

2016 Solid Waste Progress Report



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INTRODUCTION

Dakota County (County) prepares an annual report to describe the County's progress toward achieving the goals laid out in the [Dakota County Solid Waste Master Plan](#) (Master Plan). This 2016 Solid Waste Progress Report provides an overview of the County projects and programs developed and continued in 2016 to meet the Master Plan goals. The Master Plan, adopted by the Dakota County Board of Commissioners in March 2012, provides a framework for the County, residents, businesses, municipalities, and others to properly manage solid waste. Master Plan strategies focus on reducing land disposal through waste reduction and reuse, recycling, organics recycling, and resource recovery (i.e., conversion of waste into energy). The Master Plan is currently in the process of being revised, with anticipated completion in late 2017.

The Master Plan is developed in accordance with MN Stat. §§473.803 and 115A, which govern waste management in Minnesota. In 2012, the Minnesota Pollution Control Agency (MPCA) adopted the Metropolitan Solid Waste Policy Plan (Policy Plan), establishing waste management objectives for the Twin Cities Metropolitan Area (TCMA) counties¹. Since then, there have been several State law changes in the TCMA including: increased recycling rate objectives from 50% to 75% by 2030, mandatory commercial recycling for certain businesses, 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.

Table 1. TCMA Policy Plan Objectives for Municipal Solid Waste (MSW) Management System (2015 - 2030)

MSW Management Methods	2008 TCMA System Baseline	2015	2020	2025	2030
Waste Reduction (cumulative)		1-2%	2-4%	3-5%	4-6%
Total Recycling (Recycling + Organics)	43%	48-54%	51-59%	55-66%	75%
Resource Recovery	29%	32-34%	32-33%	30-31%	24-28%
Maximum Landfill	28%	20%	17%	15%	9%

In addition, Minn. Stat. §115A.02 defines the Minnesota Waste Management Hierarchy (waste hierarchy), the State's preference of how waste should be managed in this order:

1. waste reduction and reuse,
2. waste recycling,
3. composting of source-separated compostable materials, including but not limited to, yard waste and food waste,

¹ TCMA Counties are Anoka, Carver, Dakota, Hennepin, Ramsey, Scott, and Washington.

4. resource recovery through composting or incineration,
5. land disposal with methane capture, and finally,
6. land disposal without methane capture.

POLICY PLAN PROGRESS SUMMARY

Progress Summary. To manage our resources in effective and environmentally-sound manners, the County prioritizes managing MSW in accordance with the waste hierarchy and the County’s programs and initiatives are designed to reflect this. It is important to keep in mind that because many programs are new or continuously adjusted to meet the needs of our community, some of the immediate benefits of the programs have yet to be realized.

PROGRESS TOWARD POLICY PLAN 2020 OBJECTIVES

In 2016, the County diverted 59% of materials from entering a MSW sanitary landfill. However, total waste generation in Dakota County increased nearly 17%, from 397,343 tons in 2015 to 463,115 tons in 2016.

PROGRESS-AT-A-GLANCE

Progress Toward 2020 Policy Plan Objectives	Good Progress	Moderate Progress	Slow Progress
Waste Reduction (cumulative)			
Recycling			
Resource Recovery			
Maximum Land Disposal			

WASTE REDUCTION AND REUSE

The Policy Plan objective for the TCMA counties is to reduce waste 2-4% by 2020; however, the MPCA has not defined actual reduction and reuse measures for reporting purposes. As a measure of waste reduction, Dakota County measures waste per capita growth compared to population. Overall waste generation in 2016 was 463,115 tons, up from 397,343 tons in 2015. MSW managed per capita increased from 0.96 tons in 2015 to 1.10 tons in 2016, an increase of 14.5%. Although there was an increase in per capita waste generation, the County continued to support local waste reduction efforts through the Reuse Area at [The Recycling Zone](#) and increased promotions of reuse



outlets in the community.

RECYCLING (TRADITIONAL AND ORGANICS)

The County is not yet meeting the 2020 Policy Plan objective to recover 51-59% of waste generated by 2020 through recycling and organics collection. In 2016, 221,440 tons of MSW were recovered for a 47.5% recycling rate. Of that, 82,610 tons were organics, a 4% increase in organics collection over the previous year. The overall amount recycled, by weight, increased 20% from 2015. Although the total weight of recycling increased from 2015 to 2016, waste generation during this time increased more. The County continued to support local recycling efforts through ongoing programs with cities and townships and through recycling initiatives at The Recycling Zone, community events, parks, internal programs, and schools. Further, efforts by the County to capture additional organics tons included the implementation of a public residential drop site at Thompson County Park in October 2016 along with the continuation of an internal source separated organics collection program at all County owned or leased facilities.

Moderate
Progress

RESOURCE RECOVERY

The County did not meet the 2020 resource recovery Policy Plan objective of 32% to 33% of MSW recovery by 2020 by TCMA counties. In 2016, 57,868 tons of County waste was converted into energy at a resource recovery facility for a 12.4% resource recovery rate, up from 21,364 tons (5.4%) in 2015. Public entities (i.e., TCMA cities and counties, schools) are required by law to deliver waste that is not reused, recycled, or delivered for organics management to a resource recovery facility. The County includes resource recovery requirements as part of its Community Funding Program criteria, through an internal County Facility Resource Management contract, and by leasing land in Empire Township for a transfer station to deliver MSW to a resource recovery facility. The continued enforcement of statutory laws (MN § 473.848) by the MPCA may aid the TCMA in meeting the Policy Plan objectives, but without significant changes in the waste system the County will continue to be challenged to meet Policy Plan objectives for resource recovery.

Good Progress

MAXIMUM LAND DISPOSAL

The County has not met the 2020 Policy Plan objective for TCMA counties to landfill a maximum of 17% of MSW by 2020. In 2016, 190,486 tons of County MSW waste was landfilled or 41% of total waste generation, up from 181,757 tons landfilled in 2015. Although the overall amount of waste landfilled increased by 4.8% between 2015 and 2016, the overall percentage of MSW that was landfilled dropped by 4.6%. The County's land disposal rate is affected by the success of reduction, reuse, recycling, organics diversion, and resource recovery efforts. However, as identified in the Master Plan, the County anticipates continued challenges in diverting waste from landfills. Without changes in the TCMA waste system, and given that two MSW landfills that serve the TCMA are located within Dakota County, the County will continue to face substantial barriers.

