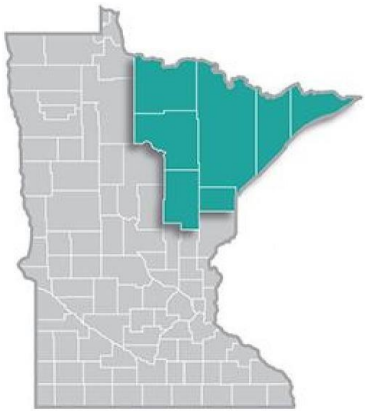
Northeast Minnesota Regional Solid Waste Management Plan



Solid Waste Officers of the Northeast Region

Aitkin, Carlton, Cook, Itasca, Koochiching, Lake, St. Louis, WLSSD

May 2023

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BURNS McDONNELL

Project No. 133022

Northeast Minnesota Regional Solid Waste Management Plan

Prepared by:

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Project No. 133022

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EXECUTIVE SUMMARY

The northeast Minnesota counties of Aitkin, Carlton, Cook, Itasca, Koochiching, Lake, and St. Louis (Counties) and the Western Lake Superior Sanitary District (WLSSD) collaborated to develop the Northeast Minnesota Regional Solid Waste Plan (Regional Plan). The Regional Plan was developed over an approximately 24-month period working closely with the Solid Waste Officers of the Northeast Region (SWONER) with support from the elected local government officials composing the Northeast Waste Advisory Council (NEWAC). The primary components of the Regional Plan include characterizing the existing system and programs, evaluating program options, and developing a recommended implementation plan for the designated 10-year planning period. SWONERs worked collaboratively with the MPCA in 2025 and 2026 to amend the the Plan to reflect changes to final landfill destination of MSW and update waste diversion programs.

The northeast region disposed of an estimated 167,000 tons of municipal solid waste (MSW) in calendar year 2020 as reflected in **Table ES-1**. An estimated 40-percent of the region's MSW was disposed at the Superior Landfill located in Superior, Wisconsin, 32-percent of the region's MSW was disposed at the St. Louis County Landfill, and the remainder was disposed at landfills outside the region.

