waste potential than arenas, as post-program diversion findings show that 37-56 percent of overall arena waste generated is true trash.

School Recycling & Organics Program: In 2009, the County initiated an Enhanced School Recycling Program to improve recycling in public schools. In 2013, the Program was expanded to include organics diversion and was extended to private schools. The new School Recycling & Organics Program focuses on organics collection, primarily in cafeterias, kitchens, and bathrooms, and improving traditional recycling in schools. The program provides containers, labels, technical assistance, and educational resources. As of 2016, 60 public schools and six private schools have participated, representing roughly 40 percent of all K-12 public and private schools in Dakota County. Dakota County hosts an annual School Recycling Workshop, inviting administrators, buildings and grounds personnel, kitchen staff, teachers, and Green Teams to learn about industry updates, best practices information, creative solutions, and free resources. The annual workshop is designed to assist all schools in improving their waste reduction, recycling and organics programs.

County Fair Recycling and Organics Collection: Since 2003, Dakota County and volunteers have worked with fair staff to decrease the amount of material going into the trash at the County Fair, which attracts over 120,000 visitors each year. Organics collection was added for the public in 2014, but recent efforts engaged County Fair food vendors. In 2016, all interested vendors were given a green bucket and compostable bags to divert organics, with a 61 percent increase in the amount of organics collected.

City and Community Events for Recyclables and Organics Collection: The County has recycling resources available for small and large events, including free portable recycling and organics containers, bags, signs, and litter grabbers. In 2016, more than 43 municipal and community events received assistance on recycling, organics collection, or both. The County works with the public, municipalities, and haulers to receive event data.

Business Recycling Incentive Program: In August 2016, the County’s first business recycling program launched. It serves commercial entities within North American Industry Classification (NAICS) Codes 42-81 that are required by state law to recycle a minimum of three materials. The program provides up to \$10,000 per eligible business to address the most frequently encountered barriers (e.g., up-front costs, lack of knowledge/information to develop successful program). Participants work with the County’s technical consultant to complete applications and identify and implement best waste management practices (employee training, placement of bins, consistent signage), and measure results.

Projects and Programs in County Operations

Dakota County’s internal recycling program covers all County buildings and grounds, including park facilities, libraries, service centers, and transportation facilities. In 2014, single-stream recyclables collection was launched in all County buildings, including park rental facilities. Additional allowable materials were also added (yogurt tubs, cartons). Ongoing efforts include:

- Providing standardized, paired, and labeled (e.g., organics, recycling, and trash) containers in key conference rooms and employee areas.
- Recycling confidential papers, non-confidential papers, glass and plastic bottles and cans, cardboard, hardcover library books, batteries, toner cartridges, fluorescent and LED bulbs, and computers and computer equipment.
- Providing recurring recycling messages for employees on DakotaWorks (employee website).
- Promoting the Employee Reuse, Recycling, and Disposal Guide to educate employees on recycling office items including paper, plastic bottles, and paper clips.
- Conducting periodic waste sorts at County buildings to measure progress and reporting findings to employees.
- Developing a Resource Management waste and recycling contract to provide building-specific organics, recycling, and trash services, evaluation, and service improvement recommendations.
- Convening a multi-department Resource Management Project Team to implement countywide waste reduction, organics, and recycling programs.

6. Non-Municipal Solid Waste Programs and Activities

Non-MSW includes non-hazardous industrial waste, construction and demolition waste, materials banned from disposal with MSW, problem materials, infectious waste, and other waste streams that are not MSW or otherwise defined or regulated as hazardous waste. The County’s non-MSW program consists of regulatory oversight of non-MSW at facilities in the County and promoting reuse, recycling, and processing of non-MSW.

Non-MSW Regulation: Although some non-MSW is routinely recycled, a significant portion is landfilled. Dakota County’s primary role is regulating the three non-MSW landfills in the County that serve the region. The County issues facility licenses, collects fees, conducts landfill inspections, and provides technical assistance and enforcement as necessary to ensure compliance with Ordinance 110. The County also works closely with the MPCA on non-MSW regulatory issues, including rule revisions and compliance.

Projects and Programs in the Community

Tire Collection Program: Proper tire management minimizes potential breeding habitats for disease-carrying mosquitoes. Dakota County provides funding to the RSWC for waste tire collection events in the townships each year. This program provides an incentive for township residents to easily recycle this problem material. Tires are also collected at The Recycling Zone and at community clean-up events.

Non-Traditional Materials: The County started seasonal collection of agricultural film plastic (e.g., silage bags, bunker covers, and bale wrap) in 2015 and added boat wrap in 2016, with 20 tons collected annually. Material is taken to a processor that can recycle bulky plastic. The program was promoted to boat storage locations and about two dozen dairies and livestock farms.

Projects and Programs in the County Operations

High Performance Buildings: The Dakota County Design Construction Sustainability Standards are required in County capital building projects to reduce waste generation, increase reuse and recycling, and minimize the County's environmental footprint. The Standards include guidelines for building deconstruction and demolition, construction waste reuse and recycling, use of sustainable building materials, native landscaping, storm water management, and energy conservation.

7. Landfill Abatement

Communications, Education, and Outreach Programs and Activities

The County committed financial and staff resources to meeting statutory requirements for public waste education. Minn. Stat. § 115A.552, subd.3, requires counties to “provide information on how, when, and where materials may be recycled, including a promotional program that publishes notices at least once every three months and encourages source separation of residential, commercial, and institutional materials.” Additionally, Minn. Stat. § 115A.96 requires counties to have an educational component to their HHW management plans.

County Communications: An annual communications plan identifies target audiences, priority messages and outlets to promote waste management information. Ongoing resident education includes brochures, monthly e-news, mailers, website information, and classes. The Business Recycling Incentive Program provides brochures, bi-monthly e-news, employee posters, employee training, container labels, direct mailers, and website information. Students and staff are educated through the School Recycling & Organics Program, waste sorts, posters, recycling guides, container labels, activity sheets, presentations, and training.

County-Funded Education through Cities and the RSWC: The County has annual JPAs with municipalities for local residential recycling and education programs. Each municipality must maintain websites, distribute County products, publish County messages, and provide in-person education and outreach.

Educational Tours: Groups are invited to The Recycling Zone to learn how to properly manage HHW and recyclables. An annual Tour de Trash invites residents to visit a recycling facility, landfill, compost site, and The Recycling Zone to understand how waste is managed.

Technical Assistance: County staff provides technical assistance to residents through phone, email, and website inquiries. The Business Recycling Incentive Program provides resources and technical assistance for qualifying businesses. Public and private schools are eligible for the School Recycling & Organics Program for help to

increase waste diversion. Technical assistance is provided to municipalities through the JPA. Regulated facilities receive County recommendations for waste management improvements during facility inspections.

Master Recycler/Composter (MRC) Program: Twice each year, Dakota County offers a six-week training course for residents on recycling and composting. After completing the course, graduates volunteer 30 hours to public outreach.

Education Resources for the Community

Green Guide: The Green Guide is an online resource on how to reduce, reuse, recycle, compost, dispose of, and properly manage more than 100 household items. Information includes pick-up and drop-off services available to County residents.

E-news: Electronic newsletters (e-news) are sent to three different audiences with regular information on waste reduction, recycling, and organics diversion. Monthly e-news is sent to 1,500 residents and over 300 businesses, including hazardous waste generators. E-news on the organics drop-off program is received by 850 residents.

Education Kits and Displays: Resources for teachers, students, community groups, and other organizations are available for check-out and include displays, activity kits, learning kits, and banners.

Presentations and Booths: County staff and volunteers regularly present at schools, meetings, and events.

Solid and Hazardous Waste Regulation Programs and Activities

The County regulates waste haulers, generators, and facilities using ordinances, licenses, compliance inspections, technical assistance, and enforcement. Compliance inspections are conducted regularly to evaluate solid and hazardous waste facility operations for compliance with license conditions. Inspection frequency is based on the type of facility, potential risk to the environment, and compliance history. If a facility is found to be out of compliance, a range of actions ensue, typically beginning with formal notification of inspection findings and providing opportunities to correct the problem.

County Solid Waste Ordinance: Dakota County's solid waste regulation program began in the 1970's with adoption of Ordinance 110, which includes standards for regulating solid waste management and the operation of solid waste facilities, including infectious waste facilities; requirements for certain facilities on a disposal site; and provisions for application and license fees, financial assurance, and penalties for lack of compliance with these provisions.

County Hazardous Waste Ordinance: The County's hazardous waste regulatory program began in 1977 with the passage of the Waste Management Act and County Board adoption of Dakota County Ordinance No. 111, Hazardous Waste Regulation (Ordinance 111). Ordinance 111 establishes standards for generating, storing, processing, or managing hazardous waste in Dakota County. The County offers free training for hazardous waste generators four times each year.

Solid Waste Facility Licenses: Solid waste management facilities must have a license from Dakota County to operate. The County licenses MSW, industrial, and demolition landfills; waste processing and recycling facilities; transfer stations; yard waste compost sites; and organics composting facilities. The County issues solid waste facility licenses for a two-year period. Dakota County regulates landfills that receive combustor ash, process residuals, and bypass from regional resource recovery facilities.

Hazardous Waste Generator Licenses: Dakota County annually licenses hazardous waste generators, with fees based on the amount of hazardous waste generated. Minimal generators, those that generate ten gallons or less of hazardous waste and no acute hazardous waste, are not required to have a license; however, are required to register with the County and obtain a Hazardous Waste Identification Number (HWID) from the MPCA.

Hazardous Waste Facility Licenses: Dakota County licenses hazardous waste facilities, including storage facilities, ten-day transfer facilities, storage and recycling facilities, treatment facilities, special hazardous waste storage sites, HHW and Very Small Quantity Generator (VSQG) collection sites, universal waste sites, and used oil collection sites.

The County's role in MSW land disposal is regulating sanitary landfills and MSW transfer stations located in the County that serve the region. Landfills accept waste from the region, state, and surrounding states. Although landfilling is the least preferred management method, it is necessary in an integrated waste system. The County regulates acceptance of waste at facilities located within the County, including material bans and prohibitions.

Material bans

Materials and wastes banned from disposal at MSW landfills located in Dakota County include:

- Trees and branches, including Christmas trees and holiday decorations
- Tires
- Lead-acid batteries
- Major appliances
- Waste oil/used oil and used oil filters
- Yard wastes
- Mercury-containing waste as listed in Minn. Stat. § 115A.932
- Telephone directories
- Cathode Ray Tubes
- Other listed wastes exceeding thresholds (e.g., liquids, sludges, radioactive waste, etc.)

Prohibitions

Unprocessed Waste: Ordinance 110 restricts the acceptance of processible waste at MSW landfills located in the County from metropolitan area generators, unless certain conditions are met.

Recyclables and Yard Waste: Ordinance 110 requires source-separated materials, such as recyclables and yard waste, to be delivered to the respective facilities, and prohibits land disposal of source-separated materials and other banned materials.

Burning and Burying of Waste: Ordinance 110 effectively prohibits burning and burial of solid wastes at unlicensed facilities. In 2009, the County Board eliminated the farm exemption.

Yard Waste Collection: Ordinance 110 prohibits the use of plastic bags for yard waste collection. Yard waste must be collected in paper bags or other biodegradable containers, or placed in a container that can be reused.

Co-Disposal Program: requires all businesses and industries to evaluate their waste to determine if it is hazardous. Industries that "co-dispose" non-hazardous industrial waste with MSW must demonstrate proper

evaluation in accordance with the law; comply with a state-approved Industrial Waste Management Plan; and, in Dakota County, comply with Ordinance 110. County requirements ensure that accepted waste is below hazardous waste limits. The Co-Disposal Program also documents industrial waste characteristics and the types and amounts landfilled.

Landfill Cover Programs: addresses essential landfill cover requirements for daily, intermediate and final cover. The Alternative Daily Cover Program addresses daily cover requirements at MSW landfills and intermittent cover at the industrial waste landfill in the County. The Alternative Daily Cover Program makes it possible for landfills to meet essential requirements with materials other than clean soil, including contaminated soil for daily cover. Other approved alternative daily cover options include tarps and foam, which do not consume landfill space.

The County provides technical assistance, as requested, to the MPCA for its Land Management Plan, Closed Landfill Program, and regulatory efforts to address landfill contamination issues.

Household Hazardous Waste, Toxicity Reduction, and Problem Material Management Programs and Activities

The County's HHW management services began in 1985 with Minnesota's first HHW collection. County services have grown to include a year-round facility for residential and business hazardous waste and problem materials collection. Minn. Stat. § 115A.96 requires counties to implement a HHW management plan. Dakota County provides for collection, storage, and proper management of HHW and problem materials through collection programs at The Recycling Zone, at community collection events, and drop-off locations for select HHW wastes.

The Recycling Zone Services:

Residential Material Drop-Off: Residents drop off HHW and problem materials at no charge, including: oil-based paint, flammable solvents, pesticides, automotive fluids, aerosols, propane tanks, fluorescent bulbs, and batteries. In August 2016, a fee was implemented for the collection of televisions and monitors. Other electronics remain free for residents to drop-off. The Recycling Zone accepts problem materials that aren't necessarily hazardous, but can be difficult to manage in the normal solid waste stream, such as latex paint, household cleaners, used oil, sharps, and tires (for a fee). Additional materials collected at no charge include cooking oil, musical greeting cards, ink cartridges, lead fishing tackle, eyeglasses, alkaline batteries, e-cigarettes, nicotine patches, and string lights.

Business Universal Waste, Electronics, and Fluorescent Lamp Collection: For a minimal fee, businesses can bring in universal waste, electronics, and spent fluorescent lamps to the Recycling Zone by appointment. Dakota County partners with Xcel Energy to offer businesses free disposal of up to ten bulbs per year, as part of Xcel Energy's compliance with State law (Minn. Stat. § 216B.241). Dakota Electric also provides funding for lamp disposal.

Business Very Small Quantity Generator (VSQG) Program: Because more than 90 percent of businesses in Dakota County qualify as a VSQG, the County offers a program to help businesses that produce small amounts of hazardous waste to comply with the hazardous waste rules. Technical assistance is provided and businesses are required to make an appointment to participate in the program and pay a disposal fee.

Paint Collection: Dakota County accepts business and household architectural paint at The Recycling Zone, and HHW collection events, at no charge. Minn. Stat. § 115A.1415 requires that for architectural paint sold in the state, producers must implement and finance a statewide product stewardship program. PaintCare, Inc. was established to represent paint producers and operate the paint product stewardship program in Minnesota. Through an agreement, PaintCare provides funds to Dakota County to pay for collection, transport, and processing of architectural paint.

Pesticide Collection Program: Dakota County accepts business and household pesticides at The Recycling Zone at no charge. Minn. Stat. § 18B.065 requires the Minnesota Department of Agriculture (MDA) to establish and operate a waste pesticide collection program for Minnesota counties. The MDA enters into cooperative agreements with counties to fund collection of business and household waste pesticides.

Residential Collection Events

Dakota County has collaborated with municipalities to provide two to four HHW collection events every year since 1985. Under JPAs, the County provides equipment, staff, publicity outside the collection area, and HHW disposal. Information on the hours, location, and materials accepted at The Recycling Zone are distributed on event days. Cities typically provide event sites, staff, and local publicity. HHW collection events accept paint, pesticides, used oil, cleaning supplies, and other hazardous materials, and can be more convenient for residents than a trip to The Recycling Zone.

Residential Sharps and Pharmaceuticals Collections

Dakota County has collected residential sharps (needles, syringes, and lancets) at The Recycling Zone since 2007. In 2012, Dakota County piloted a program to collect pharmaceuticals at three law enforcement facilities, in partnership with the County Sheriff's office. The pilot program was a success and expanded to eleven collection sites in 2013.

Projects and Programs in County Operations

The County emphasizes proper hazardous waste management in its buildings and on its grounds, including:

- Recycling Zone services to manage hazardous waste from County operations, such as fluorescent bulbs, paints, and electronics
- Recycling Zone services to properly manage hazardous waste illegally dumped on County property
- Rechargeable Battery Recycling Corporation program to manage batteries from County operations
- Employee Reuse, Recycling, and Disposal Guide to educate employees on proper management of hazardous waste at the office, such as cell phones and cell phone batteries

Resource Recovery Programs and Activities

Resource recovery, or waste processing for energy, is part of an integrated waste system, but only one step above land disposal. In 1985, the Minnesota Legislature adopted a law requiring that all MSW generated in the seven Metropolitan counties that is not reduced, reused, or recycled must be sent to a resource recovery facility (Minn. Stat. § 473.848).

County Lease for Transfer Station: In the early 1990’s, Dakota County worked to site an incinerator on County-owned land. Although permitted by the state in 1992, the facility was not developed and the land is currently leased to a private firm for source-separated organics composting, yard waste composting, and transfer to a resource recovery if capacity is available.

Landfill Host Fee Incentives: Dakota County’s host fees are negotiated such that landfills pay a higher fee for accepting processible waste than they pay for non-processible waste and process residuals.

F. Collection and Transportation of Waste

In Dakota County, private-sector companies generally collect and transport residential and business waste to waste management facilities. The County does not collect or transport solid waste.

Hauling Systems in Dakota County

MSW, recyclables, organics, and yard waste in the County are collected and transported largely through an open hauling system (e.g., subscription service), where businesses and residents contract with a private waste hauler of their choice.

Municipal Ordinances/Codes: Dakota County municipalities have ordinances for MSW and recycling collection in their respective areas. Municipal ordinances ensure the opportunity to recycle exists, and address residential services, including multi-unit dwellings, and commercial services. With the exception of the townships and most small cities (under a population of 500), all municipalities license MSW haulers. Some municipalities have expanded ordinance requirements. For example, the city of Apple Valley has instituted hauling zones/districts and times that collection services can be provided.