Slow Progress

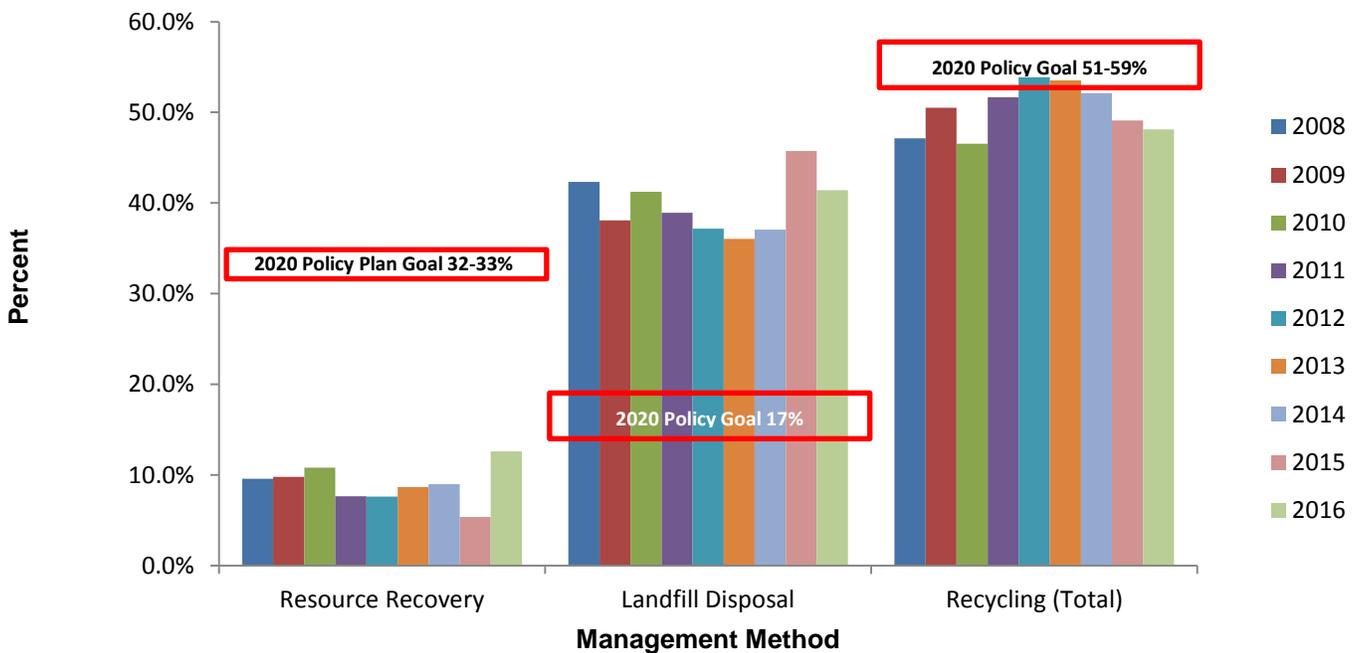
OUTREACH AND EDUCATION

The Policy Plan does not establish objectives for outreach and education but strategies were included in the Master Plan to address public education requirements in State law (MN Stat. §§ 115A.552 and 115A.96). In 2016, outreach and education efforts continued to play an essential supportive role in programs and were a primary tool used by the County to influence how waste was managed. The County continued to work cooperatively with cities and partners on a large number of outreach strategies to shift more waste up the waste hierarchy.

HOUSEHOLD HAZARDOUS WASTE AND PROBLEM MATERIALS

The Policy Plan does not include numeric objectives for household hazardous waste (HHW) and problem materials. However, the County included strategies in the Master Plan to support Policy Plan goals to protect the environment and public health and to address State law requirements (MN Stat. § 115A.96) for the County to implement a HHW management plan. The County continues to provide a premier HHW program at The Recycling Zone. In 2016, participation in HHW programs increased 8% from 2015.

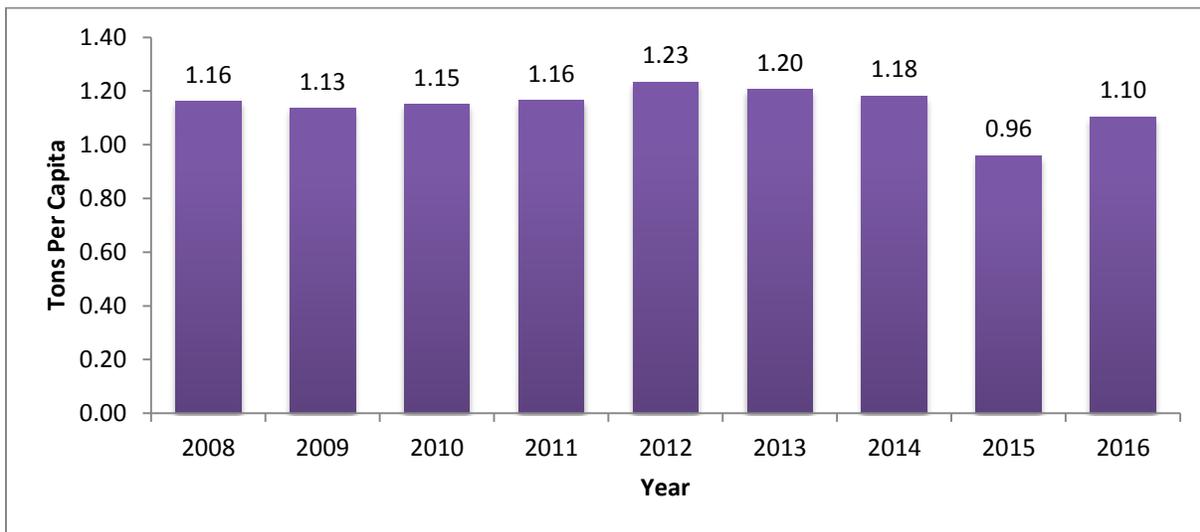
Table 2. 2008-2016 metrics: progress toward 2020 policy plan objectives



WASTE REDUCTION AND REUSE

Waste reduction and reuse efforts are difficult to quantify. 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 money American households spend on goods and services. Therefore, the County measures source reduction as waste per capita. In 2016, the amount of MSW managed per capita increased to 1.10 tons, up 14.5% from 2015. The average amount of waste created per person in Dakota County each year is 1.14 tons (2,280 pounds). Although per capita waste generation increased from the previous year, the waste per person rate in 2016 was 3.5% lower than the average generation rates from the previous eight years.

Table 3. Dakota County MSW Management Per Capita



Summary of Waste Reduction and Reuse Strategies Implemented: Waste reduction and reuse initiatives were expanded at the Recycling Zone and new programs like Fix-It Clinics were implemented focusing on reuse, environmentally preferable purchasing, and food waste reduction.

1. INCREASE REUSE OPPORTUNITES

Master Plan Strategy: Increase reuse opportunities at The Recycling Zone or other public locations.

Recycling Zone Reuse

The Recycling Zone has a reuse area where residents can drop off and pick up paints and other household hazardous waste for free. Over 332,000 pounds of latex paint, oil-based paint, and other chemicals were taken from the Recycling Zone's reuse area shelves in 2016. This saved Dakota County approximately \$280,000 in avoided disposal costs.

County Office Reuse

Dakota County leveraged other public entity connections to reuse old trash containers that were a surplus after the County transitioned to single stream recycling in 2014 and 2015. The County gave over 1,700 pounds of containers and lids to schools and municipalities. Through the public surplus website, the County sold items to 61 bidders including recycling/trash bins, chairs and a tent. In addition, the County recycled 21,707 pounds of electronics.

Green Meeting Kit

Dakota County's Environmental Resources Department staff created a Green Meeting Kit that includes reusable service ware including plates, utensils, cups, and bowls. The Green Meeting Kit is available for all County departments to check-out for meetings and gatherings. The Green Meetings Kit was used officially eight times by Dakota County staff. Employees often unofficially borrowed only a few items, such as pitchers or silverware, and that is not tracked. The Green Meeting Kit was used for the first time during the annual Giving Campaign – a week-long fundraising campaign in the three major service centers, and included events like a chili cook-off and the Taste of Dakota County.

2. EXPAND PROMOTION OF REUSE OPPORTUNITIES

Master Plan Strategy: Develop and provide an education and reuse outreach program.



Residents can get items repaired and resewed at a monthly Fix-It Clinic

Fix-It Clinics

Dakota County began sponsoring monthly Fix-It Clinics in 2016. The events were initially organized with a core group of volunteers and Neighbors Inc. through a grant from the Solid Waste Management Coordinating Board's Community POWER program. Dakota County took over managing the Fix-It Clinics in 2016 when the grant ended. At clinics, residents bring clothes, small electronics, and other household items that need repair and receive free guided assistance from skilled volunteers. Clinics build community connections and reduce the number of repairable objects that are thrown in the trash.

ReUse Guide

Dakota County maintains a [ReUse Guide](#), which is available on Dakota County's website for residents to download, print, or access through an online map-based format. In 2016, Dakota County identified two new reuse outlets to include in the ReUse Guide, bringing the total to 40 drop-off outlets and 68 second-hand businesses in Dakota County.

Partnering with ReUSE Minnesota

The non-profit [ReUSE MN](#) launched a website [directory](#) to find businesses that repair, rent, and buy and sell used items. Dakota County is partnering with ReUSE Minnesota to integrate the business listings from the Dakota County ReUse Guide into the new ReUSE Minnesota website.

More than 200 residents participated in one of the ten clinics held in the County in 2016. More than 300 items were fixed on location or residents were shown how to fix them at home. The 77% repair rate kept nearly 400 pounds of household goods from being tossed in the trash.

3. ENVIRONMENTALLY PREFERABLE PRACTICES

Master Plan Strategies: Use environmentally preferred practices (EPP) standards specification in County operations and encourage use by public entities and improve waste contracts to reduce waste and increase recycling in County operations.