Table ES-1: NE MN Waste Flow

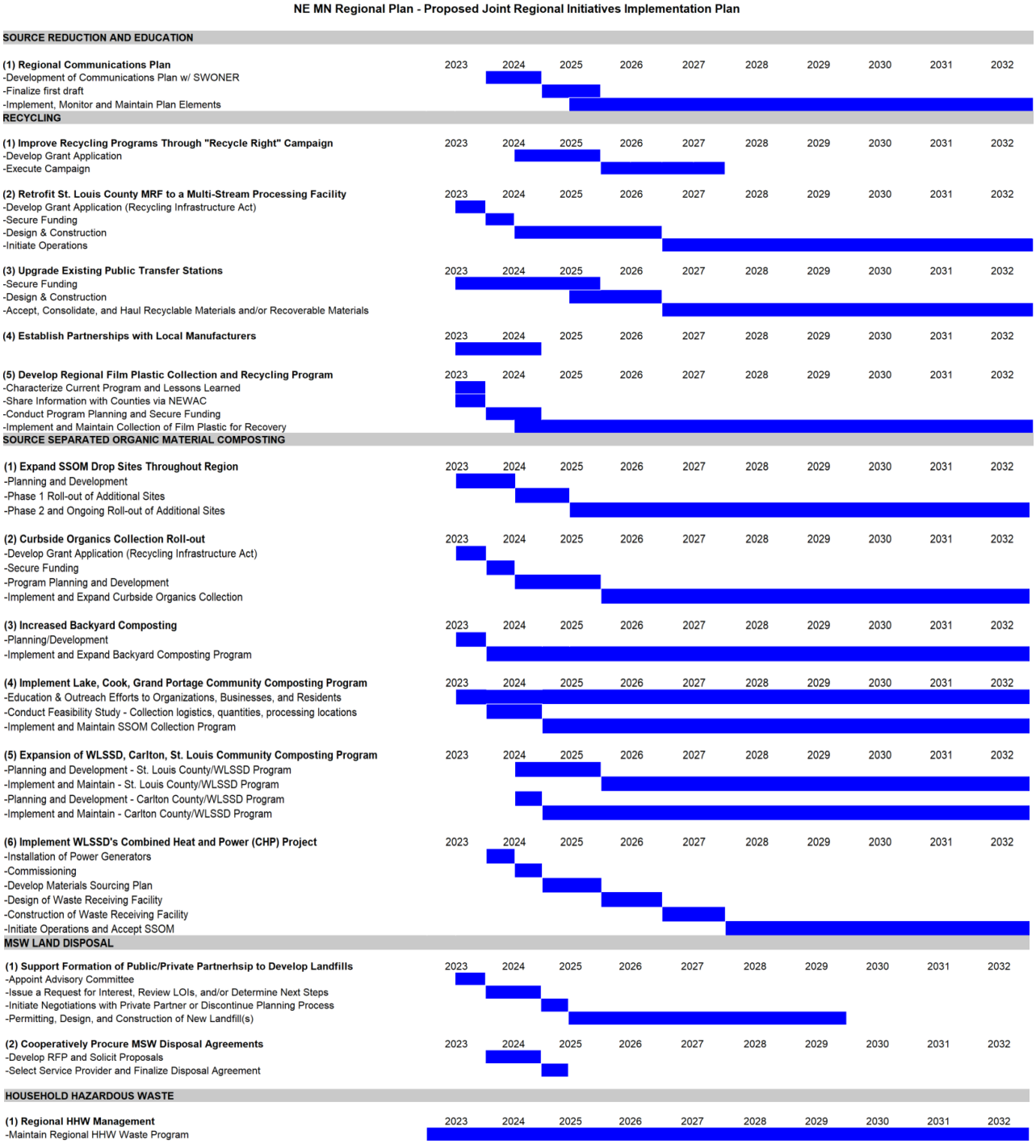
County	Estimated Quantity Generated for Disposal in 2020 (Tons)	Current Landfill Facilities Being Used
Aitkin	9,777[a]	-East Central Solid Waste Commission Landfill (Mora, MN) -Lake Area Landfill (Sarona, WI)
Carlton	10,670[a]	-Superior Landfill (Superior, WI)
Cook	3,065[a]	-Superior Landfill (Superior, WI)
Itasca	29,194[a]	-Elk River Landfill (Elk River, MN)
Koochiching	7,493[a,b]	-Mar-Kit Landfill (Hallock, MN) -St. Louis County Regional Landfill (Virginia, MN)
Lake	5,759[a,c]	-Superior Landfill (Superior, WI) -St. Louis County Regional Landfill (Virginia, MN)
St. Louis	53,481[a]	-St. Louis County Regional Landfill (Virginia, MN)
WLSSD	47,689[a]	-Superior Landfill (Superior, WI)
Total	**167,128[d]**	**--**
Total to Superior Landfill (Carlton, Cook, Lake, and WLSSD)	**67,183[d]**	**--**

(a) Derived from Goal Volume Table data provided by MPCA and confirmed via County provided data.
(b) Nearly all MSW transported to Mar-Kit Landfill; one township goes to St. Louis County Regional Landfill.
(c) Nearly all MSW generated transported to Superior Landfill; Fall Lake Township goes to St. Louis County Regional Landfill.
(d) Includes all waste generated within Carlton County, including the portion of Carlton County within WLSSD boundaries.

Based on an evaluation of the existing programs and facilities, stakeholder input identifying key barriers and opportunities, and feedback from the SWONER and NEWAC, a detailed implementation plan was formulated. The implementation plan provided in **Figure ES-1** includes a summary description of regional program initiatives, recommended steps to implement these initiatives, and a proposed timeline. These regional efforts supplement the existing and proposed programs within the individual Counties/WLSSD. The proposed regional as well as local county initiatives are detailed further in **Section 5**.

For all of the regional program initiatives described in **Figure ES-1**, there is support from the Counties/WLSSD within the Region to move forward with implementation.

Figure ES-1: Proposed Regional Implementation Plan



Note: Timeline reflects overall regional initiatives. Individual county timelines and participation may vary within each initiative.