Municipality	Solid Waste Ordinances/Codes
Apple Valley	Title V: Public Works - Chapter 50: Garbage
Burnsville	Title 7: Health and Sanitation – Chapter 3: Garbage and Refuse, Chapter 6: Solid Waste Landfill Fee, Chapter 7: Mixed Municipal Solid Waste and Recyclables, Chapter 8: Construction Debris Disposal Fee, Chapter 10: Composting
Eagan	Chapter 10: Public Protection, Crimes and Offenses - Section 10.01 Storage, Deposit, and Disposal of Refuse
Farmington	Title 7: Health and Sanitation – Chapter 1: Solid Waste Collections, Chapter 4: Sanitary Landfills
Hastings	Title XIII: General Offenses - Chapter 130: Public Protection, Crimes, and Offenses
Inver Grove Heights	Title 8: Water and Sewer; Public Services – Chapter 6: Solid Waste Collection and Disposal
Lakeville	Title 4: Health and Sanitation – Chapter 2: Mixed Municipal Solid Waste and Recyclables
Mendota Heights	Title 4: Public Health and Safety – Chapter 2: Garbage and Rubbish
Rosemount	Title 5: Health and Sanitation - Chapter 1: Solid Waste, Chapter 4: Composting
South St. Paul	Chapter 46: Solid Waste
West St. Paul	Title IX: General Regulations – Chapter 92: Health Provisions (Garbage and Rubbish, Required Collection, Composting)

City Hauling and Licensing Systems: Roughly 89 percent of County residents live in communities with open hauling for trash and recyclables, although some organizations such as townhome associations may develop single waste contracts for their members. Cities using open hauling require haulers to have city-issued licenses. The city determines the number of licensed haulers to allow, and some cities limit the number of hauler licenses to reduce wear on roads. The number of licenses for residential collection in open hauling cities ranges from three haulers (Mendota) to twelve (Inver Grove Heights).

Under organized collection, a city provides or contracts for collection services. The City of Hastings uses an open bid process and contracts with one hauler to collect and transport residential MSW, recycling, and yard waste. Commercial sector waste in Hastings is managed through an open hauling system.

The City of Farmington collects and transports MSW through a public-sector organized collection system. Farmington owns the collection vehicles and employs staff to operate the vehicles. Farmington uses an open bid process and contracts with one hauler to collect and transport recyclables and yard waste. Residential and commercial (exceptions allowed) waste is managed through Farmington's collection system. In 2016 both cities directed collected garbage to resource recovery facilities.

Hauler Collected Fees: Hauler fees for trash and recyclables collection vary because the private sector establishes and negotiates rates with their customers. Ordinance 110 includes the following requirements related to hauler collected fees:

Waste hauling fees must be weight or volume-based and must increase with the volume or weight collected.

- Section 15.08 L.1: Charges for the collection of mixed municipal solid waste in Dakota County shall increase with the volume or weight of the waste collected.
- Section 15.08 L.4: Fees for service that are not based on volume or weight are prohibited.

Recycling cannot be penalized, i.e., waste haulers cannot impose a greater charge on residents that recycle than those that do not recycle.

- Section 15.08 L.2: Collectors of mixed municipal solid waste in Dakota County are prohibited from imposing a greater charge on residents who recycle than on residents who do not recycle.

Residential waste reduction is promoted by requiring haulers to offer a 38-gallon or less base unit fee.

- Section 15.08 L.3: Haulers shall offer a 38-gallon or less base fee for solid waste generated by a residential source. Incremental service levels shall not increase by more than thirty (30) gallons, with the exception of fees charged for bulky items.

Yard waste must be charged as a separate fee, apart from recycling and waste services.

- Section 15.08 L. 5: If yard waste collection is provided, charges must be indicated as a separate line item on a customer's bill for hauler service.

Existing Rates and Charges in Dakota County: Dakota County conducted a non-scientific survey of haulers, customers, and cities with organized collection contracts, and found a range of published service rates for monthly MSW and recycling services (excluding State taxes and fees):

- 30-38 gallon: \$12.00 - \$21.00 per month
- 60-68 gallon: \$13.00 - \$25.00 per month
- 90-96 gallon: \$14.00 - \$28.00 per month

A survey of select haulers for commercial services found a range of published commercial rates for weekly services (excluding State taxes and fees):

- 95 gallon (recycling): \$5.00 - \$12.00 per month
- 4 yard (recycling): \$57.00 - \$62.00 per month
- 8 yard (recycling): \$67.00 - \$88.00 per month
- 95 gallon (MSW): \$15.00 - \$23.00 per month
- 4 yard (MSW): \$64.00 - \$88.00 per month
- 8 yard (MSW): \$93.00 - \$123.00 per month

Published hauler rates provide the best cost comparison, because charges vary with container size, location, and the type of materials being collected. Inconsistent city contracting methods and strong competition in the region result in diverse hauling charges that are not comparable across cities, businesses, or residents.

The following table shows estimated costs per ton for various management methods and includes tip fees, transport from transfer stations, collection, and other related costs. Estimates do not include local fees and taxes or local planning, regulation, or program administration. Although not easily determined, the below costs per ton estimates can be used to reflect the price of MSW management.

Management Method	Total Cost Per Ton	Tip Fee	Collection and Other Costs
Recycling (residential)	\$110 - \$143	n/a	--
Recycling (commercial/industrial)	\$85 - \$90	n/a	--
Organics (food-to-animals)	\$0 - \$49	n/a	--
Source-Separated Organics	\$80 - \$193	\$40 - \$45	\$40 - \$148
Resource Recovery	\$168 - \$207	\$49 - \$84	\$119 - \$123
Land Disposal	\$130 - \$162	\$39 - \$43	\$91 - \$119

Source: Metropolitan Solid Waste Management Policy Plan 2010-2030

Obtaining pricing from private-sector facilities is difficult. Contracts are negotiated between the facility and their customers and it is considered private information. Contract pricing varies based on volume, location, and other factors. MSW land disposal facilities located in Dakota County allow for public drop-off of waste and are required to post a non-contract per ton fee or “gate rate.”

Pricing and rebates at the recycling facilities vary, in part, because the recycling markets vary. Pricing also depends on other factors, including whether the waste is from residential or business generators, composition of the materials, and the cleanliness of the materials. Contracts are negotiated between the recycling facility and the waste hauler and are not considered public information.

The cost to deliver County-generated waste to regional resource recovery facilities is consistent with the cost information in the previous table. Specifically, the 2016 and 2017 tip fee at the Ramsey/Washington Recycling and Energy Center (REC) was \$70.00 per ton. The REC Board plans to implement designation and restrict out-of-county waste deliveries. In 2017, the REC Board authorized a \$94/ton tip fee from haulers that have an agreement with a public entity in Dakota County, had previously used the REC, and that enter into a new waste delivery contract with the REC. The allowance is only for 2018.

The following table identifies reported rates for facilities that accept Dakota County waste for disposal. Rates were gathered from annual reports to the MPCA or reported by facility staff to Dakota County.

Facility	Waste Type	Rate Per Ton	Source
Burnsville Sanitary Landfill, Burnsville	MSW	\$132.00	Annual Report to MPCA (2017)
Burnsville Sanitary Landfill, Burnsville	Demo	\$109.00	Burnsville Sanitary Landfill (2018)
Frattalone’s Dawnway Landfill, Inver Grove Heights	Demo	\$12/yard	Frattalone’s Dawnway Landfill (2018)
Elk River Landfill, Elk River	MSW	\$143.00	Annual Report to MPCA (2017)
Pine Bend Sanitary Landfill, Inver Grove Heights	MSW	\$49.97	Annual Report to MPCA (2017)
Specialized Environmental Technologies, Inc. (SET), Empire Township	SSOM	\$56.00	SET (2018)
SET, Empire Township	MSW Transfer	\$97.00	SET (2018)
SKB Rosemount Industrial and Demolition Landfill, Rosemount	Demo	\$44.00	Annual Report to MPCA (2017)
SKB Rosemount Industrial and Demolition Landfill, Rosemount	Industrial	\$75.00	Annual Report to MPCA (2017)
SKB Rosemount Industrial and Demolition Landfill, Rosemount	MSW Ash	\$100.00	Annual Report to MPCA (2017)
Spruce Ridge Landfill, Glencoe	MSW	\$50.00	Annual Report to MPCA (2017)

Figure A-7: Fees for Facilities that Accept Dakota County Waste

G. Waste Management Facilities

Waste Flow

Unless directed by the waste generator to a particular facility for processing or disposal, waste haulers determine where to deliver collected waste – to a recycling, organics, yard waste, resource recovery, or land disposal facility – based on a variety of factors, including the type of material collected, facility distance, tip fees, contracts, state law or permit conditions, and whether a facility is owned by a competitor or waste hauler’s company. Dakota County does not own or operate waste management facilities. It is anticipated that haulers

will continue to select and deliver waste to the following existing facilities and to new facilities as business decisions are made.

Figure A-8 shows the direction of material flow to various facilities within and outside the TCMA in 2016 (recycling facilities not included).

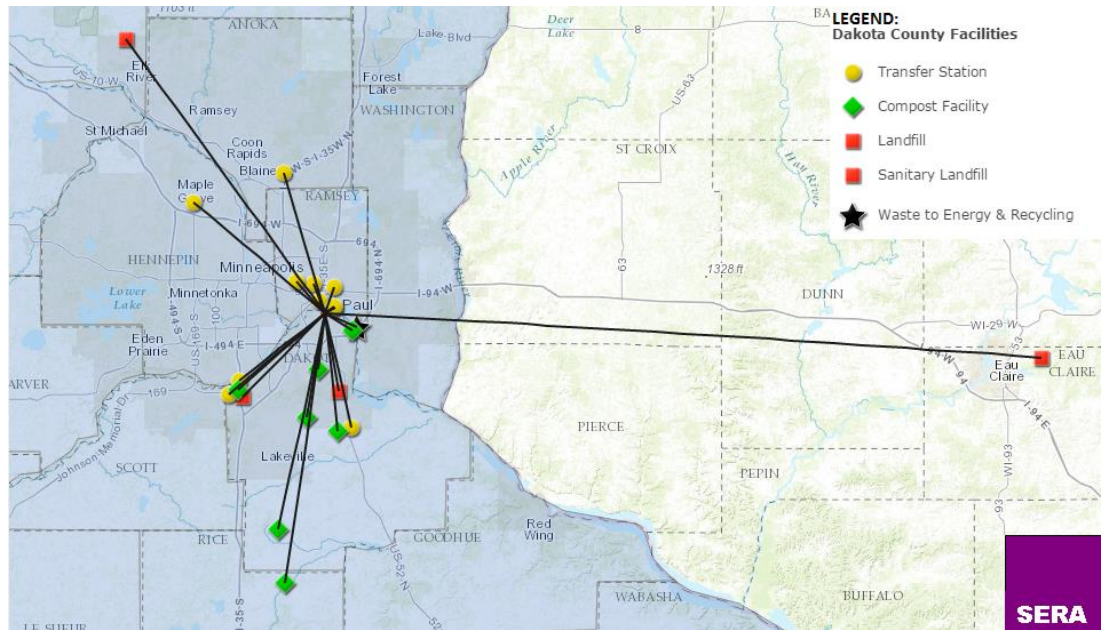


Figure A-8: Material Flow from Dakota County by Facility Type

Material Recovery Facilities (MRF)

Residential and business recyclables are delivered to MRFs (recycling facilities) in and outside of the County. Two recycling facilities located in Dakota County accept recyclables from haulers across the Region.

Licensed Material Recovery Facilities in Dakota County	Owner
Allied Recyclery, Inver Grove Heights	Republic Services, Inc.
Recycle Minnesota, Lakeville	Recycle Minnesota, LLC

Allied Recyclery: The MRF was constructed in 1991 to manage recyclables collected from Republic Services and other waste haulers. The MRF was one of the region’s first private facilities designed specifically for recyclables. Now owned by Republic Services, Inc., it is located in Inver Grove Heights next to Republic’s Pine Bend MSW landfill. The MRF has been adapted over time to accommodate changes in recyclable sorting systems. The facility’s capacity is estimated at 6,000 tons of recyclables per month.

Recycle Minnesota: Recycle Minnesota, located in Lakeville, received a permit-by-rule from the MPCA and were first licensed by Dakota County in 2014. Recycle Minnesota has a permitted capacity of up to 200 tons per day and accepts less than 100 tons per day of residential, single-stream recyclables and less than 50 tons per day of old corrugated cardboard.

Organics Management Facilities

Organics recovery consists of food waste managed as food-to-people, food-for-livestock, source-separated organics composting, and yard waste.

- **Food-to-People:** Food rescue for human use is poorly documented. A concerted effort will be made to improve data tracking methods for organics diversion through food rescue.

- **Food-to-Livestock:** Without private-sector facility expansion (i.e., ReConserve), food recovery for conversion into livestock feed might not have the same expansion potential as source-separated organics composting. ReConserve, located in Dakota County, is the only facility serving the region and is often at capacity. Direct food-to-hogs programs have been used by schools and businesses in Dakota County, although the major hog operations that accept food waste are in the north Metro, distant from Dakota County.
- **Source-Separated Organics Composting:** Organics programs are slowly developing across Dakota County with significant interest in collecting source-separated organics in schools; at large food-producing establishments, such as grocery stores and restaurants; and at local community events.
- **Yard Waste:** Yard waste increased substantially from 2014–2016 due to Emerald Ash Borer detection in the County in early 2015. Yard waste, not identified by county-of-origin, can be transferred into the County.

Residential and business organics are delivered to commercial facilities in and outside of the County. The three active facilities are used by haulers from across the region.

Licensed Organics Recovery Facilities in Dakota County	Owner
Specialized Environmental Technologies, Inc. Source-Separated Organics Compost Facility, Empire Township	Specialized Environmental Technologies, Inc.
Endres Processing, LLC, Rosemount	ReConserve of Minnesota, Inc.
SKB Rosemount Composting Facility, Rosemount	SKB Environmental, Inc.

Specialized Environmental Technologies, Inc. (SET), Source-Separated Organics Compost Facility: This facility is on County-owned land in Empire Township that the County has leased to SET for organics composting since 2002. The County Board recently authorized a five-year lease extension with possible extensions available through June 2032. This facility is permitted as a source-separated organic materials (SSOM) compost facility, a solid waste transfer and processing building, and a yard waste composting facility. The compost facility is permitted to accept 300 tons per day (tpd) of material (150 tpd of SSOM and 150 tpd of yard waste).

Endres Processing, LLC: Located in Rosemount, the facility was first licensed by the County in 1998 to recycle food waste and other organic materials into an adjunct ingredient sold in bulk to the livestock feed industry. The facility is licensed to accept 200 to 300 tons of food waste per day (no meat or meat by-products). This is the only food-to-livestock facility serving the region and is often at capacity.

SKB Rosemount Composting Facility: SSOM is not collected at this facility at this time. SKB Environmental, Inc. (SKB) is a multi-operational solid waste facility licensed as a special waste industrial waste landfill, special waste MSW incinerator ash landfill, demolition landfill, solid waste transfer station, waste processing, and a compost facility. The license authorizes all of these uses; however, not all are active. The 2011 license authorizing a compost facility identifies that once active it can accept a maximum of 50,000 tons per year of source-separated organic materials and yard waste. SKB is required to submit a construction plan and obtain approval prior to constructing the licensed compost facility.

Although not in Dakota County, in 2016, SSOM from the County was delivered to the Mdewakanton Sioux facility (6,075 tons) and Full Circle Organics (1 ton). The Full Circle Organics facility has since been closed.

Yard Waste Facilities

Residential and business yard waste is delivered to yard waste facilities in and outside of the County. Seven yard waste compost facilities are licensed in Dakota County.

Licensed Yard Waste Compost Facilities in Dakota County	Owner
South St. Paul Yard Waste Compost Facility, South St. Paul	City of South St. Paul
B & D Wood Processing and Yard Waste Compost Facility, Greenvale Township	B & D Wood Processing
Specialized Environmental Technologies, Inc. Yard Waste Compost Facility, Burnsville	Specialized Environmental Technologies, Inc.
Specialized Environmental Technologies, Inc. Compost Facility, Empire Township	Specialized Environmental Technologies, Inc.
Gertens RES Yard Waste Compost Facility, Eagan	Gertens Greenhouse & Garden Center, Inc.
Allied Waste Yard Waste Composting, Inver Grove Heights	Republic Services, Inc.
SKB Rosemount Composting Facility, Rosemount	SKB Environmental, Inc.

South St. Paul Yard Waste Compost Facility: This small, city-owned and operated facility accepts only de-bagged yard waste or yard waste in paper bags. Brush or tree waste is not accepted. Residency is not required to drop off yard waste. Capacity is 10,000 cubic yards per year and in 2016 it accepted 835 tons of Dakota County yard waste. The facility generates 1,000 cubic yards of yard waste compost per year, offered to the public at no cost.

B & D Wood Processing and Yard Waste Composting Facility: It has operated since 1996 in Greenvale Township. B & D manages yard waste, brush, and tree waste, and is licensed to receive up to 20,000 cubic yards per year. In 2016, it accepted 2,140 tons of Dakota County yard waste. Yard waste compost is sold to the public and tree waste is sawed for lumber, cut for firewood, ground for mulch, or sold to District Energy in St. Paul for fuel.

Specialized Environmental Technologies Yard Waste Compost Facility (Burnsville): It has an annual capacity greater than 40,000 cubic yards, and accepted 20,368 tons of Dakota County yard waste in 2016. Grass and leaves must be in compostable bags or reusable containers. The facility also accepts tree and brush waste. End-products include yard waste compost, blended soils, wood chips, and several kinds of landscape mulches.

Specialized Environmental Technologies Compost Facility (Empire Township): The facility is in Empire Township on County-owned land. All types of yard waste in compostable bags and loose material are accepted. Its County-licensed capacity is greater than 40,000 cubic yards per year and in 2016, it accepted 13,838 tons of Dakota County yard waste. In 2017, the facility was reissued a multi-use state permit that allows the facility to accept 300 tons per day (tpd) of material, including 150 tpd of source-separated organic materials and 150 tpd of yard waste. End-products available for sale include compost, blended soils and several kinds of landscape mulches.