New Purchasing policy with EPP language

The County revised its Procurement Policy to include requirements for procurement of environmentally preferable products that go beyond state statutory requires, including requirements for acquiring products and services that result in reduction of waste, reduction of toxins and pollution, reuse, support strong recycling markets, reward manufacturer responsibility and reduce water and energy use.

4. PREVENTING WASTED FOOD

Master Plan Strategy: Expand reduction and reuse efforts in the Community.

GreenCorps Food Waste Reduction

Dakota County was selected as a host site for a MN GreenCorps Member to assist the Environmental Resources Department staff in exploring opportunities to decrease the amount of food being purchased and thrown away by residents.

The MN GreenCorps Member identified available food waste prevention educational tools, evaluated food waste prevention barriers and opportunities through three focus groups with 37 residents, coordinated a six-week food waste reduction challenge with over 70 participating households, and educated over 900 residents at libraries, farmers markets, and events.

Results showed that residents are frustrated



Dakota County's GreenCorps member educated residents on food waste reduction at local farmer's markets

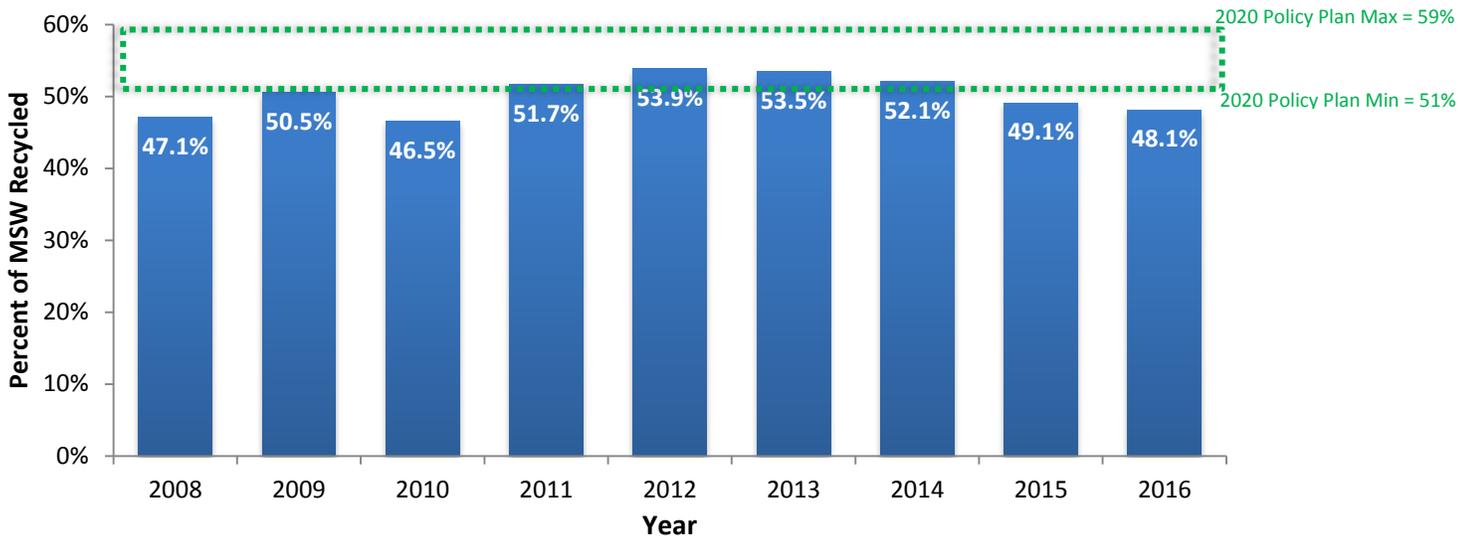
with, and feel guilty about, food waste and the associated money wasted. Expiration dates, poor planning, and buying at bulk stores were the major factors contributing to waste. Residents needed and appreciated having educational tools to simplify meal planning, shopping, food storage, and kitchen inventories. The challenge made residents aware of the amount of food being wasted each week and reduced food waste up to 18%.

Since food is the single largest component of waste delivered to landfills and wastes water and energy resources, Dakota County staff will use the MN GreenCorps results to help design components of a food waste program that addresses all levels of the waste hierarchy.

RECYCLING

In 2016, a combined total (recyclables plus organics) of 221,440 tons of MSW were recycled for a 47.5% recycling rate in Dakota County, a 1.5% recycling rate decrease from 2015. Of that, 82,610 tons were organics, such as food waste and compostable products. By weight, the overall amount recycled was up nearly 14% from 2015. Even though the amount of materials recovered for recycling increased by weight, total waste generation increased more from 2015 – 2016. Compared to 2015 data, paper recycling increased by 2,767 tons; metal recycling increased by nearly 2,500 tons; glass recycling increased by 2,542 tons; and plastics increased 803 tons. Of the 82,610 tons of organics recovered in 2016, 3,410 tons of food went to food donation programs to help people in need; 15,696 tons were made into animal feed; 7,296 tons were managed through commercial source-separated organics composting programs; and 56,210 tons of yard waste was composted.

Table 4. Dakota County Recycling Rate



Summary of Recycling Strategies Implemented: The County continued its work to increase recycling and organics diversion rates by partnering with cities, townships, businesses and schools on a variety of ongoing programs and initiatives at community events. The County continued to lead by example in developing and boosting its internal recycling and organics programs throughout the County’s office buildings and parks. In addition, the County implemented a collection site for residential source separated organics at Thompson County Park in West St. Paul, created a camping recycling kit for use at County Parks and initiated a Business Recycling Incentive Program in 2016.

1. RECYCLING AT THE RECYCLING ZONE

Master Plan Strategy: Ensure and provide opportunities to recycle

Recycling at the Recycling Zone

In addition to being a place for residents to dispose of and reuse household hazardous waste, residents can also bring other recyclable materials to the Recycling Zone. In 2016, the Recycling Zone collected over 871 tons of paper/cardboard, scrap metal, mixed containers, and plastic bags for recycling.

2. EXPANDED RECYCLING AT COUNTY AND MUNICIPAL PROPERTIES

Master Plan Strategy: Collaborate to improve recycling at public properties.

Municipal Parks

County and city staff have been focused on municipal parks and public area recycling since 2014. The Community Funding Joint Powers Agreement between the County and each city requires cities to implement visual practices that are consistent across the County to help park visitors know what to recycle.

To continue on successful park recycling implementation, more city parks were assessed and prioritized based on use in 2016. Cities and townships implemented recycling in the priority parks in accordance with waste and operational Best Management Practices (BMPs) (paired, color-coded, labeled, top-opening). City staff ordered recycling containers from a pre-selected list of approved bins for different park uses (e.g., baseball fields vs. splash pad areas) that met BMPs.



Paired and color-coded trash and recycling containers are prominent in municipal public spaces, like these in Burnsville

During the focused effort of park recycling from 2014 to 2016, 105 city parks now have recycling that meets or is close to meeting best management practices (listed below). This would not have happened without the Community Funding Program and the hard work of on-the-ground staff in each city.

Dakota County's park recycling assessment and implementation was highlighted in the April 2016 Resource Recycling magazine, a national publication for solid waste professionals. The article described four programs in the United States and highlighted Dakota County's public space recycling assessment, drawing particular attention to containers and signage used. County staff was also asked to present about park recycling program at the annual 2016 Minnesota Recreation and Parks Association Conference.

Expand Internal Single Stream Recycling in County Libraries

Environmental Resources Department staff updated the recycling collection process throughout Dakota County's library system (Burnhaven, Farmington, Galaxie, Heritage, Inver Glen, Pleasant Hill, Robert's Trail, Wentworth, Westcott), shifting from dual-stream to single-stream recycling. The switch simplified the libraries' recycling collection by allowing library visitors to put all recyclable materials into one container and made it uniform in all other Dakota County facilities. Best management practices were applied, including: color-coded containers (blue for recycling and grey for trash); color-coded, restrictive lids; paired trash and recycling containers; image-heavy labels displaying materials found in the library's waste stream; and educational resources for library staff.

Prior to single-stream recycling implementation, a container inventory was conducted to identify high-use areas with high recycling/trash generation to determine the number of containers and placement needs. As a result, over 100 superfluous containers were removed, and reused or repurposed when possible. One comment from library staff "Wow, it looks like everything got a facelift!"