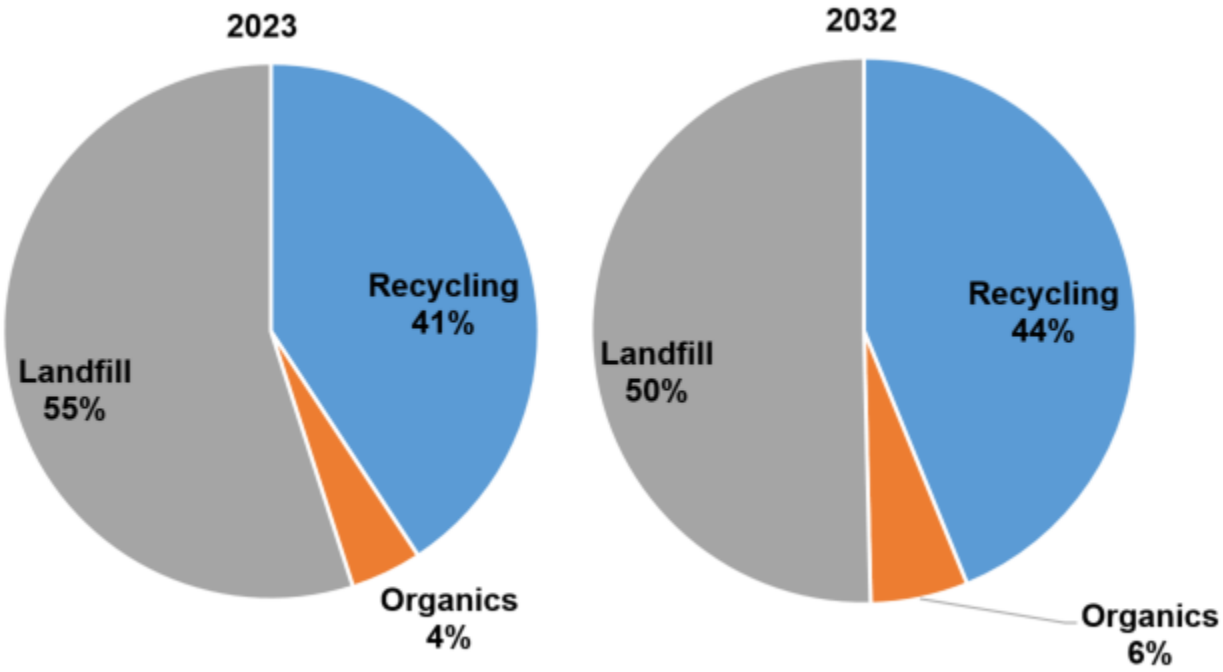
The proposed program initiatives and timeline were used to develop the waste and diversion projections for the Goal Volume Tables (GVTs) included in **Appendix X**. Based on the outcomes of the GVT analysis, the proposed regional system is projected to impact the management of the material streams over the 10-year planning period as characterized in **Table ES-2** and **Figure ES-2**. Overall, the proportion of the municipal solid waste stream generated in the region will be reduced from 55-percent to 50-percent over the 10-year planning period.

Table ES-2: Proposed Regional System Quantities of Materials (Tons)

Material Streams	2023[a]	2032[a]	Percent Change
Recycling	125,432	135,758	+ 8.2%
Organics	13,243	17,560	+ 32.6%
Landfill	169,144	157,411	- 7.0%

(a) Based on the Goal Volume Table (GVT) analysis, which considers both projected population change and new program implementation.