Gertens RES Yard Waste Compost Facility: Gertens Greenhouse & Garden Center operates a yard waste compost facility on land owned by Gopher Resource Corporation. Gertens purchased an adjacent parcel in 2016 from the City of Eagan, with plans to relocate its composting operations. The facility is licensed to accept greater than 40,000 cubic yards of yard waste per year, and in 2016 accepted 12,020 tons of Dakota County yard waste. The facility accepts yard waste that is loose or is in compostable bags, prunings, brush and tree waste. End-products include yard-waste compost, blended soils, and wood mulches.

Allied Waste Yard Waste Composting Facility: Republic Services, Inc. maintains a yard waste compost facility license for operating a 40,000 cubic yards per year or greater facility, although the facility is presently inactive.

SKB Rosemount Composting Facility: Yard waste is not collected at this facility at this time. SKB has a license authorizing a yard waste composting facility; however, is required to submit a construction plan and obtain approval prior to constructing the facility.

Dunham Brothers: Although not a yard waste facility, Dunham Brothers is a unique facility licensed as wood waste processing facility where clean wood and pallets are converted into animal bedding. Their primary customers are the cattle industry and equestrian farms. The facility is licensed for up to 200 tons per day.

In 2016, Dakota County generated yard waste was also delivered to Specialized Environmental Technologies, Inc. Shakopee (6,080 tons) and Full Circle Organics (930 tons). The Full Circle Organics facility has since been closed.

Resource Recovery Facilities

Four resource recovery facilities serve the region, although none are located in Dakota County and not all can or will accept waste generated in Dakota County.

The Hennepin Energy Recovery Center (HERC): The HERC is located in Minneapolis and uses a mass-burn technology, producing energy for district heating and electricity. Hennepin County owns the facility and contracts for operations. The facility's permit capacity is 365,000 tons annually. HERC capacity is typically filled with Hennepin County waste; however, 2016 reports indicate 1,405 tons of Dakota County-generated waste was delivered to HERC.

The Recycling and Energy Center (REC): The REC is a refuse-derived fuel (RDF) facility now owned (2016) by Ramsey and Washington Counties and operated by their contractor. The facility is in Newport and is managed by the Ramsey/Washington Recycling and Energy Board. MSW is delivered, shredded, and separated into three waste streams: RDF, recyclable metal, and residue. RDF is burned to generate electricity at Xcel Energy power plants in Red Wing and Mankato. Metals are recycled, and residue is landfilled. Permitted capacity is 500,000 tons per year. In 2016, 56,253 tons of Dakota County-generated waste was delivered to the REC.

Elk River Resource Recovery Project (ERRP): The ERRP is owned by Great River Energy (GRE). Waste is sorted on the tip floor and separated into three streams: RDF, recyclable metal, and residue. RDF is transformed for burning at GRE's power plant in Elk River. The facility's permit capacity is 552,000 tons annually. Because of the geographic location, limited Dakota County waste is delivered to this facility. In 2016, 302 tons of Dakota County-generated waste was delivered to the ERRP.

The Integrated Solid Waste Management Campus (ISWMC): The ISWMC is a RDF facility owned and operated by the City of Red Wing. Waste is sorted into RDF, recyclable metal, and residue. RDF is burned to generate electricity at Xcel Energy’s power plant in Red Wing. The city’s permitted capacity is 30,000 tons annually. No reported Dakota County-generated waste was delivered to this facility in 2016. In 2017, a major fire damaged about 40 percent of the building.

MSW Land Disposal Facilities

Residential and business waste is delivered to MSW land disposal facilities in and outside of the County. Seven landfills receive TCMA waste with a collective capacity of 10.2 million cubic yards. Two MSW landfills serving the region are located in Dakota County. Both operate methane gas-to-energy systems.

Licensed MSW Landfills in Dakota County	Owner
Pine Bend Sanitary Landfill, Inver Grove Heights	Republic Services, Inc.
Burnsville Sanitary Landfill, Burnsville	Burnsville Sanitary Landfill, Inc.

Pine Bend Sanitary Landfill: This landfill in Inver Grove Heights is owned by Republic Services, Inc./BFI Waste Systems of North America, LLC., and was originally permitted in 1971. The landfill is currently permitted at 29.8 million cubic yards of air space. At the end of 2016, 1.95 million cubic yards of airspace remained, and it is estimated that landfill capacity will be consumed by 2023 - at current use rates and a permit capacity of 29.8 million cubic yards. Additional design capacity could potentially be permitted that would extend use of the landfill. Pine Bend Landfill’s closed areas on the north and east sides of the facility were permitted at a 5:1 slope. The landfill has submitted a permit modification request to the MPCA to add capacity through a side-slope expansion by converting the 5:1 slopes to 3:1 slopes. By “piggy-backing” new disposal areas over the closed portions of the landfill, the MSW capacity would increase by 4.1 million cubic yards. In 2016, 46,682 tons of Dakota County-generated waste was delivered to this landfill.

Burnsville Sanitary Landfill: This landfill is in a commercial area in northwest Burnsville, and is owned by Burnsville Sanitary Landfill, Inc., a wholly-owned subsidiary of Waste Management, Inc. The landfill was first permitted by the MPCA in 1971. In 2016, 2.36 million cubic yards of airspace remained, and it is estimated that landfill capacity will be consumed by 2025 at current use rates and a permit capacity of 18,692,145 cubic yards. Additional design capacity could potentially be permitted that would extend use of the landfill. In 2016, 141,019 tons of Dakota County-generated waste was delivered to this landfill.

In 2016, Dakota County-generated waste was also delivered to out-of-county landfills including Waste Management, Inc. Elk River Landfill in Sherburne County (379 tons) and the Advanced Disposal Seven Mile Creek Landfill in Eau Claire, Wisconsin (2,407 tons).

Non-MSW Land Disposal Facilities

The TCMA is served by nine Non-MSW landfills. Four Non-MSW landfills in Dakota County accept construction, demolition, and industrial wastes from generators in and outside of the County. The two MSW landfills in the County also accept non-MSW, generally industrial waste and contaminated soil within the MSW cells.

Licensed Non-MSW Landfills in Dakota County	Owner
SKB Rosemount Industrial and Demolition Landfill, Rosemount	SKB Environmental, Inc.
SKB Rich Valley Demolition Landfill, Inver Grove Heights	SKB Environmental, Inc.
Frattalone's Dawnway Demolition Landfill, Inver Grove Heights and South St. Paul	Frattalone Companies
Burnsville DemCon Landfill, Burnsville	Burnsville Sanitary Landfill, Inc.
Burnsville Sanitary Landfill, Burnsville	Burnsville Sanitary Landfill, Inc.
Pine Bend Landfill, Inver Grove Heights	Republic Services, Inc.

SKB Rosemount Industrial and Demolition Landfill: The landfill is located in Rosemount and accepts industrial waste, MSW incinerator ash, and demolition waste. The landfill was originally permitted to accept only industrial waste in 1992. In 1998 the MPCA permitted the acceptance of MSW incinerator ash at the landfill. In 2003 the MPCA approved a major modification to the facility for disposing of construction and demolition debris. A 2008 landfill expansion significantly increased demolition and industrial capacity. In 2016, the facility had a capacity of 4.3 million cubic yards for construction and demolition waste; 10.3 million cubic yards for industrial waste; and 1.7 million cubic yards for MSW incinerator ash. Remaining facility life estimates are eight years for construction and demolition waste, twenty-one years for industrial waste, and eighteen years for incinerator ash.

SKB Rich Valley Demolition Landfill: The landfill is in the City of Inver Grove Heights on property owned by SKB Environmental, Inc. The facility accepts only construction and demolition wastes, but is currently inactive as operations were consolidated by SKB at the nearby Rosemount facility. In 2007, an expansion of the landfill was approved, but has not yet been fully constructed. In 2016, the landfill had a total capacity for construction and demolition waste of 2.3 million cubic yards and remaining facility life is estimated at nineteen years.

Frattalone's Dawnway Demolition Landfill: This landfill is a 51-acre facility on the border between Inver Grove Heights and South St Paul, within the footprint of a pre-existing sand and gravel pit that closed in 1980. The facility accepts demolition debris waste materials. No industrial waste is accepted. Originally developed to accept waste only from its owner, the landfill now accepts wastes from pre-screened contractors. In 2016, the landfill had a total capacity for construction and demolition waste of 1.54 million cubic yards and remaining facility life is estimated at about sixteen years.

Burnsville DemCon Landfill: It is located in Burnsville and owned by Burnsville Sanitary Landfill, Inc., a wholly-owned subsidiary of Waste Management Inc. The C and D waste cell is within the footprint of the Burnsville Sanitary Landfill. In 2016, the cell had a capacity of 2.65 million cubic yards and an estimated life of approximately ten years.

Burnsville Sanitary Landfill: See descriptions in previous section. In 2016 the facility accepted close to 18,000 tons of industrial waste and contaminated soil.

Pine Bend Landfill: See descriptions in previous section. In 2016 the facility accepted close to 94,000 tons of industrial waste and contaminated soil.

Non-MSW Processing Facilities

Six licensed Non-MSW processing facilities located in Dakota County receive TCMA waste.

Licensed Non-MSW Processing Facilities in Dakota County	Owner
SKB Rosemount Processing, Rosemount	SKB Environmental, Inc.
SKB Wood and Shingle Processing (Rich Valley), Inver Grove Heights	SKB Environmental, Inc.
Gem-Ash/SKB Rosemount Solid Waste Processing, Inver Grove Heights	SKB Environmental, Inc.
Alpha Container Services and Recycling, Coates	Alpha Container Services
Bituminous Roadways Shingle Processing, Inver Grove Heights	Bituminous Roadways, Inc.
Burnsville Demolition and Construction Waste Landfill Processing, Burnsville	Burnsville Sanitary Landfill, Inc.

SKB Rosemount Processing: It is a multi-operational solid waste facility licensed for waste processing. The landfill sorts out recyclable metals, clean wood, and concrete and processes waste shingle materials (market dependent) from the construction and demolition wastes. Metals are also sorted and recycled from the MSW incinerator ash cell. In 2016, the facility recycled 4,254 tons of ferrous metals, 1 ton of non-ferrous metals, 30 tons of clean wood and 14 tons of concrete.

SKB Wood and Shingle Processing (Rich Valley): It is licensed as a multi-operational solid waste facility with a license for waste processing of construction and demolition debris. This facility has been inactive since 2007.

Gem-Ash/SKB Rosemount Solid Waste Processing: It was licensed in 2014 to operate an ash recycling facility. The facility processes municipal solid waste incinerator ash and separates ferrous and non-ferrous metals for recycling. In 2016 the facility marketed 2,284 tons of ferrous metals and 2,579 tons of non-ferrous metals.

Alpha Container Services and Recycling: The facility processes construction and demolition waste. In 2016 they processed approximately 1,500 cubic yards of waste.

Bituminous Roadways Shingle Processing: It is licensed to process waste shingle material at its Rich Valley location (11201 Rich Valley Blvd). They have processed little or no material for the past several years.

Burnsville Demolition and Construction (C and D) Waste Landfill Processing: It has a cell that takes approved construction and demolition waste. The landfill sorts out recyclable metals from this cell. In 2016, they recycled 655 tons of ferrous metals, 39 tons of aluminum, and 1 ton of other non-ferrous metals.

Hazardous Waste and Problem Materials Facility

The Recycling Zone opened in 1997 and provides a year-round location for residents and businesses to drop off recyclables, household and business hazardous waste, and problem materials.

Licensed HHW Facility in Dakota County	Owner
The Recycling Zone, Eagan	Gopher Resource Corporation

Dakota County contracts with Gopher Resource Corporation (Gopher), to provide the site, facility, and most on-site labor. Since 1997, the County Board has extended contracts for services at the Gopher facility. In 2013, a five-year contract was executed with Gopher, extending operation through 2018. The contract includes:

- Thirty-six hours per week for residential HHW and recyclables drop-off, including two evenings each week.
- Facility rental space of 9,850 square feet.

- Recyclables collection at The Recycling Zone at no cost to residents and businesses, including containers (e.g., cans, bottles, and jars), and mixed paper/cardboard/phonebooks. In 2013, cartons and additional types of plastic containers such as yogurt tubs were added.
- HHW and problem material collection by Gopher at no cost for residents.
- Dakota County responsibility for costs relating to HHW collection, labor, supplies, and facility rental.
- Increased Gopher staffing (2014) at the Recycling Zone increased to manage increasing participation and waste.

Dakota County maintains separate contracts with hazardous waste and problem material management companies to provide for proper recycling or disposal of materials collected at The Recycling Zone. Dakota County oversees the operations at The Recycling Zone and the management company contracts. To better serve the needs of residents and businesses, Dakota County has:

- Become a PaintCare collection site to allow residents and businesses to more easily dispose of their unwanted latex and oil-based paint (2015).
- Expanded the list of materials collected.
- Consolidated the monthly business lamp collection into the existing Very Small Quantity Generator (VSQG) collection program giving businesses more opportunities to drop-off their lamps (2017).

In 2017, Dakota County staff conducted a needs assessment for countywide maintenance facilities, including whether a future maintenance facility could include a second HHW drop off facility. Findings indicated the Recycling Zone services and facility use are not compatible to share a site with County maintenance facilities. An independent assessment will be conducted to determine near-term needs and plan for future growth in the County.

APPENDIX B: MASTER PLAN DEVELOPMENT

Dakota County initiated its Master Plan revision process in 2015 to address new statutory requirements and to prepare for the anticipated release of a new Policy Plan. The planning process included four technical phases (research, strategy evaluation, draft plan development, plan review and adoption), with comprehensive and extensive stakeholder consultation throughout.

As new strategic approaches were researched and developed, stakeholders were asked to comment on the feasibility of the strategies and provide additional ideas. Consideration was given to strategies with quantifiable results that help make the most progress toward Policy Plan goals, and phasing of particular strategies in the County Master Plan.

The Master Plan was prepared by Dakota County Environmental Resources and Planning Department staff. The Dakota County Planning Commission acted as its advisory committee and direction was provided by the Dakota County Board of Commissioners. Because Dakota County transitioned to a County Manager system in 2014, the County was allowed to use its Planning Commission as a solid waste management advisory committee.

Dakota County Planning Commission (Commission): The County Board appoints two members from each County Commissioner district to the 14-member citizen advisory committee. The Commission is charged with reviewing environmental and natural resources proposals and making recommendations to the County Board. The Commission meets monthly and meetings are open to the public. The Commission was engaged on the Master Plan revision at eight meetings. The Commission provided comments on the stakeholder engagement process and the Master Plan vision and strategies. On September 28, 2017, the Commission recommended release of the Draft Master Plan for public review and on December 21, 2017, the Commission recommended County Board approval and submittal to the MPCA.

Dakota County Board of Commissioners (County Board): The County Board is a seven-member Board, elected by residents in each of their respective districts to establish County policy and funding for services. Written updates and presentations were provided to the Board throughout the plan development process, including at eight Physical Development Committee of the Whole meetings and a Board workshop. The meetings and workshop were open to the public and promoted via the County's website. County Board meetings were attended by representatives from the MPCA, municipalities, non-profit, and private waste industry interested parties.

Phase One: Research

Phase One reviewed residential scientific survey data on recycling, reviewed existing and executed new research contracts, engaged stakeholders on preferred waste management methods, and updated the Planning Commission and County Board. This phase produced a range of potential strategies to implement the Policy Plan.

Residential Scientific Surveys

Dakota County asked recycling questions in statistically-valid, scientific residential surveys in 2014, 2016, and 2017.

2017 Residential survey¹ participants responded:

- 88 percent Very or somewhat important that all households be REQUIRED to recycle materials (e.g., cans, glass, paper).
- 54 percent Very or somewhat important that households are REQUIRED to recycle organics (e.g., food waste).

2016 Residential survey² participants responded:

- 79 percent Much more likely or somewhat more likely to recycle more if given specific information on what can be recycled. *(Increased from 2014)*
- 76 percent Strongly or somewhat support haulers collecting food waste curbside in a separate container. *(Increased from 2014)*
- 73 percent Much more likely to somewhat more likely to recycle more if recyclables were collected weekly. *(Increased from 2014)*
- 71 percent Much more likely or somewhat more likely to recycle more if recycling cart had a list of accepted recyclable materials. *(Increased from 2014)*
- 63 percent Much more likely or somewhat more likely to recycle more if they had more capacity to recycle with a bigger curbside container. *(Increased from 2014)*
- 60 percent Much more likely or somewhat more likely to recycle more by saving money with the option of a smaller trash container. *(Not asked in 2014)*
- 32 percent Strongly support or somewhat support residential organics drop-sites. *(Decreased from 2014)*

2014 Residential survey³ participants responded:

- 82 percent Strongly support or somewhat support requiring schools, hospitals, and restaurants to separate food waste for collection.
- 64 percent Much more likely or somewhat more likely to recycle more if given specific information on what can be recycled.
- 62 percent Much more likely or somewhat more likely to recycle more if recyclables were collected weekly.
- 61 percent Strongly support or somewhat support backyard composting.
- 57 percent Much more likely or somewhat more likely to recycle more if haulers are held accountable for recycling collected materials.
- 55 percent Strongly support or somewhat support collecting food waste curbside in a separate cart.
- 55 percent More likely or somewhat more likely to recycle more if recycling cart had a list of accepted materials.
- 53 percent Much more likely or somewhat more likely to recycle more with a bigger curbside container.
- 37 percent Strongly support or somewhat support residential organics drop-sites.
- 36 percent Much more likely or somewhat more likely to recycle more if provided with an additional cart.