Paper Shredding in County Offices

Dakota County takes data privacy seriously and has policies in place requiring staff to shred documents that contain confidential information. The County requires the vendor who shreds the material onsite to deliver the shredded paper to a paper mill so it can be recycled. This protects the sensitivity of the documents, while still diverting waste. In 2016, Dakota County recycled nearly 190,000 pounds of shredded paper.

Environmental Assistance Grant- Zero Waste at Public Space Venues



Dakota County was awarded a \$47,198 Environmental Assistance Grant through the Minnesota Pollution Control Agency for a Zero Waste in Public Space Venues pilot project. Dakota County partnered with seven venues: four municipally-owned civic arenas (Apple Valley, Burnsville, Eagan, and Hastings) and three high school football stadiums (Burnsville, Lakeville South, and Henry Sibley High Schools).

New containers, like these at the Hastings Civic Center, were installed as part of an Environmental Assistance Grant

The goal of the pilot was to implement organics recycling, enhance traditional recycling, and engage venue attendees to increase total waste diversion from 10-15% up to 60%.

At the end of 2016, the seven locations were all at various stages of implementation. All four civic arenas have rolled out recycling and organics collection containers and have certified compostable products. One of the three high school stadiums, Lakeville South, began an organics collection program with certified compostable products in the spring of 2016. The other two high school stadiums will make improvements on recycling only, and have yet to roll out their new containers.

3. EXPANDED RECYCLING IN PROGRAMS FOR SCHOOLS, CITIES, AND TOWNSHIPS

Master Plan Strategy: Provide support to public entities to improve recycling in their operations.



Trash Talkers at Sioux Trail Elementary School help other students sort their waste

Enhanced School Recycling and Organics Program

Dakota County continues to provide free technical assistance, containers, labels, and resources to public and private schools through the Enhanced School Recycling and Organics Program. With assistance of County staff and motivated school staff, 14 schools will improve their recycling programs and 11 will implemented or improved their organics diversion programs. Schools that participated in the 2015-2016 program year are: 10 Independent School District 197 locations, Lakeville North High School, Cyprus Academy, St. Thomas Academy, and Pine Harbor Christian Academy.

Community Funding Program

The County continued to provide performance-based funding to 13 cities and the Rural Solid Waste Commission (6 rural cities and 13 townships) to ensure recycling services and public education is provided for residents. Activities in 2016 focused on public education for households, improving public space recycling, and expanding recycling infrastructure at community events and festivals.

Recycling messages were delivered to residents through city newsletters, cable access channels, sports arena advertising, employee education, workshops and presentations, social media, and direct mail pieces, resulting in more than 1.3 million impressions.

City-sponsored collection events provided opportunities for residents to discard bulky or hard-to-dispose items. A total of 21 collection events held in 2016 diverted an estimated 721 tons of recyclable materials and household hazardous waste, including:

- 45,768 pounds of paper to shred and recycle,
- 74 mattresses recycled,
- 50,800 pounds of tires to recycle,
- 7105 pounds of textiles and shoes to reuse and recycle,
- 53,125 pounds of pumpkins to compost; and,
- 5670 pounds of bikes to reuse.



Municipalities host a variety of waste diversion programs, like the Eagan Pumpkin drop

4. OFFERED BUSINESSES RECYCLING ASSISTANCE

Master Plan Strategy: Help businesses develop recycling programs.

MPCA Environmental Assistance Grant - Commercial Corridor Pilot Project

Dakota County received a \$50,000 Environmental Assistance Grant from the Minnesota Pollution Control Agency to initiate a six-month recycling and organics collection pilot project for businesses which concluded in 2016. Eight high-volume generators of food waste (e.g., grocery store, restaurants) along Robert Street in West St. Paul participated. Pilot project results demonstrated that once barriers are overcome, significant increases in recycling occur. Collectively, the recycling rate increased from 22% (traditional recyclables such as paper, glass, plastic, metal) to 81% (39% recyclables; 42% organics), an increase of 162 tons of waste diverted from disposal. Barriers overcome included program start-up costs (e.g., containers, compostable bags and service ware, labels, organics hauling service) and general lack of knowledge about what can be recycled.

Business Recycling Incentive Program

Based on results of MPCA Commercial Corridor Pilot Project, in August 2016 the County launched a [Business Recycling Incentive Program](#). This program uniquely focuses on businesses and organizations affected by the [mandatory recycling requirement](#) (i.e., businesses that fall within North American Industry Classification System codes 42-81 and contract for at least four cubic yards of trash per week). The County reimburses participating businesses up to \$10,000 per location that can be used for containers/bins, employee education, and external enclosure upgrades. The funding can also be used to start an organics collection programs including six-months of hauling service and purchasing compostable products. Participants are required to work with the County's technical assistance consultant, Minnesota Waste Wise Foundation, to implement improvements that follow best management practices and document pre- and post-program implementation for a final report. Thirty-six businesses submitted applications to participate in the Business Recycling Incentive Recycling Program, requesting nearly \$155,000 since the program's launch. Implementation is underway at fifteen businesses. The program continues in 2017. Container labels and "Recycling Guides" are available to all Dakota County businesses at



Restaurants have decreased their trash through the Business Incentive Program

no charge.

5. EXPAND OPPORTUNITIES FOR RECYCLING NON-TRADITIONAL MATERIALS

Master Plan Strategy: Add recycling for difficult materials.

Agricultural and Boat Wrap Film Plastic Project

The County expanded its highly successful 2015 Agricultural Film Plastic collection pilot project to include the collection of boat wrap, providing farmers and marina storage operators an environmentally-preferable option to landfilling or illegally disposal or burning. In 2016, 1,760 pounds of boat wrap from marina operations and 41,260 pounds of agricultural plastic (e.g., silage bags, silage bunker covers, and bale wrap) were collected and recycled, a four time increase from the 2015 pilot. Collected material was taken to a special processor that can recycle the bulky plastic. Boat wrap was collected at a centralized location in the spring when storage locations were removing the winterization wrap. Agricultural film plastic was collected from June to December at four centralized locations in the rural area. The program was strategically promoted to boat storage locations and about two dozen dairies and livestock farms.

Rural Tire Recycling

The County provided funding to the Rural Solid Waste Commission (RSWC), a partnership of the 13 townships and 6 rural cities, for increased education on proper waste tire management and to host a waste tire collection in the rural area. The tire collection was held in Douglas Township and promoted across the thirteen townships and six rural cities that comprise the RSWC area. The collection event was successful with nearly 21 tons of collected tires in a four-hour period. Collected tires were processed into crumb rubber and used for a variety of purposes, including for athletic tracks and a substitute for stone aggregates.



Tires collected at the Douglas Township tire collection event

6. EVENTS & THE DAKOTA COUNTY FAIR

Master Plan Strategies: Ensure and provide opportunities to recycle/ Build on public recycling program infrastructure to introduce organics diversion in County buildings, at County and city events, and in public schools.

Municipal Programs

In 2016, over 43 municipal events included recycling or organics collection.

- Dakota Valley Recycling (DVR) held 14 events, nine of which had recycling and organics collection
 - The July Funfest was the only event to provide diversion data: 1,460 pounds of recycling, 400 pounds of organics, and 900 pounds of trash for a 67% diversion rate.
- In 2016, 13 events introduced recycling and eight events had organics recycling for the first time.
- Dakota County was involved with 29 other event recycling opportunities, 20 of which had recycling and organics diversion. Eleven of these events collected waste diversion data. See the table below.