Figure ES-2: 2023 and 2032 Projected Waste Quantities

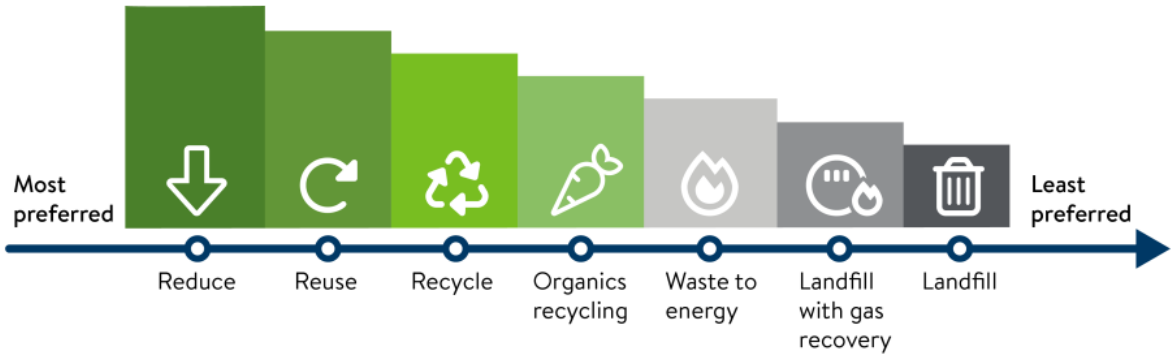


1.0 INTRODUCTION

Minnesota Statute Chapter 115A and accompanying solid waste management rules require counties and local solid waste authorities to develop solid waste management plans (SWMP) describing how municipal solid waste will be managed for the next ten years within their respective jurisdictions. The northeast Minnesota counties of Aitkin, Carlton, Cook, Itasca, Koochiching, Lake, and St. Louis (Counties) and the Western Lake Superior Sanitary District (WLSSD) have met these requirements with Minnesota Pollution Control Agency (MPCA)-approved SWMPs. Expiration dates for these County and WLSSD SWMPs vary. However, the MPCA revised the due dates to provide the opportunity for the Counties and the WLSSD to collaborate to develop a regional SWMP.

This document represents the drafting of the Northeast Minnesota Regional Solid Waste Plan (Regional Plan) which combines the individual County and WLSSD solid waste management plans required by the MPCA into one regional solid waste management plan. Minnesota's solid waste management hierarchy, **Figure 1-1**, serves as the foundation for the Regional Plan. The hierarchy prioritizes prevention, reuse, recycling, and organics composting over disposal through waste-to-energy and landfilling.

Figure 1-1: Minnesota Waste Management Hierarchy



Source: Minnesota Pollution Control Agency (MPCA) https://www.pca.state.mn.us/air-water-land-climate/waste-planning-and-recycling

This Regional Plan was developed over an approximately 24-month period working closely with the Solid Waste Officers of the Northeast Region (SWONER) with support from the elected local government officials composing the Northeast Waste Advisory Council (NEWAC). In developing the Regional Plan, a comprehensive regional stakeholder engagement process was utilized during the COVID-19 pandemic resulting in a combination of in-person, virtual, and hybrid meetings. In addition, the NEWAC had multiple meetings to review and approve the detailed implementation plan.

2.0 BACKGROUND INFORMATION

2.1 Summary of Regional Background Information

This section provides a summary of the regional demographics, economic conditions, solid waste composition and environmental justice related to historically underserved populations.

2.1.1 Regional Population Trends

Regional population trends in the northeast Minnesota Region are summarized in **Table 2-1**.

Table 2-1: Regional Population Trends

County	2010 Population	2020 Population	2030 Population Projection	Projected 10-Year Population Trend
Aitkin	16,202[1]	15,697[2]	14,314[3]	-5.8%
Carlton	35,386[1]	36,207[2]	36,754[3]	1.2%
Cook	5,176[1]	5,600[2]	5,718[3]	2.1%
Itasca	45,058[1]	45,014[2]	47,246[3]	1.3%
Koochiching	13,311[1]	12,062[2]	10,570[3]	-11.4%
Lake	10,866[1]	10,905[2]	9,536[3]	-6.9%
St. Louis	200,226[1]	200,231[2]	199,030[3]	-0.6%
WLSSD	137,411[4]	139,249[5]	141,087	1.3%
Region Total	**326,225**	**325,716**	**323,168**	**-0.8%**

Sources:
(1) U.S. Census Bureau. https://mn.gov/admin/assets/DEC-2010-SF1-DP1-us-mn- allcounties_tcm36-219431.csv
(2) U.S. Census Bureau. https://data.census.gov/cedsci/
(3) MN Department of Employment and Economic Development. https://mn.gov/deed/data/data-tools/county-profiles/
(4) WLSSD 2013 Solid Waste Management Plan.
(5) MN State Demographic Center. https://mn.gov/admin/demography/data-by-topic/population-data/our- estimates/pop-finder1.jsp
(6) Population served by St. Louis County Solid Waste Management Area (SWMA) is roughly half of what is reported. WLSSD encompasses the Duluth area that has the other half of the St. Louis County population.

As reflected above, the projected population over the next ten years for the northeast Minnesota region is expected to remain nearly stable. However, the projected population trends for the individual counties and WLSSD vary from a loss of over 11-percent for Koochiching County to an increase in Cook County of more than two percent.