When ranking factors for Dakota County/municipalities to consider adopting a single hauler, or fewer haulers for garbage and recycling services, participants responded:

- 90 percent Saving money on the bill was essential, very important, or somewhat important factor.
- 76 percent Allowing open/unlimited competition was an essential, very important, or somewhat important.
- 71 percent Fewer trucks to reduce air and noise pollution was essential, very important, or somewhat important.
- 65 percent Less congestion and noise on streets was essential, very important, or somewhat important.
- 54 percent Allowing multiple haulers (zones set within the city) was essential, very important, or somewhat important.
- 50 percent Restrictions on collection days of the week was essential, very important, or somewhat important.
- 48 percent Fewer trash and recycling containers on streets was essential, very important, or somewhat important.

1 Dakota County Comprehensive Plan Survey

2 Dakota County Residential Survey

3 Dakota County Recycling, Parks, and Transit Survey

Contracted Research

Dakota County and the SWMCB executed research contracts to gather costs, diversion potential, and policy considerations relevant to the region and Dakota County. Research generally identified the following areas for improvement in commercial recycling in the County:

- City policies/zoning codes contain barriers to commercial recycling, especially in areas of inadequate storage (e.g., indoor and outdoor) for recycling containers
- Improved access (e.g., infrastructure) and manager requirements (e.g., education) are critical to improve recycling in multi-unit dwellings.
- Capture rates of recyclable materials at city buildings are generally good but more could be diverted from the trash.

Key findings from research on commercial and residential organics diversion programs and effective approaches from regional and national models include recommendations for:

- Strong financial mechanisms, such as more significant pay-as-you-throw fee structures (smaller fees for smaller carts) and fees (e.g., county environmental charge).
- Regulatory conditions, such as phased-in requirements for large volume generators of organics.
- Organics collection in a residential organized collection has the greatest environmental benefit and diversion potential compared to other collection methods (e.g., open collection system)

Specific research included:

Ordinances and Contracts for Large Public Gatherings (2017): to research and recommend definitions and practices to require recycling, organics, or both to be collected at public gatherings. Research results indicated a wide variety of practices within Dakota County communities including park, facility, and public-property permits for events ranging from 50 to 500 or more persons. Nearly all of the evaluated municipal practices do not have recycling requirements and gaps were also identified in Ordinance 112.

Analysis of Residential Organics Recycling in Minnesota (2017): to evaluate the costs and effectiveness of two scenarios for residential curbside organics collection within Dakota County: 1) separate collection cart and truck and 2) co-collection with trash. Results indicate with an inclusive payment model, separate collection is estimated at \$3.35 per household and \$4.00 to \$7.00 for a co-collection model. Relative environmental impacts measured as greenhouse gas (GHG) emissions indicate an organized collection system with co-collection and an inclusive payment model achieve the greatest GHG reduction (4,284 Metric Tons of Carbon Dioxide Equivalent (MTCO_{2e}) reduction of emissions). In total, 12 different scenarios were analyzed for environmental impacts. The least desirable scenario for GHG emissions is an open collection, separate collection with subscription service (1,207 MTCO_{2e} increase in emissions).

Greenhouse Gas Systems for Landfill and Refuse-Derived Fuel Analysis (2017): was designed to evaluate environmental impacts in total estimated GHG emissions for two specific scenarios over a one-year period: 1) landfilling Dakota County-generated MSW into Dakota County landfills and 2) transferring Dakota County-generated MSW to the ERRP resource recovery facility through a transfer station (51 miles used: from the County centroid to the EERP). The result of the two scenarios was similar, with estimated GHG emissions at 29,823 MTCO_{2e} for scenario #1 and 28,473 MTCO_{2e} for scenario #2.

Waste Audits for Municipal Buildings (2017): conduct waste sorts at thirteen municipal buildings in Dakota County to determine the effectiveness of recycling programs and whether organics collection should be considered. Results indicated capture and recycling rates higher than typically seen in these types of facilities. As a result, to significantly increase diversion from most facilities it will be necessary to add organics collection to the existing recycling program.

Dakota County City Policies Addressing Commercial Waste, Recycling and Organics (2017): inventory and analyze policies and mechanisms/approaches that address collection, transportation and management of waste from commercial entities, and to provide prioritized strategies for improvements to meaningfully increase recycling and organics recovery in the commercial sector. Recommendations included removing barriers caused by inadequate external waste enclosure space, instituting requirements for owners/operators of multi-unit dwellings and senior living associations to contract for recycling services, establishing a registration and waste generation reporting system for businesses within NAICS 42-81, adopting a County ordinance consistent with MN Stat. § 115A.151, and expanding the Business Recycling Incentive Program to better address multi-unit dwellings.

Waste Diversion Approaches for Commercial Establishments (2016): prioritize short- and long-term approaches for effective commercial recycling and organics diversion, including identification of commercial establishments that generate large amounts of recyclables and organics and have high diversion potential. Results identified the top generators of recyclables as the service industry (professional, technical, financial), retail trade, restaurants, wholesale establishments, and trucking. Top generators for food waste include restaurants, retail trade, services, medical and health, and food and beverage retail stores. Program recommendations include grants, tip fee surcharges/taxes, enhanced volume-based pricing, requirements for businesses with food licenses and specific North American Industry Classification System (NAICS) codes to collect organics, hauler incentives, bans for key recyclables (e.g., cardboard, food), and enhancements for accountability in municipality programs.

Residential Recycling Audience Research (2016): a SWMCB contract to assess attitudes and self-reported recycling behaviors and experiences with their curbside recycling program. The research also examined attitudes toward, potential barriers to, and the likelihood of participation in curbside food-scrap recycling. It was a statistically-valid, scientific analysis. Results include:

- Importance of recycling was very high and the difficulty to recycle curbside was low. Difficulty increased for multi-unit dwelling tenants.
- Respondents overwhelmingly indicated that participation was related to environmental concerns.
- Barriers to recycling were moderate-to-low for single-family residents, with the biggest concern being placing personal information in the recycling bin. Multi-unit tenants had more barriers.
- Interest in participating in food-scrap recycling was moderate. Barriers common to all were increased fees, attracting pests, and smells. A sizable group indicated the barriers were not insurmountable. Overall, respondents were positive about organics recycling.
- Ongoing and accurate information using a variety of methods, especially social diffusion to create a social norm, is needed to sustain successes.

Multi-Unit Residential Recycling (2015): a SWMCB contract to identify, analyze, and test opportunities to increase recycling in multi-unit dwellings. Results include recommendations to develop specific outreach materials and methods, to standardize education messages, to educate at new resident orientations, to engage property managers, and to modify codes/ordinances and planning/construction to ensure adequate internal and external space are available and convenient to tenants.

Commercial Cost and Billing Research (2013): a SWMCB contract to identify tools, policy levers, and resources to increase commercial recycling. Recommendations include regional collaboration, recycling requirements for generators, waste audits for compliance, surcharges/fees for trash, startup grants, increasing cost differentials for different sized trash containers, implementing franchise rates or districts, standardizing or clarifying billing practices, single-hauler contracts, and if sufficient progress is not made, to institute disposal bans.

Organics and Commercial Recycling Diversion Research Studies (2011): a SWMCB contract to identify programs, policies, incentives, legislation, and other strategies that have been implemented in the U.S. and Canada to recover organics. Results indicate that including regulatory strategies into local practices more quickly increases diversion and results in lower costs. Recommendations include engaging commercial building facilities staff, custodial staff, and property managers; increasing cost differentials for different sized trash containers; embedding recycling and organics collection fees across all accounts; providing rebates; allowing small businesses to participate in residential programs at residential rates; providing startup grants; implementing cooperative hauling contracts; requiring compostable product use; requiring certain businesses (e.g., those with food and/or beverage licenses/permits) to recycle and/or recover organics; requiring all businesses to recycle from list of recyclables; requiring recycling plans; and incorporating requirements into permits, licenses, and leases.

Stakeholder Engagement

A formal stakeholder engagement effort was instituted for the Master Plan revision. This effort was spurred because of the significant statutory changes since the previous Master Plan was adopted (e.g., a focus on businesses and organics, the increase from 50 percent to 75 percent recycling rate goal), the need to consider additional tools to influence change and the need to nurture existing and develop new relationships so the County can move seamlessly from planning to implementation.

Stakeholder groups were identified and included residents, businesses, public entities, waste haulers, and waste facilities. New stakeholder group segments were engaged, including property owners and managers, nonprofits (food shelves), and reuse organizations. Stakeholder engagement was broken into two parts: Round 1 gathered input on solid waste issues, barriers, and solutions and Round 2 gathered feedback on draft Master Plan strategies.

Round 1 stakeholder activities (October 2016 - February 2017) included in-person gatherings, interviews, mailings, online surveys for all stakeholder groups, and multi-lingual (English, Somali, Vietnamese, Spanish) online residential surveys. Table B-1 summarizes methods used for each stakeholder group.

Table B-1: Round One Engagement Methods and Stakeholder Groups

Round 1 Stakeholder Groups	Number of Participants	Engagement Method		
		Online Survey	Workshop	Phone Interview
Businesses	45	◆		
Reuse Organizations	1	◆		
Industrial Users	2	◆		
Waste Haulers & Facilities	27	◆	◆	
Cities & Townships	15	◆	◆	
School Districts	11		◆	◆
Residents	452	◆		

More than 500 stakeholders collectively identified the following barriers:

- Differences in recycling messaging and material acceptance make it hard to know what to recycle.
- Residents lack adequate access to organics diversion options (e.g., drop off, curbside).
- Managing waste as trash may be less expensive for smaller volume generators than in accordance with waste management Hierarchy (e.g., recycling).
- The ability for industry to make equipment investments to manage new materials (e.g., organics) requires more widespread and higher density of participating customers.

Results of stakeholder input were published on the County’s website and shared with stakeholders, the Planning Commission, the County Board, and used to develop potential strategies.

Phase Two: Strategy Evaluation

Phase Two solicited stakeholder input on potential strategies from the Policy Plan and other sources, evaluated the strategies in a scoring system, and reviewed strategies with the Planning Commission and County Board.

Round 2 stakeholder engagement activities occurred March - May 2017 to gather feedback from stakeholders on draft strategies emerging from Round 1 input and Policy Plan requirements. Key stakeholder groups engaged included businesses, organizations, school districts, waste haulers and facilities, municipalities, multi-unit property owners/managers, and residents. Techniques included in-person workshops and online surveys. Table B-2 summarizes the methods used for each major stakeholder group.

Table B-2: Round Two Engagement Methods and Stakeholder Groups

Stakeholder Group	Number of Participants	Engagement Method	
		Online Survey	Workshop
Businesses & Schools	140	◆	
Waste Haulers & Facilities	17	◆	◆
Cities & Townships	19	◆	◆
School Districts	11		◆
Multi-Unit Dwellings	4		
Residents	1,137	◆	

More than 1,300 stakeholders identified the following needs and issues related to potential strategies:

- More specific and standardized information that is distributed through multiple education partners (e.g., haulers, cities).
- Convenient and more opportunities to recycle (e.g., drop offs).
- Consistent list of collected recyclables.
- Weekly residential curbside collection of recycling and organics.
- More technical assistance and support to commercial generators and multi-unit dwelling property owners.
- Best management practices and support for municipal collection contracts.
- No support for organized residential trash collection.

The following were identified by stakeholders as preferred approaches for implementation of strategies:

- Desire to work collaboratively.
- Favor education and incentives, rather than mandates.
- Prefer new requirements for recycling and organics diversion be phased in over multiple years.

Stakeholder input was used to further refine potential strategies and was published on the County’s website and shared with stakeholders, the Planning Commission, and the County Board.

Strategy Selection

The Policy Plan format allowed TCMA counties to select from a list of strategy choices. To help prioritize selection and frame strategy Board considerations, each strategy was evaluated using five weighted criteria, in order of priority:

1. Waste diversion potential (e.g., estimated new tons diverted)
2. Environmental protection
3. Cost-effectiveness (i.e., cost per ton to County)
4. Public perspective
5. Industry perspective⁴

Waste diversion potential for anticipated new tonnages assumed full strategy implementation. Tonnages were calculated using the following information:

1. Tonnage estimates identified in contracted research.

⁴ Public and industry perspectives were based on feedback obtained during the 2016-2017 public engagement process and results of the 2014, 2016, and 2017 County scientific residential surveys.

2. Potential diversion rates/tons provided by the MPCA and added to current diversion rates/tons (SCORE/CERT data).
3. Potential tonnage using the following:
 - Current diversion rates/tons (SCORE/CERT data)
 - Potential diversion rates/tons of specific materials disposed (MPCA Waste Composition Study, 2013)
 - Estimated number of impacted household and/or commercial establishments
 - Estimated participation rate of impacted household and/or commercial establishments (e.g., taking the average of estimated high, medium, and low household and/or commercial participation)

The score was calculated by multiplying the weight by the number assigned to a particular scoring criterion. For example, strategy implementation anticipated to divert 8,000 new tons would get a diversion potential score of $4 \times 2 = 8$.

Criterion	Weight	Scoring Criteria (maximum 16)
Diversion Potential (annual new tons)	4	4. > 25,000 3. >10,000 and < 25,000 2. > 1,000 and < 10,000 1. < 1,000

Environmental Protection scoring criteria scores higher for strategies that support the higher levels of the Hierarchy.

Criterion	Weight	Scoring Criteria (maximum 12)
Environmental Protection	3	4. Promotes toxicity reduction 3. Promotes reduction and/or reuse 2. Promotes or encourages recycling and/or organics diversion 1. Encourages solid waste processing

Cost effectiveness scoring criteria was calculated based on known County costs for existing programs to anticipate County costs for a new strategy and from research contract estimates.

Criterion	Weight	Scoring Criteria (maximum 8)
Cost Effectiveness (\$/ton)	2	4. > \$10 3. > \$10 and < \$100 2. > \$100 and < \$200 1. > \$200

The stakeholder engagement process and County survey responses were used to determine public and waste industry perspective.

Criterion	Weight	Scoring Criteria (maximum 8)
Public Perspective	2	4. Evidence of general support 3. Neutral or no preference for support 2. Low level of support 1. No support/active opposition
Criterion	Weight	Scoring Criteria (maximum 4)
Waste Industry Perspective	1	4. Evidence of general support 3. Neutral or no preference for support 2. Low level of support 1. No support/active opposition

The total score was the sum of each of these calculations, up to a maximum of 48. Strategies that scored the highest in each topic area were presented to the County Planning Commission on July 27, 2017, and at a County Board Workshop on August 1, 2017.

Phase Three: Draft Plan Development

Phase Three sought input on potential timing of selected strategies.

Informal Stakeholder Engagement

Stakeholder feedback was sought on potential implementation timing of strategies presented to the County Board. Proposed timing was based on stakeholder responses in previous engagement phases, County Board priorities identified at the workshop, and alignment with the MPCA’s recommended implementation schedule in the Policy Plan. Input on timing was solicited from interested and previously-engaged stakeholders through email invitations and promotions on the County’s website; no comments were received.

Phase Four: Plan Review and Adoption

NOTE: phase four will be completed upon Master Plan approval by the County Board of Commissioners

The draft plan was presented to the Dakota County Planning Commission and to the Dakota County Physical Development Committee of the Whole with a recommendation for a 30-day public review and comment period.

The public review and comment period was conducted from November 1 to December 1, 2017. Residents, businesses, non-profits, schools, and waste industry representatives were invited to provide comments through email at Wasteless@co.dakota.mn.us or through the U.S. Mail. Comments were requested using a variety of promotions, including:

- County website
- Press release
- E-newsletters (*County, municipalities*)
- Social media platforms (*County, municipalities, program partners*)
- Stakeholder emails
- Environmental Resources Department program partners (*Master Recycler/Composters, participants in the Business Recycling Incentive Program, Enhanced School Recycling and Organics Program, residential organics drop site program*)
- Environmental Resources Department public program trainings/education classes

In-person comment opportunities were also provided, specifically for businesses, waste industry representatives, residents, Minnesota Pollution Control Agency staff, and city administrators (Table B-3).

Table B-3: In-Person Public Comment Opportunities

	Date
Countywide Chamber Event for Businesses	Nov 2
Waste Hauler/Facility Meeting	Nov 14
Public Open House for Residents	Nov 18
Minnesota Pollution Control Agency Meeting	Nov 21
City Administrator/County Manager Meeting	Dec 1

County staff considered all comments, categorized whether plan revisions are recommended, and provided reasoning for staff decisions. Staff recommendations on comments and revisions to the draft plan were presented to the County Planning Commission and to the Dakota County Physical Development Committee of the Whole with a recommendation for adoption and submittal to the MPCA for approval.

The County Board adopted the MPCA-approved plan on September 18, 2018 (Resolution 18-493).

APPENDIX C: ENVIRONMENTAL JUSTICE: REVIEW AND FRAMEWORK FOR MASTER PLAN IMPLEMENTATION

A. Background

The Policy Plan strongly encourages counties to conduct an environmental justice review in developing their waste plans. The EPA 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.” The goal of environmental justice is to provide all people with:

- The same degree of protection from environmental and health hazards; and
- Equal access to the decision-making process to have a healthy environment in which to live, learn, and work.

The following sections were recommended by the Minnesota Pollution Control Agency (MPCA) and constitute the County’s review of the County Master Plan.

B. Identification of Potentially Affected Communities

The MPCA identified waste-related facilities in areas of concerns for environmental justice, based on census tracts (using data from the U.S. Census and American Community Survey) that meet one or both of these demographic criteria consistent with the criteria established by Metropolitan Council:

- Total population of people of color greater than 50 percent
- More than 40 percent of the population with income less than 185 percent of the federal poverty level

The MPCA chose these two criteria because “research indicates that people of color and low-income people are disproportionately exposed to pollution, and bear disproportionate health impacts from pollution, regardless of other population characteristics. “

Figure C-1 shows solid waste facility locations and census tracts that are considered areas of concern for environmental justice in Dakota County. Areas marked in purple are census tracts with more than 40 percent of the population earning less than 185 percent of the federal poverty line – this translates to \$52,614 per year for a family of four. Dakota County does not have census tracts with greater than 50 percent people of color.