Event Name	Recycling Collected (lbs)	Organics Collected (lbs)	Trash Collected (lbs)	Diversion Rate
Farmington Dew Days			20 bags	
Scottish Fair and Highland Games	201	198	51	89%
Celebrate Empire	43	83	18	88%

Randolph BBQ	480	3,190	1,080	77%
WSP/SSP/MH Safety Camp	0	3	3	50%
Good Shepherd Church Brunch	34		Not documented	N/A
Parkview Elementary Carnival	19	N/A	98	11%
Dakota County Volunteer Appreciation Event	Not documented	61	Not documented	N/A
Housing Coop Ice Cream Social	3	4	9	44%
Senator Carlson Fundraiser	22	10	20	62%

Highlights of municipal events:

- Randolph’s Annual Chicken BBQ - Dakota County partnered with the Rural Solid Waste Commission (RSWC) and the Randolph-Hampton Fire Department to collect recyclables and organics for composting and livestock feed at the Fire Department’s annual chicken BBQ fundraiser. Staff and Master Recycler/Composter volunteers strategically placed color-coded containers with clear signage and helped educate event attendees about recycling and organics for composting. The RSWC purchased compostable serving products to make it easy for the approximate 2,000 guests to sort the organics during the five-hour event. As a result, nearly 3,200 pounds of organics, 480 pounds of recycling, and 1,080 pounds of trash were collected, yielding a 77% recycling rate. The Mulch Store stated the organics were the “cleanest they had ever seen from an event.”
- Celebrate Empire - The RSWC worked with Empire Township to offer recycling and organics collection at the Celebrate Empire festival in July. Nearly 500 people attended the event; 43 pounds of recycling and 83 pounds of organics were collected, for an 88% diversion rate.



Organics recycling at the annual Randolph Chicken BBQ



Volunteers help distribute Recycling Zone capes and help County Fair goers sort waste

- Dakota County Fair. County staff, County Fair staff, and Master Recycling/Composter volunteers worked together to ensure recycling opportunities were offered to fair visitors. In its third year, food waste collection containers were placed along food row. This year, one out of every three food vendors collected their own food waste in collection pails to use inside their booth, helping to divert over one ton of organics. Four tons of recyclables were collected and 17 tons of trash, yielding a 23% recycling rate, slightly up from the previous year (2015, 20% diversion rate).

7. ENHANCED ORGANICS COLLECTION OPPORTUNITIES

Master Plan Strategy: Build on public recycling program infrastructure to introduce organics diversion in County buildings, at County and city events, and in public schools.

Expanded County Building Organics Collection

Dakota County expanded its internal organics recycling program to Park facilities, including Lebanon Hills Camp Sacajawea, Lebanon Hills Visitor Center, Camp Spring Lake Park Retreat Center, and Schaar’s Bluff Gathering Center. Currently, Dakota County has 15 buildings diverting organics.

County Building Organics Evaluation

Organics recycling was introduced in late 2015 at the Northern Service Center; Empire Transportation Building; Dakota Communications, Administration, Judicial, and Law Enforcement Centers. In February 2016, employees responded to a survey about how they felt the organics program was going and how it could be improved. Approximately 30% of employees responded, with one employee saying, “Wonderful Program! Has inspired me and my family to recycle organics.”

Survey results showed that the organics recycling bins are being used frequently throughout the County – 81% of employees use the bins at least once per week and over half use them daily. Staff is overall satisfied or very satisfied with the program (78%). Sixty-seven percent are confident or very confident about what goes in the bin, 25% were somewhat confident, and the remaining 8% were not confident. For those with less confident about how to use the bins,



New waste station at Lebanon Hills Visitor Center

a generic e-mail was created and is displayed on the organics recycling bins so employees can send in questions.

To measure how well the internal recycling and organics program was working, trash, recycling, and organics from the Northern Service Center and Administration Center was sorted and weighed. Results show a significant recycling rate increase from the 2015 data.

	2015 Diversion Rate <i>(before organics collection)</i>	2016 Diversion Rate <i>(Post-organics program implementation)</i>
Northern Service Center <i>West St. Paul, MN</i>	47%	82% (77% recycling, 5% organics)
Administration Center <i>Hastings, MN</i>	39%	74% (63% recycling, 11% organics)

Results also show that there are still recyclables and organics in the trash. In fact, the recycling rates could be as high as 91% at the Northern Service Center and 82% at Administration Center. Common recyclables and organics in the trash include paper, aluminum cans, plastic food containers, food waste, and paper towels. Continued employee education will help to achieve higher rates.

Organics at Campgrounds

Beginning in June 2016, campers at Lebanon Hills and Lake Byllesby campgrounds, and White Tail Woods Camper Cabins were given Campground Recycling Kit for the first time. The kit contained a blue bag for recyclables; a green, compostable bag for organics; a black bag for trash; as well as a card that describes common materials in campgrounds that are recyclable, compostable, or trash. Signs at the campground waste stations and on the dumpsters told campers which dumpster to use for each bag.

In August, County staff conducted a waste sort at the Lebanon Hills Campground to evaluate the project. Results showed a 51% diversion rate (26% recycling, 25% organics). The waste sort also showed potential to increase diversion up to 65% (31% recycling and 34% organics). Efforts to increase recycling and organics diversion in next year’s camping season will include increased education and tailored images to more accurately reflect the materials observed during the waste sort.



A bag kit describes the recycling and organics diversion program at Dakota County campgrounds

8. SUPPORTED SOURCE-SEPARATED ORGANICS CAPACITY FOR THE TCMA

Master Plan Strategy: Manage the lease on County-owned land in Empire Township to provide organics management capacity.

Lease land to private sector

The County continues to lease County-owned land in Empire Township to a private company that operates both source-separated organics composting and yard waste composting facilities. This is one of two source-separated organics composting facilities that serve the TCMA.

9. RESEARCHED AND IMPLEMENTED METHODS FOR ORGANICS DIVERSION

Master Plan Strategy: Evaluate and improve County and city tools for improved organics management by residents, businesses, and public entities.

Backyard Compost Bins for Residents

Dakota County and Dakota Valley Recycling partnered with the Recycling Association of Minnesota (RAM) staff for the first compost bin sale and distribution in the county. New in 2016, Dakota County offered a \$15 discount to residents. One-hundred seven (107) Dakota County residents ordered, purchased, and picked-up their new backyard compost bins at a discounted rate at the Burnsville Maintenance Facility. Master Recycler/Composter volunteers helped residents load compost bins and answered backyard composting questions during the pick-up day. Six residents participated in a composting class on-site during the pick-up day to learn how to use their new composting bin.



Volunteers help distribute low-cost compost bins to residents

New Residential Organics Dropsite

In October 2016, Dakota County launched its first residential organics dropsite at Thompson County Park in West St. Paul. The dropsite is a pilot project to understand the demand and barriers for residents to recycle organic materials (food scraps, napkins/paper towels) and educate on the importance of organics recycling.

Residents were required to sign up to participate in the project, and by the end of 2016, nearly 750 people had registered in the three months of the pilot project – well above the goal of 200. Approximately 2,000 pounds of organics were being collected at the dropsite every week and brought to a commercial compost facility.

Commercial Recycling Study

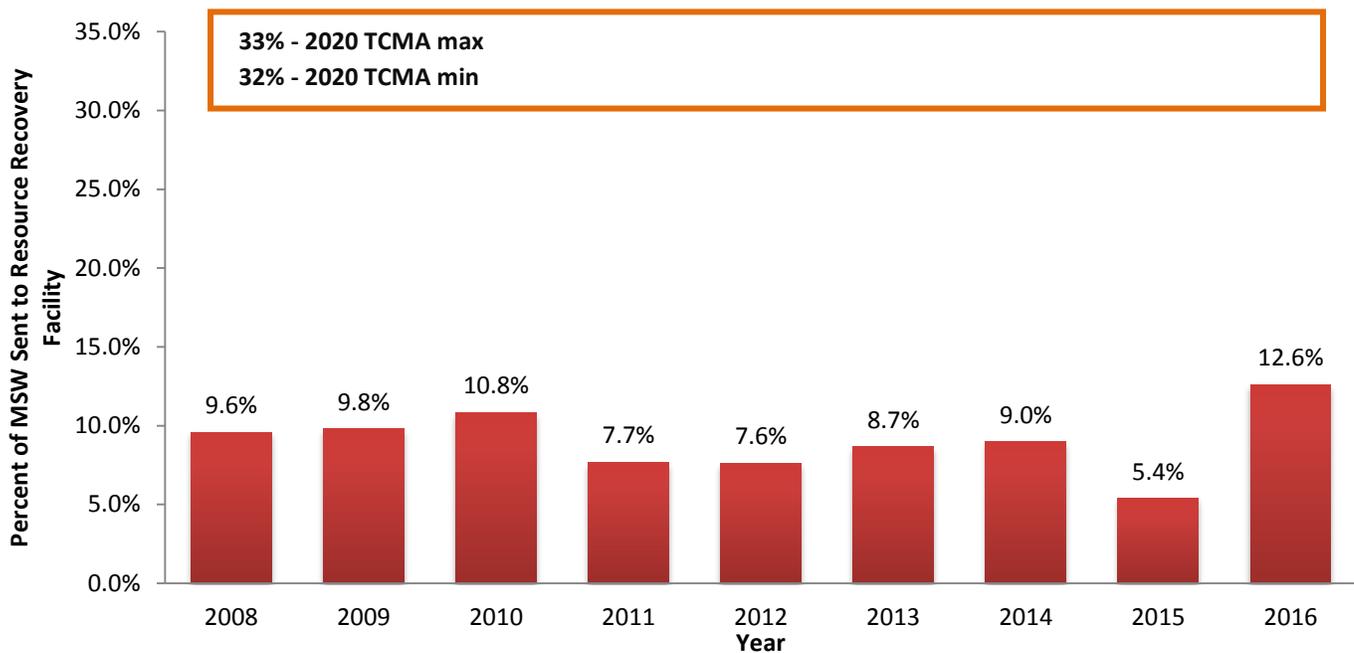
Dakota County hired a consultant to research which business types generate high amounts of recyclables and organics. The consultant identified North American Industry Classification System (NAICS) subsectors, NAICS employee size ranges, and/or NAICS business square footage range that generate large amounts of recyclables and organics and have high diversion potential. Dakota County staff will use this information to target these types of businesses for short-term needs (i.e., business outreach, education, and technical assistance) and longer-term needs (i.e., policy and ordinance development). In addition, the consultant provided recommendations for ways to increase commercial waste diversion: policies like pay-as-you-throw, material bans, required organics diversion, and hauler incentives to increase waste diversion.