Table 2-2 summarizes demographic information for the northeast region, **Figure 2-1** depicts the population density throughout the northeast region followed by a discussion specific to the WLSSD.

Table 2-2: Regional Demographic Information

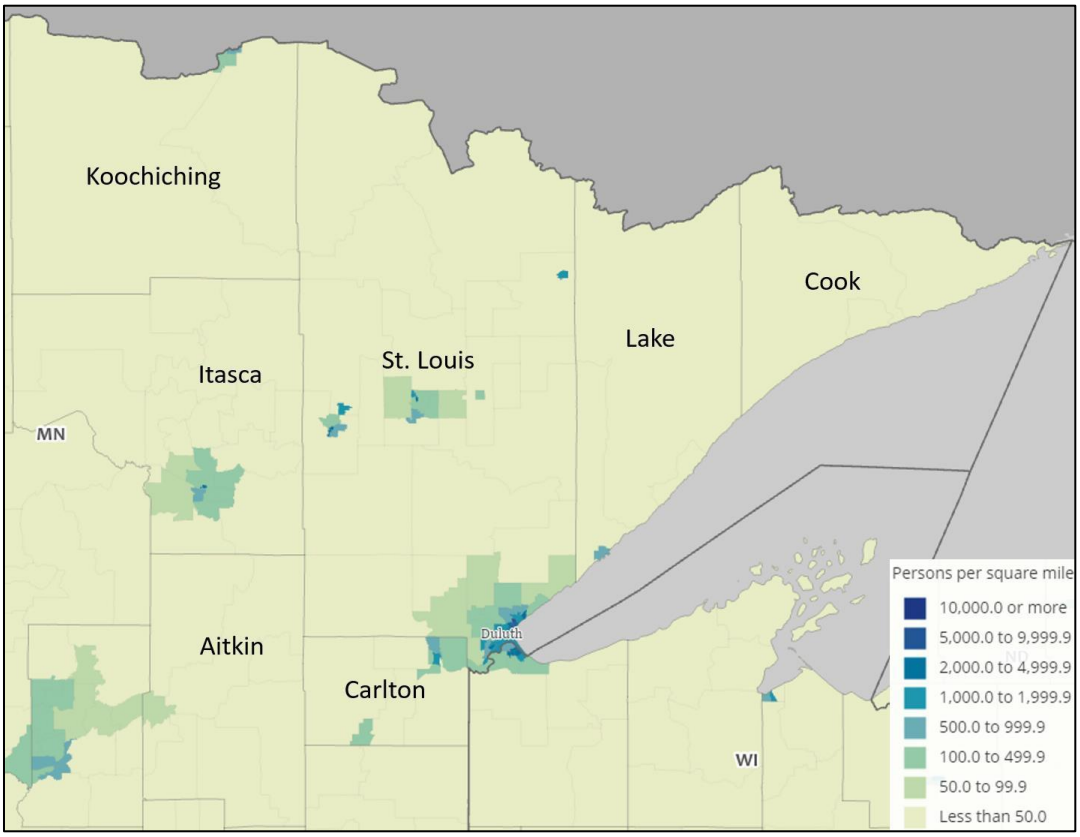
County[a]	Land Area (Square Miles)	Population Density (per Square Mile)	People per Household	County Seat	Urban Percentage of Population	Rural Percentage of Population
Aitkin	1,821	8.6	2.0	Aitkin	23	77
Carlton	861	42.0	2.7	Carlton	52	48
Cook	1,452	3.9	2.1	Grand Marais	26	74
Itasca	2,667	16.9	2.3	Grand Rapids	51	49
Koochiching	3,104	3.9	2.2	International Falls	64	36
Lake	2,109	5.2	2.1	Two Harbors	52	48
St. Louis	6,246	32.1	2.3	Duluth	77	23

(a) WLSSD is excluded from this table. WLSSD is located in Carlton and St. Louis Counties.

Sources:

- U.S. Census Bureau. https://www.census.gov/programs-surveys/decennial-census/decade/2020/2020- census-main.html
- Minnesota Department of Employment and Economic Development. https://mn.gov/deed/data/data- tools/county-profiles/
- Minnesota State Demographic Center. https://mn.gov/admin/demography/

Figure 2-1: Regional Population Density



Source: 2020 U.S. Census Bureau. https://mtgis-portal.geo.census.gov/arcgis/apps/MapSeries/index.html?appid=2566121a73de463995ed2b2fd7ff6eb7
Note: Represents individual census level tracts within each County.