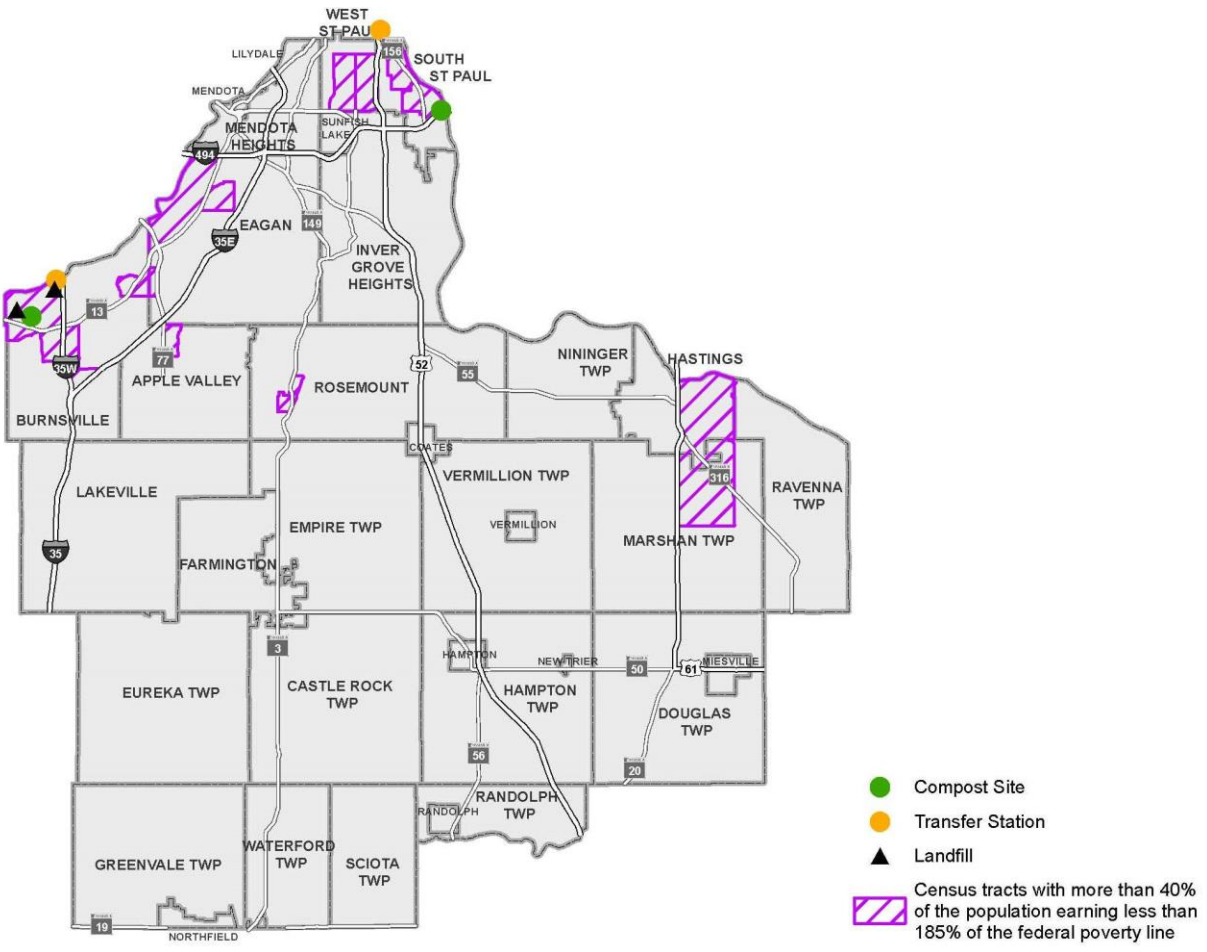


Figure C-1: Map of Solid Waste Facilities in Dakota County in Areas of Concern.

C. Environmental Justice as A Framework For Moving Forward

The County will emphasize a framework of environmental justice and inclusiveness as an intentional approach as Master Plan strategies are implemented. The goal is an environment where all people enjoy the same degree of protection from environmental and health hazards and equal access to decision-making for a healthy environment in which to live, learn, and work. The framework adopts a public health model of prevention to protect people, their communities and the natural environment.

As this Master Plan is implemented and programs, ordinances, and efforts are initiated, the County will work to be intentional about engaging all populations, including stakeholders living or working in MPCA-identified areas of concern.

Several strategies in the Master Plan would directly benefit communities in areas of concern for environmental justice. For example, the County Master Plan includes strategies to implement a multi-unit dwelling recycling program (Figure C-2) and require owners and managers provide recycling education and better access for proper waste management for their tenants. These efforts can lead to reductions in illegal dumping, a common concern in lower income communities.

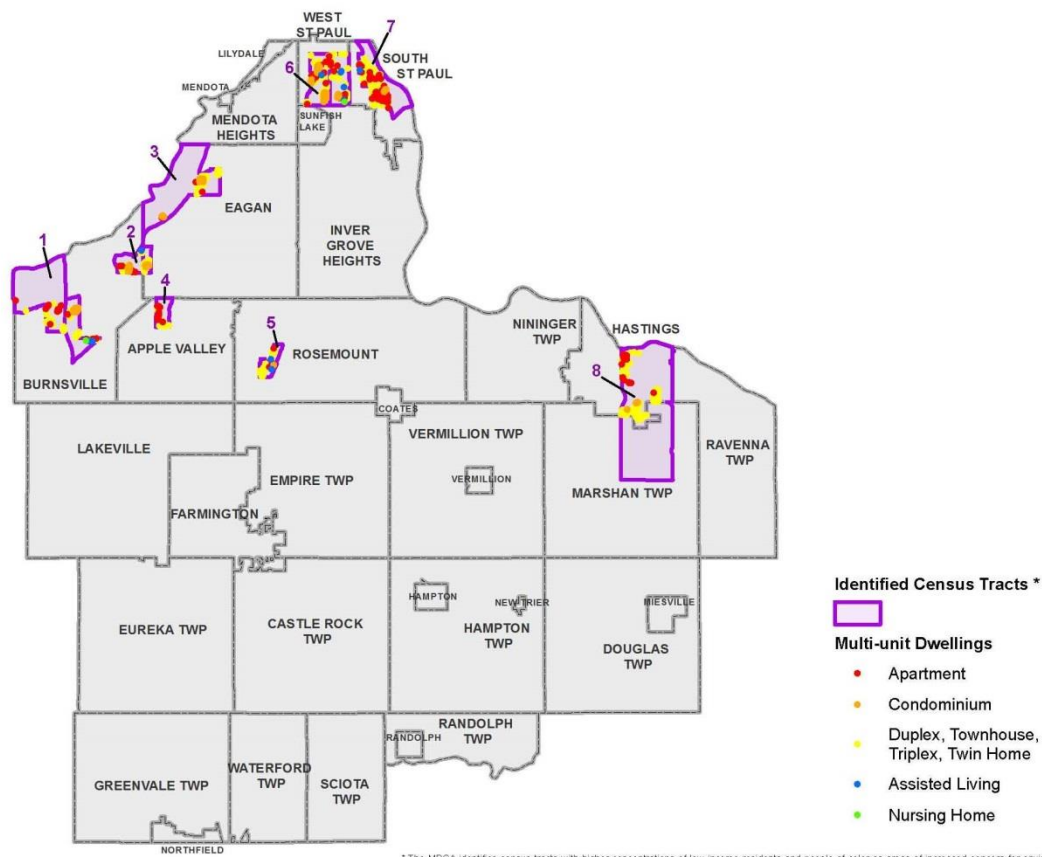


Figure C-2: Map of Types of Multi-Unit Dwellings within MPCA-Identified Areas of Concern

1. Impact and Assessment: Implementing the strategies identified in the County Master Plan will divert waste from landfills to recycling and organics recovery facilities. Dakota County is home to a variety of waste management facilities – from recycling and compost facilities, to landfills. The MPCA identified six facilities (Figure C-3) that are within the areas of concern.

Figure C-3: Solid Waste Facilities within MPCA-Identified Areas of Concern

Facility	Location
1. South St. Paul Compost Site	South St. Paul
2. Burnsville Yard Waste Compost Facility	Burnsville
3. Freeway Transfer Station	Burnsville
4. Keith Krupenny & Son Disposal Service (Transfer Station)	St. Paul (near West St. Paul border)
5. Burnsville Sanitary Landfill	Burnsville
6. Freeway Sanitary Landfill (Closed)	Burnsville

When considering license renewals or new license applications in areas of concern, the County will:

- Identify facility types that warrant additional actions based on potential for adverse effects.
- Increase civic engagement to ensure that everyone has the opportunity to provide comment, particularly in cases when public notice is required.

- 2. Impact review.** Dakota County will continue to license facilities to minimize impacts to the environment and human health. Dakota County does not exercise land use authority outside the shore land area but will encourage municipal partners to site facilities in locations that minimize impacts to the environment and human health.

- 3. Engagement.** The County conducted an extensive stakeholder engagement process during the development of this County Master Plan, including multi-lingual online surveys, phone surveys, workshops, and meetings. Engaging people through a variety of formats created better opportunities for stakeholders of all backgrounds to provide feedback on strategies. The County will continue inclusive engagement efforts for strategy implementation.

APPENDIX D: PERFORMANCE AND ACCOUNTABILITY

A. Evaluating Progress

Dakota County is committed to identifying performance measures to monitor and evaluate progress on strategies identified in the Master Plan. These metrics apply to all aspects of the solid waste management system described throughout this plan. Performance measures are important to ensure ongoing program improvement and to evaluate progress in meeting Master Plan objectives. More detailed progress measures will also be specified in the County's annual work plans, implementation projects, and in ongoing process improvement efforts.

Dakota County is accountable to the MPCA for Master Plan development and advancement, but all stakeholders – including all levels of government, waste generators, and operators of the waste management system – are expected to participate and have accountability in implementing this Master Plan. Dakota County will continue to monitor compliance of regulated waste generators and the waste industry to measure Master Plan progress.

The Policy Plan acknowledges that the complexity of the TCMA solid waste system makes it difficult to measure how MSW is managed according to the system objectives. Some data is more verifiable, such as the waste amounts delivered to waste facilities, because material is weighed and records are kept. Other data is not easily measured, such as the amount of material recycled by commercial establishments. Statute requires the MPCA to evaluate SCORE data collection and management and to make recommendations to the Legislature for its improvement. Continued evaluations will improve the reliability of measurement tools used to assess progress in attaining the Policy Plan's TCMA objectives.

B. County Reporting Requirements

Progress updates will be submitted to the MPCA through annual reports required by State law. Counties share data to account for waste that crosses county lines and also obtain data for waste that is sent outside of the region or state to ensure that data is as complete as possible. Reports summarize trends, project and program outcomes, and activities over the course of the previous year, including relevant data to identify progress. Annual reports submitted to the MPCA include:

- **SCORE Report/Survey** is an annual report that gathers qualitative and quantitative on recycling rates, waste reduction efforts, waste management data and practices, County licensing and collection, finance, and administration. The County will submit the report by the required deadline each year.
- **Certification Report** is an annual solid waste resource recovery and land disposal report. The MPCA reviews the report for consistency with the requirements of Minn. Stat. § 473.848 and the Policy Plan. The County will annually submit the report by the required deadline each year.
- **Local Recycling Development Grant (LRDG) Report** is an accounting to the MPCA of how LRDG funds were used in County programs and efforts. The County will submit the report by the required deadline each year.
- **Household Hazardous Waste Report** provides the MPCA with data on the amount and type of HHW collected during the previous year. Financial data and the number of county and out-of-county households served are reported. The County will submit the report by the required deadline each year.

- **Annual Report** provides the MPCA with a progress report on Master Plan implementation, including timelines for implementation and partners involved. Information submitted includes work and activities completed and priorities planned for the following year. The County will submit the report annually by the required deadline.

C. County Oversight of the Private Sector, Municipalities, and Program Partners

The solid waste management system serving Dakota County is comprised of both public- and private-sector services. State law includes a preference for private-sector ownership and operation of solid waste facilities (Minn. Stat. §§ 473.803 and 115A.46). Therefore, the private sector (both public and not-for-profit organizations) plays a critical role in carrying out solid waste functions within the County and directly influences the ability of the County to achieve Policy Plan objectives and meet statutory requirements.

Minn. Stat. § 473.803 indicates:

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.*

The tools Dakota County uses to hold the private sector, municipalities, and program partners accountable include:

1. **Regulation** – through assuring compliance with County ordinances and, as appropriate, state laws that relate to solid waste management.
2. **Monitoring and reporting** – by gathering information from entities to monitor actions related to the solid waste system and Master Plan implementation.
3. **Contracts/Agreements** – through assuring compliance with voluntary agreements entered into between Dakota County and other entities.

The County implements oversight of the private sector providing waste management services, municipalities implementing landfill abatement programs, and program partners receiving funding or services to implement projects through the following:

- **Solid waste facilities: license and reporting requirements.** All landfills, transfer stations, yard waste, and organics management facilities provide data on the amounts and types of waste they receive as part of their annual reports to the County. All waste management facilities in Dakota County are privately-owned. Through regulation and reporting requirements, facilities are accountable.
 - The County establishes and collects host fees from MSW landfills and to support landfill abatement programs.

- Ordinance 110 requires licensing and reporting for all landfills, recycling facilities, special waste storage facilities, energy recovery facilities, transfer stations, infectious waste facilities, and compost facilities.
- All solid waste facilities are licensed every two years to monitor compliance with environmental and public health requirements. Landfills are inspected at least monthly, recycling facilities are inspected two to four times per year, and compost facilities are inspected one to three times per year depending on size. The County has authority to issue penalties for non-compliance.
- Landfills and transfer stations report waste sources by municipality. Materials recovery facilities (for recyclables) report the amount of incoming waste and how much waste is separated for recycling. The County will update facility report forms, as necessary, to ensure relevant and accurate data is submitted.

Standard for approval of licenses and reports: The County will approve solid waste facility licenses and reports if they meet Ordinance 110 requirements.

Procedures

- **Required License and Report:** The County will provide a license application and report forms and notify regulated facilities of license and reporting obligations and submittal deadlines, as specified in Ordinance 110. The County provides the forms and instructions for completion.
- **County Review and Approval:** The County will review and approve applications and reports if they are determined to be accurate and meet Ordinance 110 requirements. If applications or report forms are incomplete or inaccurate, the County will work with the facility on a complete submittal or can deny them.

- **Waste hauler license and reporting requirements:** Haulers must report the amount of residential and commercial recyclables hauled and the number of accounts that they serve, by city. Haulers are accountable to Master Plan objectives through Ordinance 110 and licensing. Ordinance 110 establishes standards for collection and transportation of solid waste and recyclable materials in the County. Standards include requirements for licensing, reporting, providing the opportunity to recycle, record keeping, collection fee structure, equipment and operations requirements, and a prohibition for mixing MSW and source-separated recyclables. The County enforces Ordinance 110 by licensing MSW haulers. The license requirement includes a checklist to report which recyclable materials each hauler accepts and the frequency of collection. The County provides the application form and instructions for completeness that outline the information, and communicates to waste haulers on the required submittal dates. In addition, licensed haulers are required to report information about collection and processing of recyclable materials. Effective 2017, haulers report residential and commercial waste collection data directly to the MPCA. The County will work with the MPCA to ensure accurate data is submitted. In addition, Ordinance 110 has long-required haulers to submit collection data to the County. County forms require the number of accounts per city and total tons collected by material. The residential form also collects the number of multi-unit accounts. The County will monitor the ongoing need for haulers to continue to submit data directly to the County given the change in the MPCA collection of hauler data. Licensing and reporting holds haulers accountable for Master Plan objectives to implement recycling programs.

Standard for approval of licenses and reports: The County will approve hazardous waste hauler licenses and reports if they meet Ordinance 110 and regional hauler licensing requirements.

Procedures

- **Required License and Report:** The County will collaborate with regional partners, as appropriate, to annually develop a license application and notify haulers of license and license obligations specified in Ordinance 110. The County will notify haulers of reporting obligations specified in Ordinance 110, and will collaborate with the state to compare state and county data submitted by haulers. Application and report forms outline information and data that is required to be submitted.
 - **County Review and Approval:** The County will review and approve applications and reports if they are determined to be accurate. If applications or forms are incomplete or inaccurate, the County will work with the hauler to complete an accurate submittal or can deny the application/reports.
- **Hazardous waste generators and facilities: license and reporting requirements:** Regulated generators and facilities report the amount of waste generated and managed, sorted by hazard category, and waste type. Private-sector generators are accountable to Master Plan objectives based on their status as hazardous waste generators. Hazardous waste generators are accountable through Ordinance 111 which establishes standards based on generator size for training, licensing, generating, storing, processing, and managing hazardous waste in Dakota County. The County licenses, inspects, and trains hazardous waste generators and facilities. Licensing is renewed annually. Inspection and training frequency depends on size. Large and small generators are inspected every year, very small quantity generators every two years, and minimal quantity generators every five years. Inspections and training requirements hold private-sector hazardous waste generators accountable for meeting Master Plan objectives for proper hazardous waste management.

Standard for approval of licenses and reports: The County will approve hazardous waste generator and facility licenses and reports if they meet Ordinance 111 requirements.