RESOURCE RECOVERY (PROCESSING)

In 2016, 57,869 tons (12%) of Dakota County-generated MSW was converted into energy at a resource recovery facility, which is below the 2020 Policy Plan objective of 32- 33%. However, this was an increase over 2015 data. Of the recovered waste, 97% was recovered at the Ramsey/Washington Recycling & Energy Center in Newport. Hennepin Energy Recovery Center and Elk River Resource Processing Plant received a small amount (<3%) of MSW generated in Dakota County.

The Policy Plan requires that if there is capacity at a resource recovery facility, waste must be recovered instead of landfilled.

Table 5. Dakota County Resource Recovery Rates



Summary of Resource Recovery Strategies Implemented: In 2016, the continued Dakota County Resource Management contract required waste generated in County facilities to be sent to a resource recovery facility. The County included waste recovery as part of its Community Funding Program, and continued to support resource recovery by leasing land in Empire Township for a transfer station to deliver MSW to a recovery facility. Of the total 57,868 tons recovered, 27,177 tons was delivered from the Empire Transfer Station to the Ramsey/Washington Recycling & Energy Center in 2016.

1. SUPPORTED STATUTORY REQUIREMENTS

Master Plan Strategy: Support statutory requirements that MSW from public entity operations is delivered to a resource recovery facility.

Required Waste Be Recovered from County Buildings

All waste generated in the 28 County buildings and parks was reused, recycled, composted, or delivered to a resource recovery facility. The County's internal Resource Management contract requires the waste hauler to comply with State statute requirements for recycling and waste processing (MN Stat. §§115A.471 and 473.848).

Notified Public Entities of Resource Recovery Requirements

The County notified 45 public entity and 125 school representatives of their obligation to comply with State statutory requirements for waste recover (MN Stat. §§ 115A.471 and 473.848). These public entities also received notification about statutory requirements that public entities must recycle at least three broad materials (MN Stat. § 115A.151).

Community Funding Program Notification for Cities and Townships

The Community Funding Program annual funding application requires cities and townships to identify whether waste generated from their operations that is not reused or recycled is delivered to a resource recovery facility.

Support MPCA's intent to enforce Minn. Stat. § 473.848, Restriction on Disposal

To decrease landfill disposal, MN Stat. §473.848 requires that MSW first be sent to a resource recovery facility. Only if facilities are at capacity or the MSW meets certain criteria (i.e., has been certified as unprocessable or the waste is being transferred from a resource recovery facility), can the MSW be disposed of at a landfill. However, the MPCA has been unable to enforce MN Stat. §473.848 until recently. In 2015, the MPCA implemented a framework for enforcing this statute and in 2016 began the data collection process to evaluate capacity levels and gaps at the resource recovery facilities that serve Dakota County. To aid in the MPCA's enforcement, County staff worked with the MPCA to provided data and input on the MPCA's effort to enforce the Restriction on Disposal (ROD) at Dakota County landfills. Dakota County staff also continues to participate in the MPCA's 2016/2017 stakeholder engagement process to develop a compliance strategy.

2. SUPPORTED RESOURCE RECOVERY CAPACITY FOR THE TCMA THROUGH LEASE

Master Plan Strategy: Manage the lease for County land in Empire Township to provide transfer to a resource recovery facility.

Lease land to private sector

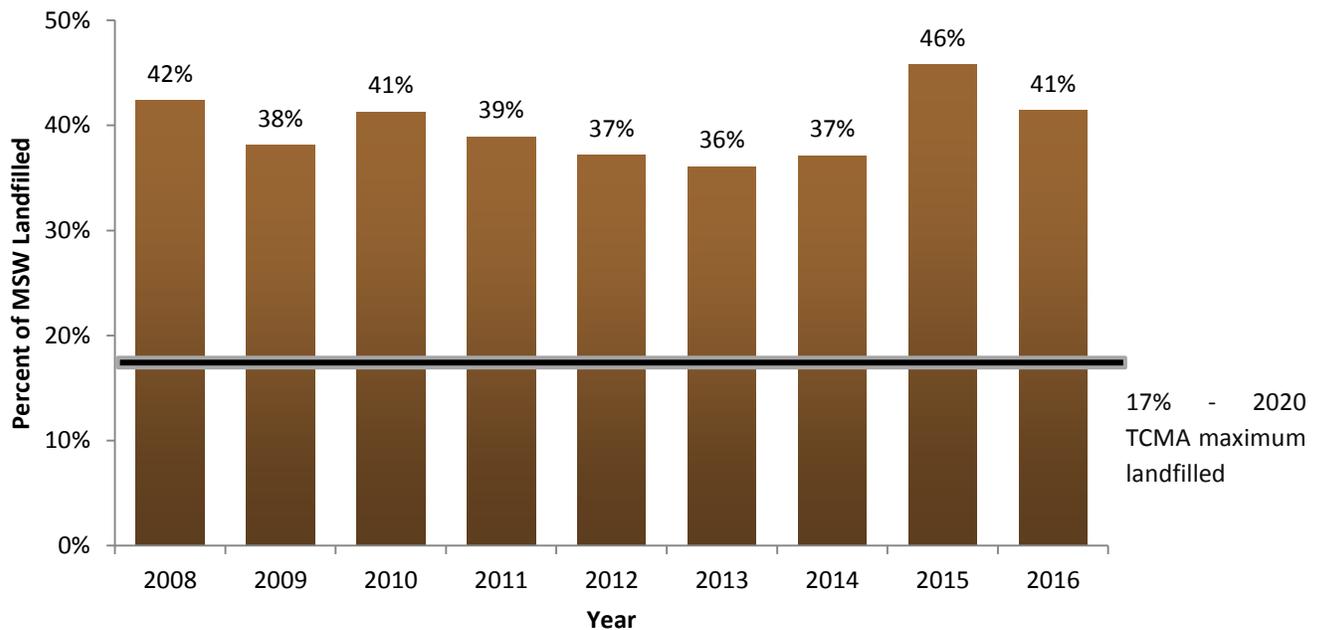
The County continued to lease land in Empire Township used as the Empire Transfer Station, a privately-owned and operated facility. This is the only transfer station in Dakota County that directly hauls MSW to the resource recovery facility in Newport, Minnesota.

LAND DISPOSAL

The County continues to face obstacles for meeting the Policy objective for TCMA counties to landfill a maximum of 17% of MSW by 2020. In 2016, 41% of County MSW was landfilled, a total of 190,487 tons. In 2015, for comparison, 46% of County MSW was landfilled.