The WLSSD is located in northeastern Minnesota at the western tip of Lake Superior. The WLSSD covers an area of approximately 530 square miles in southeastern St. Louis County and northeastern Carlton County. The other 5,717 square miles of St. Louis County not served by the WLSSD, is served by the St. Louis County Environmental Services Department and Carlton County Environmental Services. A map depicting the areas served by the WLSSD is provided in **Figure 2-2**. Within the WLSSD legislative boundaries are eight cities and nine townships. These include the cities of Duluth, Hermantown, Proctor, Cloquet, Carlton, Scanlon, Rice Lake, and Wrenshall; and the townships of Duluth, Lakewood, Canosia, Grand Lake, Solway, Midway, Thomson, Twin Lakes, and Silver Brook.

Based on data from the 2020 United States Census, the combined population of these cities and townships within WLSSD is estimated to be 139,249 with the City of Duluth as the largest city with a population of 86,697. The WLSSD area experienced a 1.3 percent population increase between 2010 and 2020. The WLSSD's 2030 population is projected to be 141,087 assuming the overall annual current growth rate.

Figure 2-2: WLSSD Service Area

Source: https://www.pca.state.mn.us/sites/default/files/WLSSD percent20Solid percent20Waste percent20Service percent20Area.jpg

Within the northeast region of Minnesota are significant amounts of tribal nation areas, which are depicted in **Figure 2-3**. Based on the 2020 U.S. Census, the American Indian population makes up the largest minority population within the northeast region of Minnesota. This population data is summarized on the following pages in **Table 2-3**, **Table 2-4**, and **Figure 2-4**.

Tribal nations within the northeast region include the Grand Portage, Bois Forte, Red Lake, Leech Lake, Minnesota Chippewa, Fond du Lac, and Mille Lacs Bands. The portions of the northeast Minnesota region with the highest American Indian populations include eastern Cook County, northern and southwestern St. Louis County, eastern Koochiching County, western Itasca County, eastern Aitkin County, and north central Carlton County.

All the tribal nations in the northeast region were contacted at the beginning of the planning process encouraging involvement in plan development. Representatives of the Fond du Lac Band (Carlton County), Grand Portage Band (Cook County), and Bois Forte Band (St. Louis County) were included in stakeholder engagement meetings throughout the planning process. Representatives were provided the opportunity to provide input describing their respective solid waste management system and working relationship with the respective county solid waste systems.

Distance is a barrier for the tribal nations within the northeast region relative to solid waste management and lack of infrastructure. Many of the American Indian populations are located in the more rural areas of the northeast region, restricting access to the solid waste management systems that exist in more populated areas of the region.

Table 2-3: Regional American Indian Population

County	2020 Population[1]	Percent Caucasian Population[2]	Percent American Indian Population[2]	2020 American Indian Population
Aitkin	15,697	94.5%	2.7%	424
Carlton	36,207	89.1%	6.0%	2,172
Cook	5,600	86.4%	8.6%	482
Itasca	45,014	92.6%	3.9%	1,756
Koochiching	12,062	93.6%	2.5%	302
Lake	10,905	96.3%	0.7%	76
St. Louis	200,231	92.1%	2.4%	4,806
Total	**325,716**	**92.0%**	**3.1%**	**10,017**