Procedures

- **Required License and Report:** The County will annually provide a license application and report forms and notify generators and facilities of license and reporting obligations and submittal deadlines, as specified in Ordinance 111. Forms outline information and data that is required to be submitted.
 - **County Review and Approval:** The County will review and approve applications and reports if they are determined to be accurate. If applications or forms are incomplete or inaccurate, the County will work with the generator or facility to complete an accurate submittal or can deny the application/reports.
- **Municipalities, including the Rural Solid Waste Commission,** report progress toward achieving landfill abatement objectives and County Master Plan requirements, in accordance with Community Funding JPAs. Ordinance 110 requires all municipalities to have a solid waste abatement program in compliance with the County's Master Plan. Community Funding dollars are distributed to each city based on annual work plans. To receive funds, municipalities annually submit an application, work plan, and budget. Funds must be used for residential recycling programs, education and outreach, and priority issues indicated in the JPAs. Municipalities must submit an Annual Report to the County with qualitative and quantitative measurements

resulting from work plan projects and programs. W plans focus on meeting several Master Plan objectives: outreach and education, household hazardous waste recycling, residential recycling, and organics. The Annual Report is used to measure performance. If a municipality fails to meet Ordinance 110 or JPA requirements the County can implement a program on the municipality's behalf, request the return of funds, or both.

An excerpt of Ordinance 110 for a municipal solid waste abatement program is below:

16.01 SOLID WASTE ABATEMENT Program.

- A. *Each municipality shall have a solid waste abatement program. Each municipality's program must:*
 - 1. *Be consistent with the County Solid Waste Master Plan and the joint powers agreement between the county and each municipality with regard to solid waste abatement; and*
 - 2. *Provide a method of collecting and reporting the data required by section 16.02.*
- B. *If a municipality does not maintain a solid waste abatement program, the county may implement a solid waste abatement program in that municipality consistent with the county's solid waste abatement goals and this section.*
- C. *The county may recover its costs for developing, implementing, and operating a solid waste abatement program including, but not limited to, administrative, monitoring and public education costs, from any municipality or group of municipalities, which does not maintain a solid waste abatement program. Costs may be pursued through a service charge established pursuant to Minn. Stat. § 400.08 or through such other means deemed appropriate by the county board.*

16.02 Reporting Requirements for Municipalities.

- A. *Each municipality shall report to the department information relating to the recyclable material generated at drop-offs within its boundaries, as well as other reporting requirements in the municipality's joint powers agreement with the county.*
- B. *Failure to submit a report as required by section 16.02(A) shall be construed by the department as a failure on the part of the municipality to meet its annual solid waste abatement goals and shall be subject to sections 16.01(B) and 16.01(C).*

16.03 Failure to Meet SOLID WASTE ABATEMENT Goals.

If a municipality fails to meet its annual solid waste abatement goals as required by the municipality's joint power agreement with the county, the county board may institute any part of or all of section 16.00 either in the municipality that failed to meet the county's solid waste abatement goals or in the county as a whole, as deemed appropriate by the county board.

Standard for approval of funding and annual report: The County will approve the annual funding if JPA and Ordinance 110 requirements are met, or if municipalities demonstrate progress toward JPA objectives, as documented in the required Final Report.

Procedures

- **Required Report:** The County will annually provide a Final Report and notify municipalities of reporting obligations and reporting submittal deadlines, as outlined in the JPA. Forms will outline information and data that is required to be submitted.
 - **County Review and Approval:** The County will review the Final Report to determine if the municipality has met JPA requirements. If the municipality fails to meet requirements, the County will notify the municipality and work with them to identify action steps to achieve JPA requirements. If the municipality continues to fail to make adequate progress, County staff will discuss options with the municipality and the County Board for remedial actions that include implementing the program on behalf of the community, having the municipality return funding to the County, or both.
- **Agreements/contracts** are used with the private sector to provide incentives to support Master Plan goals and establish mechanisms for reporting:
 - a. **Business Recycling Incentive Program.** The County requires businesses and organizations to enter into a contract with the County to participate in the Business Recycling Incentive Program. The program provides up to \$10,000 for eligible businesses subject to the state’s commercial recycling requirement (MN Stat. § 115A.151) for implementation of eligible activities identified in program guidelines. Program guidelines and contract language support Master Plan goals to implement and document results of waste reduction and improved recycling (including organics recovery). Guidelines establish funding eligibility, details on how the funding will be used, reporting requirements (e.g., Application, Baseline Report, Final Report), and requirements to use County technical assistance to ensure businesses follow best management practices (e.g., use color-coded bins and labels). The County will reimburse the business for County-approved items identified in the contract, following proof of payment by the business.

Standards for approval of contracts and program report forms: For contracts and reports to be approved by the County, landfill abatement activities identified in the required County-developed Application must be consistent with the program’s Guidelines and Contract. Once the contract is approved for program participation, the business is required to submit reports to demonstrate diversion improvements in their waste management program.

Procedures

- **Required Program Reports:** The contract requires that participating businesses complete a Baseline and Final Report, and identifies the submittal timeline and report content requirements. Forms outline information and data that is required to be submitted. Baseline Reports must be submitted within 30 days of approval of program participation (e.g., contract execution). The Baseline Report requires reporting on quantitative (pre-program trash and recycling volumes at the businesses) and qualitative measures (general awareness of recycling). The Final Report must be submitted within 12 months of program participation (when project is complete). It requires an update on quantitative and qualitative measures from the Baseline

Report to measure changes in diversion and recycling awareness at the end of the project. In addition, for payment of County funds for items identified in the contract, the businesses must submit a Reimbursement Form that demonstrates proof of purchase and payment of County-approved items.

- **County Review and Approval:** The County will review and approve the program forms to determine if they meet Guidelines and contract obligations. If they do not, and until any issues are resolved, the County will not approve reports and will not issue reimbursement for project items purchased by the business.

b. School Recycling and Organics Program. The County requires schools to enter into a JPA (public schools) or contract (private schools) with the County to participate in the School Recycling and Organics Program to establish program roles and expectations. The JPA/contract supports Master Plan goals to implement and document results of waste reduction and improved recycling (including organics recovery) actions. The JPA/contract establishes program eligibility and requirements to use County technical assistance to ensure schools follow best management practices (e.g., paired, labeled, and color-coded bins, green teams, update internal policies) and measure waste diversion progress (e.g., allow pre- and post-program waste sorts).

For the JPA/contract to be approved by the County for participation in the program, the school must agree to comply with JPA/contract obligations. The County works closely with a contractor and school participants to ensure program expectations are achieved. If they are not, the County can remove any waste management system infrastructure (e.g., recycling bins) provided by the County.

The County will individually, and with state and regional partners, routinely evaluate aforementioned forms and related measurement requirements. The County will revise forms as necessary to ensure data is accurate and relevant, and assist in reporting of Master Plan implementation.

D. Accountable Parties and Additional Measures for Strategies

The Master Plan outlines strategies to achieve Policy Plan and statutory requirements. All stakeholders in the system have roles and responsibilities to ensure successful implementation of these strategies.

The following tables include strategies identified in Part Two of the Master Plan, along with key entities accountable for strategy implementation, possible output or outcome measures, and primary mechanisms for gather measures.

1. Regional Solutions

Strategy	Accountable Party	Possible Outputs or Outcome Measures	Primary Methods for Data Gathering
1. Standardize ordinances.	TCMA Counties, MPCA	Standardized hauler reporting, licensing, and HHW reciprocity	Hauler reporting evaluation; hauler licensing program evaluation; HHW reciprocity program evaluation
2. Implement standardized messaging regarding residential recycling in all seven TCMA counties.	County, Waste Industry/Haulers, Municipalities	Waste management behavior and attitude change in the County; Standardized messages used by municipalities and regulated parties	County surveys; Education tracking/evaluations; Hauler and municipality reports
3. Collaborate with partners on education, research, planning, implementation, evaluation, and reporting of waste management projects and programs.	MPCA, TCMA Counties	Consistent and complimentary waste management programs across the TCMA	County surveys; Education tracking; Program data; Peer program reviews
4. Collaborate with partners to implement effective reporting for performance measurement purposes.	MPCA, TCMA Counties, Haulers and Facilities	Waste management performance measurement changes	Hauler and facility reports; Program data; Peer workshops

2. Source Reduction and Reuse

Strategy	Accountable Party	Possible Outputs or Outcome Measures	Primary Methods for Data Gathering
1. Support the State’s Sustainable Purchasing Program.	County, MPCA	Quantity of sustainable products purchased from state contracts; Program needs met with available, compliant state contract products	County purchasing data; Program and contract evaluations
2. Implement a program for either businesses or residents to prevent food from being wasted.	County	Tons of food rescued; Food waste behavior and attitude change in the County	County surveys; Program evaluations
3. Implement public entity and commercial waste reduction and reuse programs.	County, Public Schools, Municipalities	Number of reuse opportunities in the County; Types and quantity of waste reduced in County and public entity programs	County program data; Public entity program data
4. Implement residential waste reduction and reuse programs.	County	Tons of household reuse occurring and waste reduced; Types and volumes of waste reduced in County programs; Percent multi-unit dwellings with reuse opportunities	Program data; Program evaluations
5. Collaborate with partners to develop environmentally-preferable procurement standards and practices and encourage their use by public entities.	County, Public Schools, Municipalities	Sustainable products purchased from state or local government contracts; Percent public entities with sustainable purchasing policies	Public entity program data; Peer workshops
6. Support waste reduction and reuse opportunities in the community.	County	Pounds of material repaired at Fix-it-clinics; Tons of reuse occurring in the community	Program data; Data from reuse organizations
7. Provide reuse opportunities for materials brought to County collection sites.	County	Pounds of material reused at The Recycling Zone	The Recycling Zone data

3. Collection Best Practices

Strategy	Accountable Party	Possible Outputs or Outcome Measures	Primary Methods for Data Gathering
1. Collect recycling weekly.	County, Haulers	Number of hauler licenses issued that offer weekly collection	Licensing data
2. Improve the consistency and accountability of waste materials collection.	County, Haulers, Municipalities	Improvements of recycling collection practices; Number of municipalities evaluating/implementing organized collection	Evaluation of collection practices in County ordinance and municipal codes; Hauler, facility and progress reports
3. Institute generator fee schedules and funding incentives to prevent and divert waste from disposal.	County	Financial tools increase waste reduction and recycling; Amount of program financial assistance provided	Evaluation of fees and schedules; County program data; Progress reports
4. Implement long-term revenue sources for landfill abatement programs that encourage waste diversion.	County, MPCA, Municipalities	State, County, and municipal revenue sources meet waste program needs; Frequency and amount of County program funds distributed, withheld, or recovered	State, County, and municipal revenue and program data; Progress reports
5. Regulate solid waste haulers.	County, Haulers and Facilities	Number of complaint and enforcement issues; Number of licenses issued; Percent in compliance; industry changes communicated	Program data; Hauler and facility licensing reports
6. Collect and manage fees to implement waste management programs.	County	Fees collected and funds distributed for programs; regulatory programs fully funded by fees	County revenue/expense and program data

4. Recycling Management

Strategy	Accountable Party	Possible Outputs or Outcome Measures	Primary Methods for Data Gathering
1. Support the collection of non-traditional recyclables such as furniture, mattresses, carpet.	County, Municipalities	Tons of material collected; Type, location, percent municipalities with drop sites/events; number of non-traditional recycling facilities in the County	Event and drop site data; County program data; Municipal program data
2. Implement generator requirements to improve recycling.	County, Regulated Generators	Changes in County ordinance; registration and reporting implemented for regulated solid waste generators	Progress reports
3. Implement a multi-unit dwelling recycling program.	County, Municipalities, Property Owners/Managers	Development of program; Number of participants/units assisted and tons diverted; Changes in municipal code/ programs to support recycling; property owners/managers accountable for program components	Progress reports; County program data
4. Ensure the opportunity to recycle.	County, Municipalities, Haulers	The Recycling Zone and hauler offering services; Changes in County ordinance requirements to ensure the opportunity	Program data; Progress and hauler reports
5. Provide support to schools to improve recycling through the School Recycling and Organics Program.	County, Schools	Number of program participants; Waste sort results; Tons of material diverted	Program data
6. Provide support to commercial entities to improve recycling through the Business Recycling Incentive Program.	County, Businesses	Number of program participants; Program results; Tons of material diverted	Program data
7. Provide support to event coordinators to improve recycling at community events.	County, Event Coordinators, Haulers	Tons recycled from events; volunteer hours	Event data; Hauler data
8. Provide recycling in County operations.	County, Contracted Haulers	Tons of material diverted from County operations; waste sort results	Program data; Hauler reports; Waste sorts

5. Organics Management

Strategy	Accountable Party	Possible Outputs or Outcome Measures	Primary Methods for Data Gathering Mechanism
1. Support community-based social marketing campaigns that educate residents on ways to reduce the amount of food that is not eaten.	County, Municipalities	Food waste behavior and attitude change in the County	County surveys; Program evaluations; Municipal program data
2. Require organics diversion by large generators of organics by 2022.	County, Large Generators, Haulers and Facilities	Large generators defined; Change in County ordinance	Progress data; Hauler and facility reports
3. Implement organics diversion at public entity facilities and in large event venues.	County, Municipalities, Schools, Haulers	Changes in County ordinance and city code/programs and schools to support organics recovery/diversion at large events	Progress reports; County program data; City program data; School program data; Event data; Hauler reports
4. Implement a multi-unit dwelling recycling and organics recovery program.	County, Municipalities, Property Owners/Managers	Development of program; Number of participants/units assisted and tons diverted; Changes in municipal code/programs to support recycling/organics recovery; property owners/managers accountable for program components	Progress reports; County program data
5. Expand opportunities for residential organics recovery.	County, Municipalities, Haulers	Changes in County ordinance and city code/ordinance to support curbside collection; Number and percent of haulers offering curbside collection; Tons of organics diverted	Progress reports; Program data; Hauler and facility reports
6. Support private and public sector efforts in the region to develop new or expanded organics transfer and management capacity.	County, Industry	New or expanded capacity serving the County	Progress reports; Facility reports; Hauler reports
7. Provide drop off opportunities to collect organics from residents.	County, Municipalities, Haulers	Tons of organics collected; Participant needs are met ; number and location of drop sites	Program data; Hauler and facility reports; Participant survey data
8. Lease County-owned land to support organics capacity.	County, Facility Owner/Operator	Lease supports SSOM and yard waste operations; lease compliance	Lease; Inspections

9. Provide funding and resources to municipalities to implement landfill abatement programs.	County, Municipalities	County program funds distributed, withheld, or recovered	Municipality program data
10. Provide support to schools to implement or improve organics recovery through the School Recycling and Organics Program.	County, Schools, Haulers	Number of program participants; Waste sort results; Tons of organics recovered/diverted	Program data; School and hauler reports
11. Provide support to commercial entities to implement or improve organics recovery through the Business Recycling Incentive Program.	County, Businesses, Haulers	Number of program participants; Program results; Tons of organics recovered/diverted recycled	Program data; Business and hauler reports
12. Provide support to event coordinators for organics recovery at community events.	County; Event Coordinators	Number of events; Tons of organics recycled/diverted from events; number of volunteer hours	Event data; Hauler data
13. Provide organics recovery/diversion in County operations.	County	Tons of organics recovered/diverted from County operations	Program data; Hauler data
14. Regulate yard waste to ensure proper waste management.	County, Haulers and Facilities	Number of complaint and enforcement issues; Tons of yard waste managed at yard waste sites/commercial compost facilities	County compliance data/tracking; Hauler and facility data; Inspections

6. Non-Mixed Municipal Solid Waste

Strategy	Accountable Party	Possible Outputs or Outcome Measures	Primary Methods for Data Gathering Mechanism
1. Waste composition studies must be conducted at all disposal facilities that accept waste from the TCMA.	MPCA, County, Non-MSW Landfills	Changes in MPCA facility permits and/or County ordinances and landfill licenses to require studies; Waste composition studies completed	Facility data; Waste composition analyses
2. Implement reuse and recycling of non-MSW in County and public entity infrastructure projects.	County, Municipalities	Tons of non-MSW reused or recycled	County project data; Municipal project data
3. Provide opportunities to recycle and properly manage non-MSW that is banned from disposal.	County, Municipalities	Tons of non-MSW managed at The Recycling Zone; Tons of non-MSW managed in County and municipal projects	The Recycling Zone data; County project data; Municipal project data
4. Regulate non-MSW haulers and facilities.	MPCA	Number of complaint and enforcement issues; number and percent of facility inspections.	County compliance data/tracking; Inspections

7. Recycling Market Development

Strategy	Accountable Party	Possible Outputs or Outcome Measures	Primary Methods for Data Gathering Mechanism
1. Expand the capacity for existing markets, specifically glass, paper, and film.	MPCA, County, TCMA Counties, Industry, Recycling Organizations	Tons of material collected and recycled	Facility data; Peer workgroup
2. Establish a shared vision to build and improve local market development infrastructure and capacity.	MPCA, County, TCMA Counties, Industry	Regional workgroup convened to focus on market development	Peer workgroup; Progress reports
3. Research best practices for Material Recovery Facility (MRF – recycling facility) optimization.	MPCA, County, TCMA Counties, Industry	Assessment or study complete of best management practices/equipment at MRFs	MPCA study; Progress reports; Peer workgroup
4. Invest in new technologies and equipment for sorting.	MPCA, County, TCMA Counties	Number or amount of MPCA grants or loans awarded	MPCA program data; Peer workgroups

8. Organics Market Development

Strategy	Accountable Party	Possible Outputs or Outcomes Measure	Primary Methods for Data Gathering Mechanism
1. Expand the use of compost in the Minnesota Department of Transportation's (MnDOT) and in local government transportation infrastructure projects	County, Municipalities	Tons of food waste-derived compost used in and number of County and municipal transportation infrastructure projects	County project data; Municipality project data
2. Use compost derived from yard waste in County transportation and park projects.	County, Municipalities	Tons of yard waste-derived compost used in and number of County and municipal transportation infrastructure projects	County project data; Municipality project data