Dakota County has two MSW landfills and no resource recovery facilities, making it less expensive for haulers to transport waste to the landfill. To decrease landfill disposal rates, the County needs to have successful reduction, recycling, organics diversion, and resource recovery efforts. The MPCA's strategy to enforce the Restriction on Disposal (which requires waste to be sent to a processor if capacity exists) will facilitate the transportation of waste to proper facilities and assist the County's efforts to reduce landfill rates.

Table 6. County Landfill Rate



SUMMARY OF MASTER PLAN STRATEGIES IMPLEMENTED: The County continued regulatory approaches to ensure proper management of solid waste and explored new efforts to divert waste from landfills.

1. REGULATED FACILITIES THAT MANAGE SOLID WASTE

Master Plan Strategy: Regulate land disposal facilities to ensure compliance with Ord. 110 and license conditions.

Compliance Inspections

County staff continued to further proper management of solid and hazardous wastes by regularly inspecting landfills, materials recovery facilities, and transfer stations to ensure compliance with Federal, State and local requirements, including regulating material bans and prohibitions. In 2016, the County completed 109 compliance inspections of solid waste facilities.

OUTREACH & EDUCATION

Outreach and education do not have specific measurement goals in the Policy Plan, but strategies were included in the Master Plan to address public education requirements in State law (MN Stat. §§115A.552 and 115A.96).

Summary of Outreach and Education Strategies Implemented: In 2016, outreach and education continued to be a primary tool used by the County to influence how waste is managed. The County partnered with municipalities on a large number of outreach strategies to shift waste up the waste hierarchy by targeting audiences of greatest need with specific information. Outreach efforts included the development of new workshops and online and print resources, expansion of existing resources, targeted outreach through work with cities and townships, and collaborative education through the SWMCB regional education and grant programs.

1. PROVIDED OUTREACH TOOLS AND EDUCATIONAL MATERIAL TO CITIES AND TOWNSHIPS

Master Plan Strategy: Strengthen partnerships with cities and townships to provide outreach and education to the community.

Community Funding Program

The County develops pre-written articles, social media posts, and images to be used by Dakota County's Local Solid Waste Staff (LSWS). These resources provide a consistent message to residents throughout the County. Cities and townships used County and SWMCB outreach resources on their websites, newsletters and other communication channels, and provided more than 1.3 million impressions of recycling messages to residents in 2016. LSWS gave 20 presentations and had a booth at 17 events.

2. ASSISTED EDUCATORS DEVELOP STRATEGIES FOR WASTE REDUCTION

Master Plan Strategy: Identify sectors and recyclable materials most needing improvement and address findings.

School Recycling Workshop

Environmental Resources Department staff hosted the 2nd Annual School Recycling Workshop for school administrators, teachers, and facilities management staff held at the Lakeville Sanitation Recycling Facility. Forty-five school personnel, including two enthusiastic students, attended the three-hour workshop which included a panel of experts sharing knowledge and experiences to: shift from disposable to compostable products; recover food in cafeterias; improve school stadium recycling; and how to close the loop by using compost. Nearly all workshop attendees went on the optional tour of the recycling facility after the workshop. Feedback was positive, including multiple requests for a third annual workshop and additional requests for recycling assistance.

School Educational Resources

Environmental Resources developed and distributed a variety of educational resources for school staff. This included over 150 posters that guide students and staff on how to sort their waste properly and the importance of recycling and over 3,000 school activity guides for students.



Zero the Hero, a waste reduction superhero, visits students at Sioux Trail Elementary School

3. PROVIDED RECURRING AND EXPANDED LANDFILL ABATEMENT EDUCATION

Master Plan Strategy: Provide recurring and consistent education... using a variety of communication methods.

Educational Experiences at The Recycling Zone

Twenty-six groups (311 people total) toured The Recycling Zone in 2016, and were educated on reuse, recycling, and household hazardous waste. Groups included schools, Scout troops, and MRC classes. Post-tour surveys show that the tour gave the participants a better understanding of why recycling is important and what items are accepted at The Recycling Zone.

Educational Resources for Residents

Dakota County uses diverse communication to provide recycling education to residents. News articles, press releases, e-news, handouts, reuse and recycling guides are included in events, presentations, or when asked for by residents. In 2016, 1,054 people subscribed to the residential environmental e-newsletter. The most read e-news topics were: repair options, food waste prevention, and alternative wrapping paper.

Room-to-Room Recycling

Dakota County wanted to encourage residents recycle more than just food and beverage containers and paper from the kitchen. Studies have shown a lot of recyclable material left in the trash comes from offices, bedrooms, and bathrooms. A direct mail postcard was sent to all 168,257 Dakota County households in

October highlighting items to recycle in each room. It also had tips to recycle better such as leave plastic bags out of home recycling carts and leave caps on containers.

Continued Master Recycler/Composter Program

Environmental Resources staff again offered Master Recycler/Composter (MRC) classes to educate adult residents on waste and recycling. Over six weeks, participants learned about solid waste reduction, reuse, and recycling; organics composting; and proper hazardous waste management. At the end of the course each participant is required to complete 30 hours of community service related to waste diversion in Dakota County. In 2016, 27 residents graduated from the spring and fall classes bringing the total MRCs to 134 since 2014. MRCs volunteered 708.25 hours in 2016 and reported talking to 10,703 residents.



Fall 2016 Master Recycler/Composter graduating class

Educational Displays, Kits, and Activities

County staff provides education resources on a check-out basis for residents, community organizations, and schools. Materials include visual displays and self-guided instructions that were used in 34 presentations focused on toxicity and waste reduction and recycling at local elementary schools, community safety events, Scout groups, local churches, 4-H groups, city roadside clean-up events, and business recognition events.



Dakota County's educational resources, were used many groups like Dakota Valley Recycling

Educational Resources for Businesses

Dakota County's website included the new State recycling requirement for sports facilities and commercial establishments. Information about the 2016 commercial recycling requirement was distributed in the County's quarterly e-news to over 309 businesses.

The County's technical assistance contractor provides outreach and education as well. The contractor conducted a strategic call campaign in August to over 550 commercial entities for to recruit them in the

program which resulted in 89 site visit evaluations in 2016. The outreach effort was targeted to specific businesses that are known to produce large volumes of recyclables and organics, and included entities such as grocery stores, full service restaurants, hospitals and large clinics, and assisted living facilities.

New Program Resources

To support new and growing programs, Dakota County developed new outreach tools, including:

- The launch of the Business Recycling Incentive Program came with a program handout, employee Recycle Right Guide, and window clings used for business recognition.
- The first Dakota County residential organics drop site needed to recruit households in the surrounding area to take part in the new program. A recruitment kit with an organics brochure and letter was sent to over 10,000 residents near the dropsite which invited them to sign up by replying back with the pre-paid postcard or contacting staff. New participants are sent a welcome kit with their first two compostable bag, instructions on what to collect, and pertinent information on how to use the drop off site.
- Environmental Resources Department staff helped the Parks Department launch the recycling and organics efforts in two campgrounds and camper cabins. A bag kit containing a bag for each material stream (recycling, organics, trash) with an instructional guide was made to empower campers to sort their materials properly.

4. EVALUATED CURRENT UNDERSTANDING AND PERCEPTUAL BARRIERS TO WASTE DIVERSION

Master Plan Strategy: Target outreach materials to audiences with the greatest need for education.

Dakota County Residential Survey

Approximately every three years, Dakota County conducts a Residential Survey to provide residents an opportunity to rate the quality of life in the county as well as service delivery and their satisfaction with County government. The survey also gives residents an avenue to provide feedback to the County about what is working well and what is not, and to share their priorities for the County. In 2016, the County the survey results indicated:

- The Overall Quality of Services Provided by the County was rated 66 out of 100, an increase of 4 points from 2013.
- 24% of respondents don't use the Recycling Zone, 26% said they were unfamiliar with it
- The number one reason people did not use the Recycling Zone was that they did not want to pay fees (24%). Respondents also noted: inconvenient hours (15%), do not have anything to drop off (14%), do not know what can be recycled (14%), too far away (10%), and used a different facility (7%)
- Of those who do use The Recycling Zone, 84% indicated that the level of service was good (46%) or excellent (38%)

HOUSEHOLD HAZARDOUS WASTE AND PROBLEM MATERIALS

The County implements a Household Hazardous Waste Management Plan, as required by State law (MN Stat §115A.96). The County's strategies to address household hazardous waste and problem materials are detailed in the Master Plan and further protect the environment and public health.

Summary of HHW and Problem Materials Strategies Implemented: The County provides collection, storage, and proper management of hazardous waste and problem materials through collection services at The Recycling Zone, community collection events, and drop-off locations.

1. THE RECYCLING ZONE

Master Plan Strategies: Provide for consistent and cost-effective services/Increase opportunities to manage problem materials and household hazardous waste.

Electronics fee

In response to the increasing cost to properly manage electronics waste, Dakota County began charging \$10 to recycle TVs and monitors at the Recycling Zone in August 2016. The implementation of a fee was expected to reduce the amount of electronics collected. The reduction in electronics collected did not occur, and in fact, Dakota County collected 11% more electronics in 2016 than in 2015.

New Recycling Zone study

In 2016, Dakota County hired a consultant to evaluate the space needs for the County's household hazardous waste program. The study found that the Recycling Zone needs approximately twice as much space as it currently has to meet its existing participation and waste storage needs. The amount of space needed will continue to increase as participation and waste collected grow.

Recycling Zone Usage

The Recycling Zone continues to see record attendance levels every year. In 2016, over 69,000 residents dropped off hazardous waste, electronics and other items at the Recycling Zone, an eight percent increase from 2015. In 2016, over four million pounds of household hazardous waste and electronics was managed at the Recycling Zone.



The Recycling Zone saw an increase in residential participation in 2016

Table 7. Dakota County HHW Program Participation

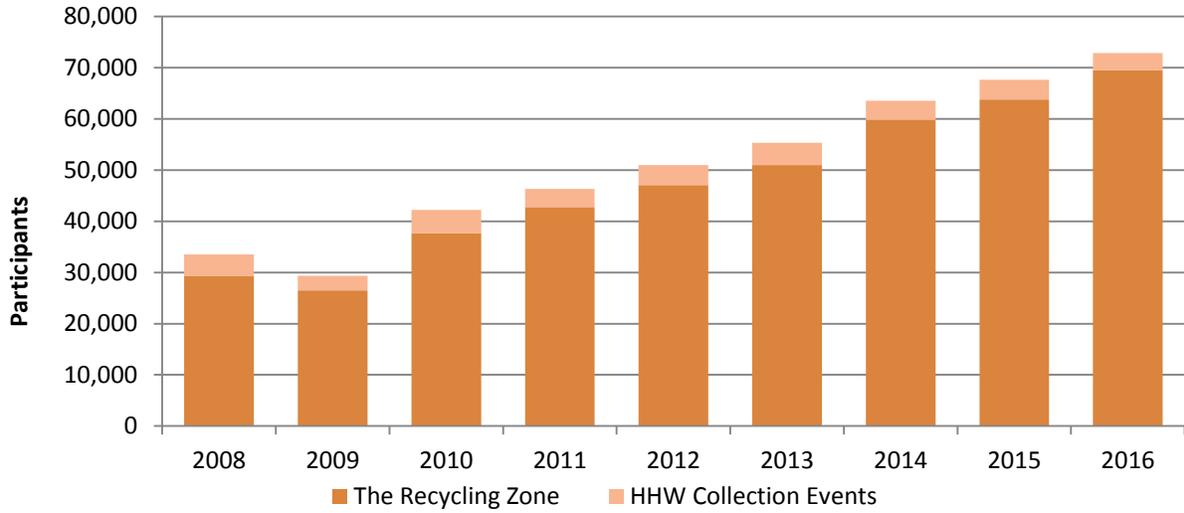
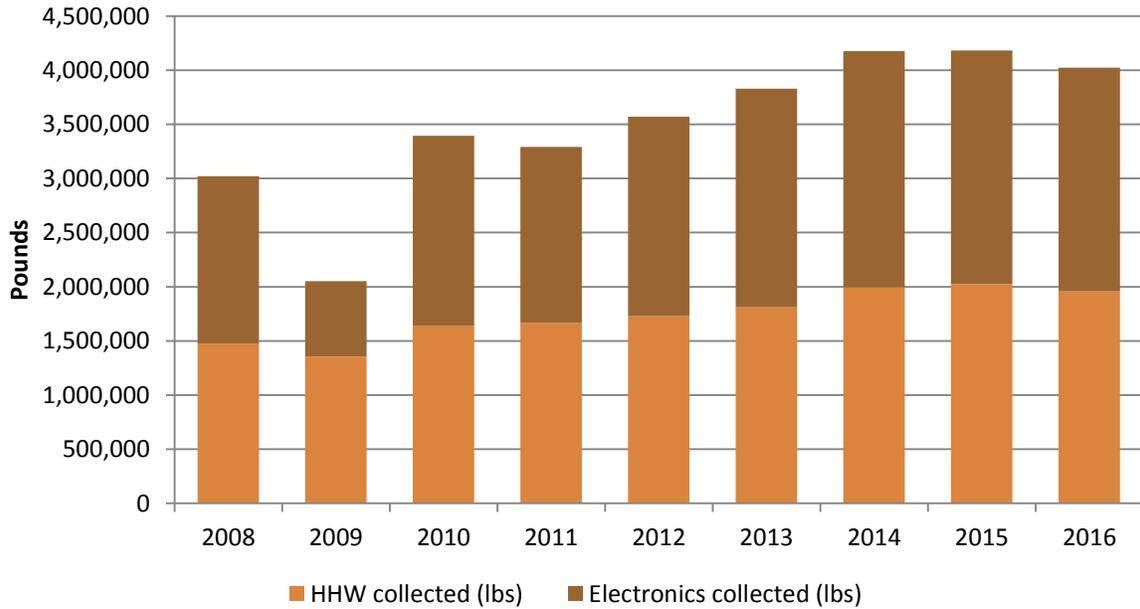


Table 8. HHW and Electronics Managed at The Recycling Zone



2. HOUSEHOLD HAZARDOUS WASTE COLLECTION EVENTS

Master Plan Strategy: Provide convenient opportunities to manage problem material and HHW.



Residents dropping off household hazardous waste at the Farmington drop-off event

HHW Collection Events

Four household hazardous waste collection events were held in 2016 in the cities of Hastings, Lakeville, Farmington, and Burnsville. Over 3,300 residents participated in these events, and the County collected 273,992 pounds of hazardous waste and electronics.

3. PRODUCT STEWARDSHIP

Master Plan Strategy: Support Product Stewardship Legislation

Electronics

In 2016, the Minnesota legislature modified the State's electronics recycling law to increase the amount of electronics that manufacturers' of these devices must recycle. The legislation also sought to have manufacturers cover more of cost local governments incur when they collect electronic waste. Dakota County participated in discussions with MPCA staff, electronics recyclers, and manufacturers' representatives to get legislation that would increase Minnesota's electronics recycling rate.

Paint

PaintCare, a non-profit organization created by paint manufactures, to administer and implement paint product stewardship programs across the country went into effect in Minnesota in 2014. Funds collected by PaintCare, through a per-can fee on architectural paint sold, are used to reimburse the County for costs associated with the transportation and recycling of paint collected at The Recycling Zone, at HHW Collection Events and for paint taken by the public for reuse.

DAKOTA COUNTY BEGINS SOLID WASTE MASTER PLAN REVISION

Dakota County is currently revising its [Solid Waste Master Plan](#) (Master Plan) to create a long-term framework for proper waste management. The revised Master Plan will include strategies to divert waste from the landfill and comply with state mandates and the MPCA's Policy Plan. Because everyone makes decisions about and produces waste, the Master Plan revisions will include a wide range of strategies to divert waste from landfills and will affect many stakeholders. Starting in November 2016 and going through May 2017, Dakota County staff will reach out to residents, businesses, solid waste facility personnel, waste haulers, and public entity staff to begin a transparent, inclusive, and participatory stakeholder engagement process. The engagement process will elicit input and feedback regarding waste diversion barriers and solutions, waste diversion strategies, and how all waste system users can be held accountable to meeting a 75% recycling goal.