9. Emerging Technology

Strategy	Accountable Party	Possible Outputs or Outcome Measures	Primary Methods for Data Gathering Mechanism
1. Evaluate anaerobic digestion for the region.	MPCA, County, TCMA Counties, Stakeholders	Assessment or study complete	Progress reports; Peer workgroup
2. Develop a process for gathering the information necessary to make timelier and consistent policy decisions.	MPCA, County, TCMA Counties	State regulatory process and policy established for emerging technologies	Progress reports; Peer workgroup
3. Support private and public sector efforts in the region to develop new or expanded landfill abatement-related facilities.	County, Industry	New technologies or expanded capacity serving the County	Progress reports; Facility reports

10. Product Stewardship

Strategy	Accountable Party	Possible Outputs or Outcome Measures	Primary Methods for Data Gathering Mechanism
1. Create a regional Product Stewardship Committee.	TCMA Counties	Regional Product Stewardship Committee established	Progress reports; Peer workgroup
2. Counties report annually on the management of priority materials.	County	Annual report to MPCA updated with priority materials; County reporting of priority materials	Program data
3. Support product stewardship initiatives with an emphasis on products that pose a public health or safety risk.	MPCA, County, TCMA Counties, Industry	Product stewardship legislation or program changes implemented	Progress reports; Program data; Material data

11. Landfill Abatement

Strategy	Accountable Party	Possible Outputs or Outcome Measures	Primary Methods for Data Gathering Mechanism
1. Conduct waste composition studies at MSW land disposal facilities in the County.	MPCA, County, MSW Facilities	Changes in MPCA facility permits and/or County ordinances and landfill licenses to require studies; Waste composition studies conducted	Facility data; Waste composition studies
2. Support state efforts to maximize the use of existing resource recovery facility capacity serving the TCMA while considering geography and environmental impacts.	MPCA, County, Public Entities	Regional resource recovery facility capacity maximized; MPCA landfill permits modified; Public entities managing MSW at resource recovery facilities, as appropriate	Facility data; MPCA permit data; Public entity survey; Program data/evaluation
3. Provide consistent, broad-based education to the community on proper waste management.	County	Waste management behavior and attitude change; Number of messages distributed	County program evaluation; County program data; Residential surveys
4. Provide messages and education programs using communication methods most effective for the intended audience.	County	Inclusive engagement conducted; Number and type of messages and engagement methods; number of MRC classes and graduates; Waste management behavior and attitude change by target audience	County program evaluation; County program data; Residential survey; Public engagement process
5. Regulate solid waste generators, haulers, and facilities to protect the environment and public health.	County	Number of complaint and enforcement issues; Tons of solid waste managed; Number of inspections	County compliance data/tracking; Hauler data; Facility data; Generator data; Inspections
6. Collaborate with partners to develop long-term strategies for landfills to protect the environment and public health.	MPCA, County, Municipalities, Industry	Landfill long-term closure plans developed	MPCA landfill closure plans; MPCA program data
7. Manage the lease for County-owned land in Empire Township to support transfer capacity to a resource recovery facility.	County	Lease requirements met	Lease data

<p>8. Provide performance-based grant funding and resources to municipalities to implement landfill abatement programs within their operations and in the community.</p>	<p>County, Municipalities</p>	<p>Funding program implements Master Plan; County program funds distributed, withheld, or recovered</p>	<p>Program data; Municipality reports</p>
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12. Toxicity Reduction and Hazardous Waste Management

Strategy	Accountable Party	Possible Outputs or Outcome Measures	Primary Methods for Data Gathering Mechanism
1. Increase opportunities for proper management of problem materials, hazardous, and household hazardous waste.	County	Number of residents served and distance traveled; Number and location of year-round facilities; Tons of problem material, household hazardous waste and hazardous waste properly managed.	The Recycling Zone program data; Hazardous waste compliance data
2. Provide consistent, broad-based education to the community on proper waste management options.	County	Waste management behavior and attitude change; Number of messages distributed	County program evaluation; County program data; Residential surveys
3. Provide drop off opportunities for problem materials and hazardous waste management.	County	Number of residents and businesses served at The Recycling Zone; Number and location of year-round facilities; Tons of problem material, household hazardous waste and hazardous waste properly managed.	The Recycling Zone program data; Hazardous waste program and compliance data
4. Provide consistent and cost-effective household hazardous waste, hazardous waste, and problem material management services.	County	Tons of materials reused at The Recycling Zone; cost increases/decreases from use of regional and reciprocal use agreements	The Recycling Zone program data; Hazardous waste program data
5. Regulate hazardous waste generators and facilities.	County	Number of complaint and enforcement issues; Tons of hazardous managed; number of inspections	County compliance data/tracking; Facility data; Generator data; Inspections

APPENDIX E: PROPOSED TIMING OF STRATEGIES

Following is the list of the Policy Plan and Additional strategies identified in Part Two of the Master Plan and their proposed implementation timing start and end dates. Note that actual implementation timing may be different based on approved approaches, budgets, strategy phasing, future conditions, and interactions with other implemented strategies. A revision of the Master Plan is anticipated in 2023 following the next Policy Plan revision.

Legend for Figures E-1 and E-2

-  Source Reduction & Reuse
-  Collection Best Practices
-  Recycling Management
-  Organics Management
-  Non-Municipal Solid Waste
-  Recycling Market Development
-  Organics Markets
-  Emerging Technology
-  Product Stewardship
-  Landfill Abatement
-  Regional Solutions
-  Toxicity Reduction and Hazardous Waste Management

Figure E-1: County-Led Strategies

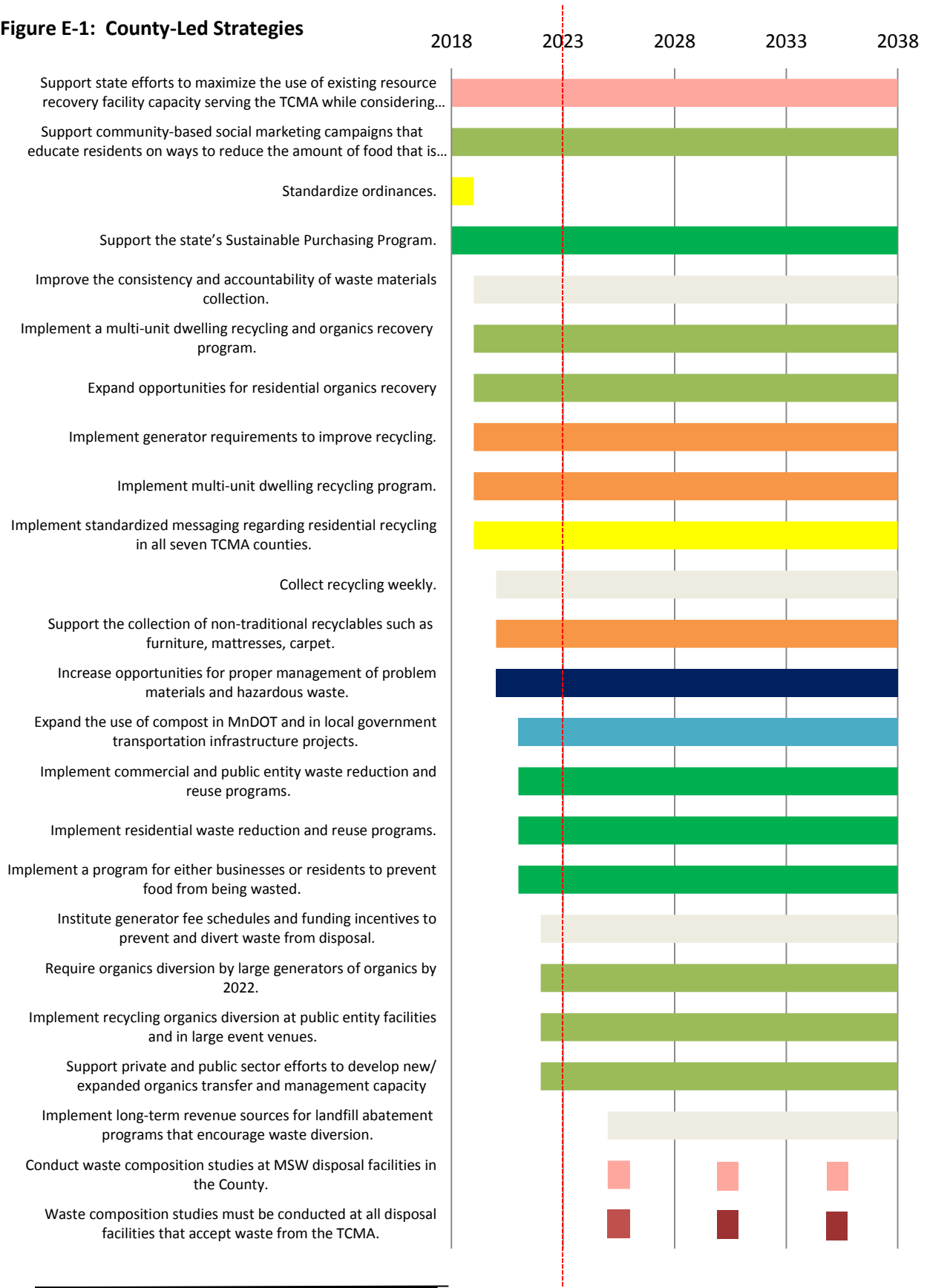
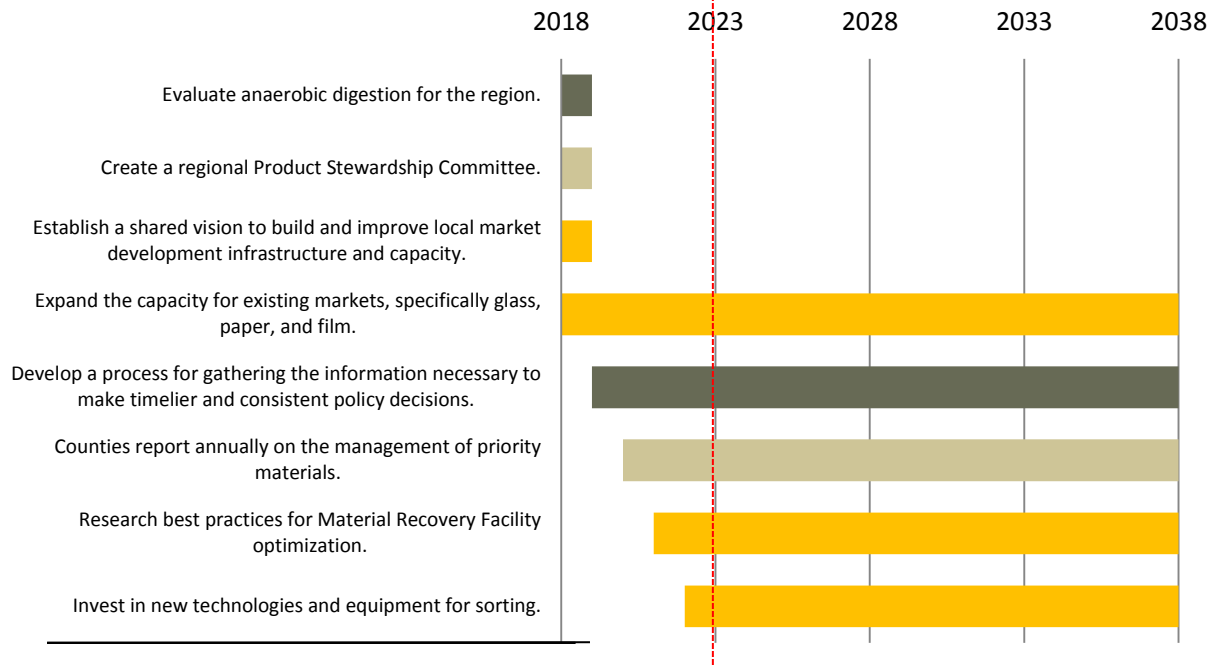


Figure E-2: MPCA-Led and/or County Participation Expected Strategies



APPENDIX F: CROSS REFERENCE OF STATUTORY COUNTY MASTER PLAN REQUIREMENTS

Metropolitan counties are required by Minn. Stat. § 473.803 to submit a revised County Master Plan to the MPCA for approval. Below is a list of components statutorily required to be in the County’s Master Plan and the location in the plan where they are addressed.

MINN. STAT. § 473.803 COUNTY MASTER PLAN REQUIREMENTS	LOCATION IN MASTER PLAN
<i>County Solid Waste Master Plan to implement the Policy Plan</i>	<p>Part One: Introduction Section A: Introduction Section B: Master Plan Purpose and Framework Section C: Moving Forward</p> <p>Part Two: Solid Waste Landfill Abatement Plan Section B: County Solid Waste Policies Section C: Strategies, Tactics, and Timing Section D: Implementation</p>
<i>County solid waste activities, functions, and facilities</i>	<p>Appendix A: Existing Waste Management System and County Programs Section A: Waste Management Governance, Roles, and Responsibilities Section E: Dakota County’s Solid Waste Programs and Activities Section G: Waste Management Facilities</p>
<i>Existing system of solid waste generation, collection, processing, and disposal</i>	<p>Appendix A: Existing Waste Management System and County Programs Section C: Waste Projection and Composition Section D: Solid Waste Management in Dakota County Section E: Dakota County’s Solid Waste Programs and Activities Section F: Collection and Transportation of Waste Section G: Waste Management Facilities</p>
<i>Proposed mechanisms for complying with the recycling requirements of § 115A.551</i>	<p>Part Two: Solid Waste Landfill Abatement Plan Section B: County Solid Waste Policies Section C: Strategies, Tactics, and Timing 4. Recycling Management 5. Organics Management 11. Landfill Abatement</p>
<i>Proposed mechanisms for complying with the household hazardous waste management requirements of § 115A.96,</i>	<p>Part Two: Solid Waste Landfill Abatement Plan Section B: County Solid Waste Policies Section C: Strategies, Tactics, and Timing 1. Regional Solutions</p>

<i>subd. 6</i>	12. Toxicity Reduction and Hazardous Waste Management
<i>Existing and proposed county and municipal ordinances and license and permit requirements relating to solid waste facilities and solid waste generation, collection, processing, and disposal</i>	<p>Part Two: Solid Waste Landfill Abatement Plan</p> <p>Section B: County Solid Waste Policies</p> <p>Section C: Strategies, Tactics, and Timing</p> <ol style="list-style-type: none"> 1. Regional Solutions 3. Collection Best Practices 4. Recycling Management 5. Organics Management 6. Non-Municipal Solid Waste 8. Organics Markets 11. Landfill Abatement 12. Toxicity Reduction and Hazardous Waste Management <p>Appendix A: Existing Waste Management System and County Programs</p> <p>Section A: Waste Management Governance, Roles, and Responsibilities</p> <p>Section E: Dakota County’s Solid Waste Programs and Activities</p> <p>Section G: Waste Management Facilities</p>
<i>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</i>	<p>Part Two: Solid Waste Landfill Abatement Plan</p> <p>Section C: Strategies, Tactics, and Timing</p> <ol style="list-style-type: none"> 3. Collection Best Practices 4. Recycling Management 5. Organics Management 6. Non-Municipal Solid Waste 7. Recycling Market Development 8. Organics Markets 9. Emerging Technology 11. Landfill Abatement 12. Toxicity Reduction and Hazardous Waste Management <p>Appendix A: Existing Waste Management System and County Programs</p> <p>Section A: Waste Management Governance, Roles, and Responsibilities</p> <p>Section E: Dakota County’s Solid Waste Programs and Activities</p> <p>Section F: Collection and Transportation of Waste</p> <p>Section G: Waste Management Facilities</p>
<i>Any solid waste facility which a 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</i>	<u>N/A</u> - Dakota County does not own or plan to acquire any solid waste facilities.

<i>the facility</i>	
<i>A proposal for the use of each facility after it is no longer needed or usable as a waste facility</i>	N/A - Dakota County does not own or plan to acquire any solid waste facilities
<i>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</i>	Part Two: Solid Waste Landfill Abatement Plan Section B: County Solid Waste Policies Section C: Strategies, Tactics, and Timing <ol style="list-style-type: none"> 3. Collection Best Practices 5. Organics Management 9. Emerging Markets 11. Landfill Abatement 12. Toxicity Reduction and Hazardous Waste Management
<i>For solid waste facilities owned or operated by public agencies or supported primarily 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 waste management objectives identified in this plan</i>	N/A - Dakota County does not own or plan to acquire facilities
<i>Include a land disposal abatement element to implement the Metropolitan Land Disposal Abatement Plan adopted under § 473.149, subd. 2d (consistency with the “Policy Plan”)</i>	Part Two: Solid Waste Landfill Abatement Plan Section B: County Solid Waste Policies Section C: Strategies, Tactics, and Timing <ol style="list-style-type: none"> 1. Regional Solutions 2. Source Reduction and Reuse 3. Collection Best Practices 4. Recycling Management 5. Organics Management 6. Non-Municipal Solid Waste 7. Recycling Market Development 8. Organics Markets 9. Emerging Technology 11. Landfill Abatement 12. Toxicity Reduction and Hazardous Waste Management
<i>Implement the local abatement objectives for the county and cities within the county as</i>	Part One: Introduction Section B: Master Plan Purpose and Framework Section C: Moving Forward

<p><i>stated in the Metropolitan Abatement Plan</i></p>	<p>Part Two: Solid Waste Landfill Abatement Plan Introduction Section B: County Solid Waste Policies</p>
<p><i>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 the Policy Plan revisions</i></p>	<p>Section C: Strategies, Tactics, and Timing</p> <ol style="list-style-type: none"> 1. Regional Solutions 2. Source Reduction and Reuse 3. Collection Best Practices 4. Recycling Management 5. Organics Management 6. Non-Municipal Solid Waste 7. Recycling Market Development 8. Organics Markets 9. Emerging Technology 10. Product Stewardship 11. Landfill Abatement 12. Toxicity Reduction and Hazardous Waste Management
<p><i>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 the Policy Plan revisions</i></p>	<p>Part One: Introduction Section B: Master Plan Purpose and Framework Section C: Moving Forward Part Two: Solid Waste Landfill Abatement Plan Introduction Section B: County Solid Waste Policies Section D: Implementation Appendix D: Performance and Accountability Section C: County Oversight of the Private Sector, Municipalities, and Program Partners Section D: Accountable Parties and Additional Measures for Strategies</p>
<p><i>Performance standards must implement the metropolitan and county abatement objectives</i></p>	<p>Part Two: Solid Waste Landfill Abatement Plan Introduction Section B: County Solid Waste Policies Section D: Implementation Appendix D: Performance and Accountability Section C: County Oversight of the Private Sector, Municipalities, and Program Partners Section D: Accountable Parties and Additional Measures for Strategies</p>
<p><i>Include performance standards and procedures to be used by</i></p>	<p>Appendix D: Performance and Accountability Section C: County Oversight of the Private Sector, Municipalities, and</p>

<p><i>the county in determining annually under subdivision 3 whether a city within the county has implemented the plan and satisfied the performance standards for local abatement</i></p>	<p>Program Partners Section D: Accountable Parties and Additional Measures for Strategies</p>
<p><i>Plans for required use of resource recovery facilities. Plans proposing designation shall evaluate the benefits of the proposal, including the cost of the proposal (direct and indirect) and adverse long-term effects.</i></p>	<p><u>N/A</u> – Dakota County does currently or plan to designate waste to a resource recovery facility.</p>
<p><i>The County Plan may include a determination (delegate) that the private sector will achieve, either in part or whole, the goals of the Policy Plan and Master Plan:</i></p> <ul style="list-style-type: none"> <i>a. County monitors performance</i> <i>b. County continues to meet responsibilities under law (education, opportunity to recycle, promote waste reduction)</i> <i>c. Continues to provide required annual reports</i> <i>d. Adopt specific strategies and goals for private sector</i> <i>e. Adopt specific measures for oversight of private sector (fees, subsidies, arrangements, licenses, reporting, regulations and other institutional agreements.)</i> 	<p><u>N/A</u> – Dakota County is not delegating Master Plan goal achievement to the private sector.</p>
<p><i>Recycling Implementation Strategy that identifies how to reach recycling goals along with mechanisms for providing</i></p>	<p>Part One: Introduction Section A: Introduction Section B: Master Plan Purpose and Framework Section C: Moving Forward</p>

<p><i>financial incentives to generators to reduce the amount of waste and to separate recyclables). (Minn. Stat. § 115A.55)</i></p>	<p>Part Two: Solid Waste Landfill Abatement Plan</p> <p>Section C: Strategies, Tactics, and Timing</p> <ul style="list-style-type: none"> 3. Collection Best Practices 4. Recycling Management 5. Organics Management 6. Non-Municipal Solid Waste 7. Recycling Market Development 11. Landfill Abatement 12. Toxicity Reduction and Hazardous Waste Management <p>Section D. Implementation</p>
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APPENDIX G: MINNESOTA POLLUTION CONTROL AGENCY LETTER OF PLAN APPROVAL



520 Lafayette Road North | St. Paul, Minnesota 55155-4194 | 651-296-6300
800-657-3864 | Use your preferred relay service | info.pca@state.mn.us | Equal Opportunity Employer

July 30, 2018

Commissioner Kathleen A. Gaylord, Chair
Dakota County Board of Commissioners
Administration Center
1590 Highway 55
Hastings MN 55033-2343

Dear Commissioner Gaylord:

I am pleased to inform you that Dakota County's Master Plan (Plan), dated June 11, 2018, was approved by the Minnesota Pollution Control Agency (MPCA). MPCA staff reviewed the Plan and determined that it meets the requirements outlined in Minn. Stat. §473.803 and supports achieving the objectives of the 2016-2036 Metropolitan Solid Waste Policy Plan. The Findings of Fact approving the Plan are enclosed. MPCA staff feel that Dakota County has developed a Plan that includes several new and potentially significant elements, such as:

- A strong focus on organics management –
 - Plans for residents, business and schools from wasting food.
 - Resources for food rescue for hunger relief agencies.
 - Organics drop-off locations, transfer, and support for the Empire recycling facility.
- Recycling plans including expansion of recycling requirements for large volume waste generators and weekly curbside collection.
- Development and implementation of new reuse, non-traditional materials recycling, and multi-unit dwelling recycling programs.

The MPCA appreciates Dakota County's continued leadership and commitment to implementing comprehensive and effective solid waste management programs. We commend Dakota County's plan to examine strategies to ensure long term revenue sources and sustainable funding. MPCA Staff admired the County's hard work throughout the planning process and would like to request an opportunity to speak to the County Board at an upcoming meeting to express our appreciation.

Sincerely,

A handwritten signature in black ink, appearing to read 'David J. Benke', is written over a light blue horizontal line.

David J. Benke
Division Director
Resource Management & Assistance Division

Enclosure

cc: Georg Fischer, Dakota County
Kirk Koudelka, MPCA
Steve Giddings, MPCA
Mark Rust, MPCA
Peder Sandhei, MPCA

MINNESOTA POLLUTION CONTROL AGENCY

In the Matter of the Approval of the
Dakota County Solid Waste Master Plan

FINDINGS OF FACT,
CONCLUSIONS OF LAW
AND ORDER

Dakota County submitted a Solid Waste Master Plan to the Commissioner of the Minnesota Pollution Control Agency (MPCA) for review and approval pursuant to Minn. Stat. § 473.803. After reviewing the Solid Waste Master Plan, the MPCA makes the following Findings of Fact, Conclusion of Law and Order.

FINDINGS OF FACT

A. Authority, Procedure, Requirements, and Background

1. Minn. Stat. § 115A.42 provides that the Commissioner of the Minnesota Pollution Control Agency (MPCA) establish and administer a program to encourage and improve regional and local solid waste management planning activities and to further the state policies and purposes expressed in Minn. Stat. § 115A.02. The program under sections 115A.42 to 115A.46 is administered by the MPCA pursuant to rules promulgated under chapter 14, except in the metropolitan area where the program is administered by the MPCA pursuant to Minn. Stat. § 473.149.
2. Minn. Stat. § 473.149 required the MPCA to revise the metropolitan long range policy plan for solid waste management "Policy Plan" by December 31, 2016, and every sixth year thereafter.
3. Minn. Stat. § 473.803, subd. 1 provides that "each metropolitan county, following adoption or revision of the 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 MPCA for approval, a county solid waste master plan to implement the policy plan."
4. Minn. Stat. § 473.803, subd. 2 provides that 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."
5. Minn. Stat. § 473.803 and the Policy Plan pages D-10 through D-15 ("Appendix D"), describe the procedure and requirements for MPCA review and approval of the Master Plan. The Master Plan must be consistent with and implement the Plan, and include:
 - a. **473.803, subd. 1 Contents.** The Master Plan includes the required general contents (*see* Minn. Stat. § 473.803, subd. 1 and Appendix D, bullet 9 under "Standard");
 - b. **Land Disposal Abatement.** The Master Plan includes a land disposal abatement element to implement the metropolitan land disposal abatement plan (*see* Minn. Stat. § 473.083, Subd. 1c., Appendix D, bullets 1-5 under "Standard," and Policy Plan Part 3);
 - c. **Oversight.** The Master Plan provides oversight over entities delegated by the county to implement the plan and the private sector (*see* Minn. Stat. § 473.803, Subd. 5; Appendix D, bullets 6-8 under "standard"; and Appendix D, "Role of private sector; county oversight");

- d. **Designation to Resource Recovery Facility.** The Master Plan proposes designation of a resource recovery facility and evaluates the benefit of the proposal (see Minn. Stat. § 473.803, subd. 1d);
 - e. **Advisory Committee.** The Master Plan was prepared with the aid of a solid waste management advisory committee (see Minn. Stat. § 473.803, subd. 4).
6. On April 6, 2017, the MPCA adopted a revised Metropolitan Solid Waste Management Policy Plan, 2016-2036, pursuant to Minn. Stat. § 473.149.
 7. On June 11, 2018, Dakota County submitted its Solid Waste Management Master Plan, 2018-2038 ("Master Plan"), for MPCA review.

B. Master Plan

1. 473.803, Subd 1 Contents

- a. The Master Plan includes the general contents required under Minn. Stat. 473.803, subd. 1 and Appendix D.
- b. The Master Plan includes:
 - county solid waste activities, functions, and facilities; County functions are outlined in Appendix D.
 - the existing system of solid waste generation, collection, and processing, and disposal within the county; The existing system is outlined in Appendix A.
 - 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; Mechanisms for recycling are outlined in Part Two of the Master Plan.
 - 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; Regulations are outlined in Appendix D of the Master Plan.
 - 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; This information is contained in Appendix A.
 - 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; Dakota County owns and plans to own no solid waste facilities.

2. Land Disposal Abatement

- a. The Master Plan includes a land disposal abatement element to implement the metropolitan land disposal abatement plan adopted under section 473.149, subdivision 2d ("Metropolitan System Plan").
- b. The Master Plan implements the local abatement objectives for the county and cities within the county by incorporating strategies identified in Part Three of the Policy Plan:

- The Master Plan must include two regional solutions as provided in the Policy Plan. Dakota County included two of the recommended strategies from the Policy Plan and therefore meets this criterion;
- The Master Plan must include two source reduction strategies as provided in the Policy Plan. Dakota County included two of the recommended strategies from the Policy Plan and therefore meets this criterion;
- The Master Plan must include one collection strategy as provided in the Policy Plan. Dakota County included one of the recommended strategies from the Policy Plan and therefore meets this criterion;
- The Master Plan must include one traditional recycling strategy as provided in the Policy Plan. Dakota County included one of the recommended strategies from the Policy Plan and therefore meets this criterion;
- The Master Plan must include one traditional recycling strategy as provided in the Policy Plan. Dakota County included one of the recommended strategies from the Policy Plan and therefore meets this criterion;
- The Master Plan must include three organics management strategies as provided in the Policy Plan. Dakota County included three of the recommended strategies from the Policy Plan and therefore meets this criterion;
- The Master Plan must include one Non-MSW management strategy as provided in the Policy Plan. Dakota County included one of the recommended strategies from the Policy Plan and therefore meets this criterion;
- The Master Plan must include one organics market development strategy as provided in the Policy Plan. Dakota County included one of the recommended strategies from the Policy Plan and therefore meets this criterion;
- The Master Plan must include two product stewardship strategies as provided in the Policy Plan. Ramsey County included two of the recommended strategies from the Policy Plan and therefore meets this criterion.

c. The Master Plan 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 Policy Plan revisions. A description of the County's actions to achieve landfill abatement is contained in Part Two of the Master Plan.

d. The Master Plan 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 Policy Plan revisions. The County's numerical objectives are outlined in Figure 3 on page 3 of the Master Plan.

e. The performance standards in the Master Plan implement the metropolitan and county abatement objectives. The County's numerical objectives are outlined in Figure 3 on page 3 of the Master Plan and states that all stakeholders including Dakota County, municipalities, waste generators, and system operators will be held accountable for meeting these objectives.

f. The Master Plan 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

plan and has satisfied the performance standards for local abatement. Performance and accountability related to cities is outlined in Appendix D.

g. The above land disposal abatement criteria included in the Master Plan are consistent with the Policy Plan.

3. Oversight.

a. The Master Plan states Dakota County is not delegating achievement of the goals contained in its Master Plan to the private sector. The Master Plan states that Dakota County does not provide direct solid waste management services and does not own any solid waste facilities. However, Dakota County provides oversight over private sector entities whom the County relies upon in part to implement aspects of the plan including, land disposal, waste collection, recycling, organic waste recovery, waste transfer, household hazardous waste management, and the other private sector system waste management operators. Performance and accountability measures related to private sector are outlined in Appendix D and allows the County to:

- 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 Policy Plan and the master plan.
- 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.
- Continues to provide all required reports on the county's progress in meeting the waste management goals and standards of Minn. Stat. chs. 473 and 115A.
- Whether the plan outlines specific and measurable actions to be taken by entities delegated by the county to implement the Policy Plan.
- Whether the county plan outlines specific measures to maintain oversight over entities delegated by the county to implement the Policy Plan.
- Whether the plan outlines accountability measures for solid waste programs delegated to the private sector.

4. Designation to Resource Recovery Facility.

a. The Master Plan does not propose designation of a resource recovery facility.

5. Advisory Committee.

a. The Master Plan was prepared with the aid of a solid waste management advisory committee. Dakota County also engaged the public through an extensive engagement process.

b. Dakota County worked with its County Planning Commission instead of forming a separate Solid Waste Advisory Committee and also developed aspects of the Master Plan through a public engagement process. The County Planning Commission convened for two meetings in 2017 to aid in the preparation of its Master Plan.

CONCLUSIONS OF LAW

- A. The MPCA Commissioner has the authority under Minn. Stat. § 473.803, subd. 1 and 2, to review and to approve the Dakota County Solid Waste Master Plan.
- B. Dakota County's Solid Waste Master Plan meets the requirements of Minn. Stat. §§ 473.803 and the Policy Plan.
- C. Dakota County's Solid Waste Master Plan is consistent with and implements the Policy Plan, 2018-2038, as required under Minn. Stat. § 473.803, subd. 1.
- D. Any findings that might properly be termed conclusions and any conclusions that might properly be termed findings are hereby adopted as such.

ORDER

NOW THEREFORE, pursuant to the authority vested in me by Minn. Stat. §§ 115A.42, 473.149 and 473.803, the Ramsey County Master Plan is APPROVED.

Dated: 7/30/18


John Linc Stine
MPCA Commissioner

APPENDIX H: DAKOTA COUNTY BOARD RESOLUTION OF PLAN ADOPTION

BOARD OF COUNTY COMMISSIONERS DAKOTA COUNTY, MINNESOTA

September 18, 2018
Motion by Commissioner Egan

Resolution No. 18-493
Second by Commissioner Slavik

Adoption Of 2018–2038 Dakota County Solid Waste Master Plan

WHEREAS, the Dakota County Board of Commissioners (Board) recognizes the need for waste management approaches that reduce landfilling, protect public health and the environment, and conserve natural resources; and

WHEREAS, in Minnesota, counties are required to develop projects and programs to achieve state goals for waste management; and

WHEREAS, significant statutory changes have occurred since the 2012–2030 Dakota County Solid Waste Master Plan (2012–2030 Master Plan) was adopted, including an increased recycling rate goal, mandatory business and multi-unit recycling, and a focus on organics diversion; and

WHEREAS, on April 6, 2017, the Minnesota Pollution Control Agency (MPCA) adopted the 2016–2036 Metropolitan Solid Waste Policy Plan (Policy Plan); and

WHEREAS, the Policy Plan provides the framework for solid waste management in the metropolitan area over a 20-year time horizon; and

WHEREAS, Minn. Stat. § 473.803 requires metropolitan county solid waste master plans to be revised and contain specific, measurable strategies to implement the Policy Plan; and

WHEREAS, by Resolution No. 16-481 (September 20, 2016), the Board authorized execution of a contract to support Master Plan stakeholder engagement and strategy development; and

WHEREAS, the 2018–2038 Dakota County Solid Waste Master Plan (2018–2038 Master Plan) was developed in accordance with Minn. Stat. §§ 473.803 and 115A to communicate Dakota County's vision, policies, strategies, timing, and tactics for solid waste management over the next twenty years; and

WHEREAS, by Resolution No. 17-545 (October 31, 2017), the Board authorized release of the Master Plan for a 30-day public review and comment period; and

WHEREAS, the 2018–2038 Master Plan incorporates comments, guidance, and recommendations from stakeholder engagement, public review, the Dakota County Planning Commission, and the County Board; and

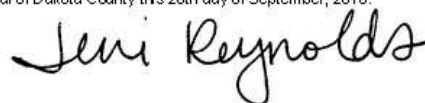
WHEREAS, revised metropolitan county master plans must be submitted to the MPCA Commissioner for review and approval; and

STATE OF MINNESOTA County of Dakota

	VOTE
Slavik	Yes
Gaylord	Yes
Egan	Yes
Atkins	Yes
Workman	Absent
Holberg	No
Gertach	Yes

I, Jennifer Reynolds, Clerk to the Board of the County of Dakota, State of Minnesota, do hereby certify that I have compared the foregoing copy of a resolution with the original minutes of the proceedings of the Board of County Commissioners, Dakota County, Minnesota, at their session held on the 18th day of September, 2018, now on file in the County Administration Department, and have found the same to be a true and correct copy thereof.

Witness my hand and official seal of Dakota County this 26th day of September, 2018.



Clerk to the Board

WHEREAS, by Resolution No. 18-171 (March 27, 2018), the County Board authorized submittal of the draft 2018–2038 Master Plan to the MPCA Commissioner for review and approval; and

WHEREAS, the MPCA Commissioner approved the 2018–2038 Master Plan on July 30, 2018; and

WHEREAS, staff recommends adoption of the 2018–2038 Master Plan; and

WHEREAS, this recommended 2018–2038 Master Plan replaces the 2012–2030 Master Plan adopted by the County Board on March 27, 2012 (Resolution No. 12-154); and

WHEREAS, implementation and costs will be determined annually as part of the Board's work plan priorities and approval of the Environmental Resources Department budget.

NOW, THEREFORE, BE IT RESOLVED, That the Dakota County Board of Commissioners hereby adopts the 2018–2038 Dakota County Solid Waste Master Plan.

STATE OF MINNESOTA
County of Dakota

	VOTE
Slavik	Yes
Gaylord	Yes
Egan	Yes
Atkins	Yes
Workman	Absent
Holberg	No
Gerlach	Yes

I, Jennifer Reynolds, Clerk to the Board of the County of Dakota, State of Minnesota, do hereby certify that I have compared the foregoing copy of a resolution with the original minutes of the proceedings of the Board of County Commissioners, Dakota County, Minnesota, at their session held on the 18th day of September, 2018, now on file in the County Administration Department, and have found the same to be a true and correct copy thereof.

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Clerk to the Board