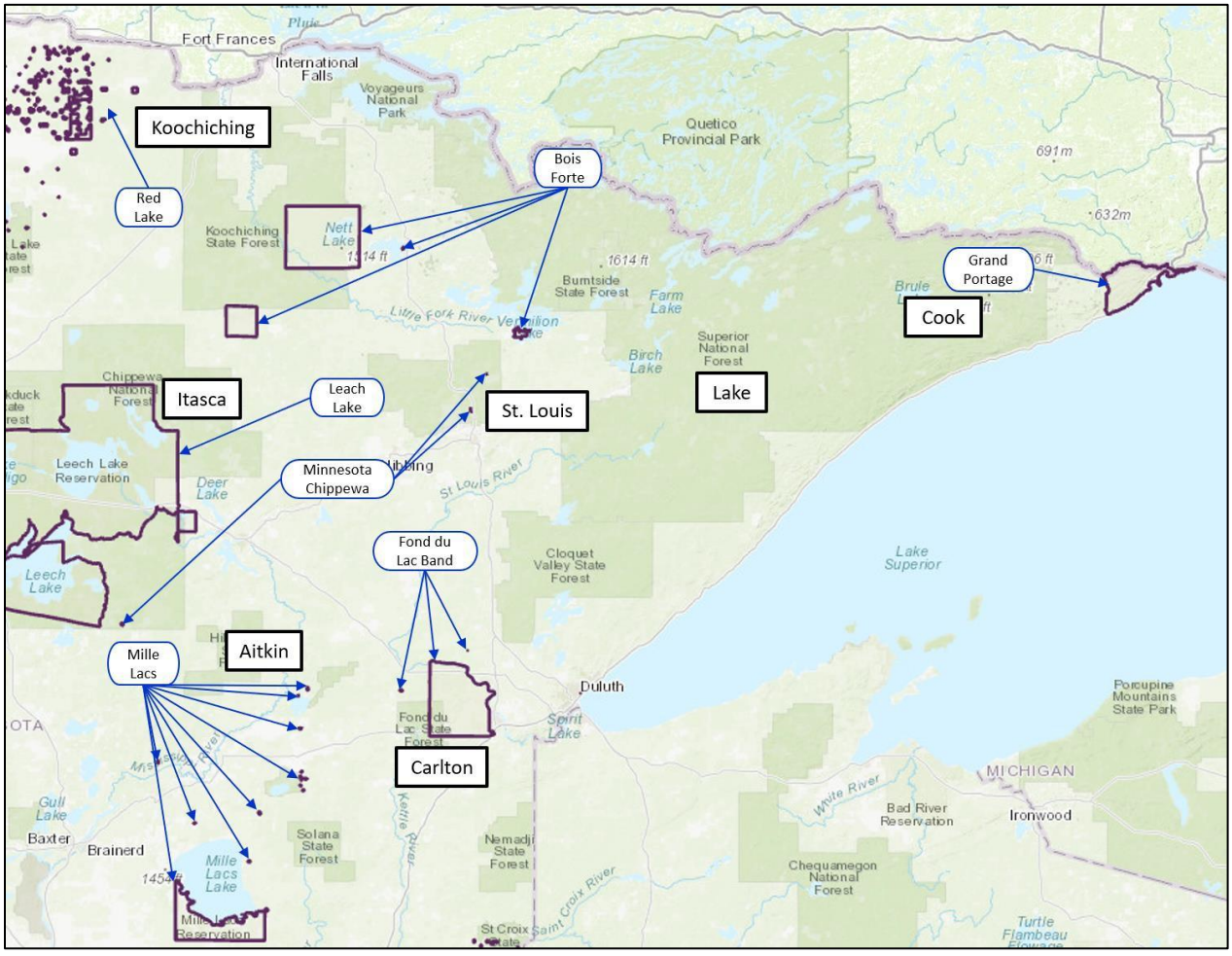
Source:
(1) U.S. Census Bureau. https://data.census.gov/cedsci/
(2) U.S. Census Bureau. https://www.census.gov/quickfacts/fact/table/US/PST045221

Table 2-4: Minority Populations

County	2020 Population	Percent Caucasian Population	Percent American Indian and Alaska Native Population	Percent African American Population	Percent Asian Population	Percent Native Hawaiian and Other Pacific Islander	Percent Hispanic or Latino
Aitkin	15,697	94.5	2.7	0.7	0.3	0.	1.5
Carlton	36,207	89.1	5.7	1.8	0.6	0	1.9
Cook	5,600	86.4	7.8	1.6	1.2	0	2.8
Itasca	45,014	92.6	3.8	0.5	0.4	0.2	1.7
Koochiching	12,062	93.6	2.7	0.8	0.7	0	1.4
Lake	10,905	96.3	0.8	0.5	0.6	0	1.6
St. Louis	200,231	92.1	2.4	1.6	1.1	0.1	1.9
Total	**325,716**	**92.0%**	**3.0**	**1.4**	**0.9**	**0.1**	**1.8**

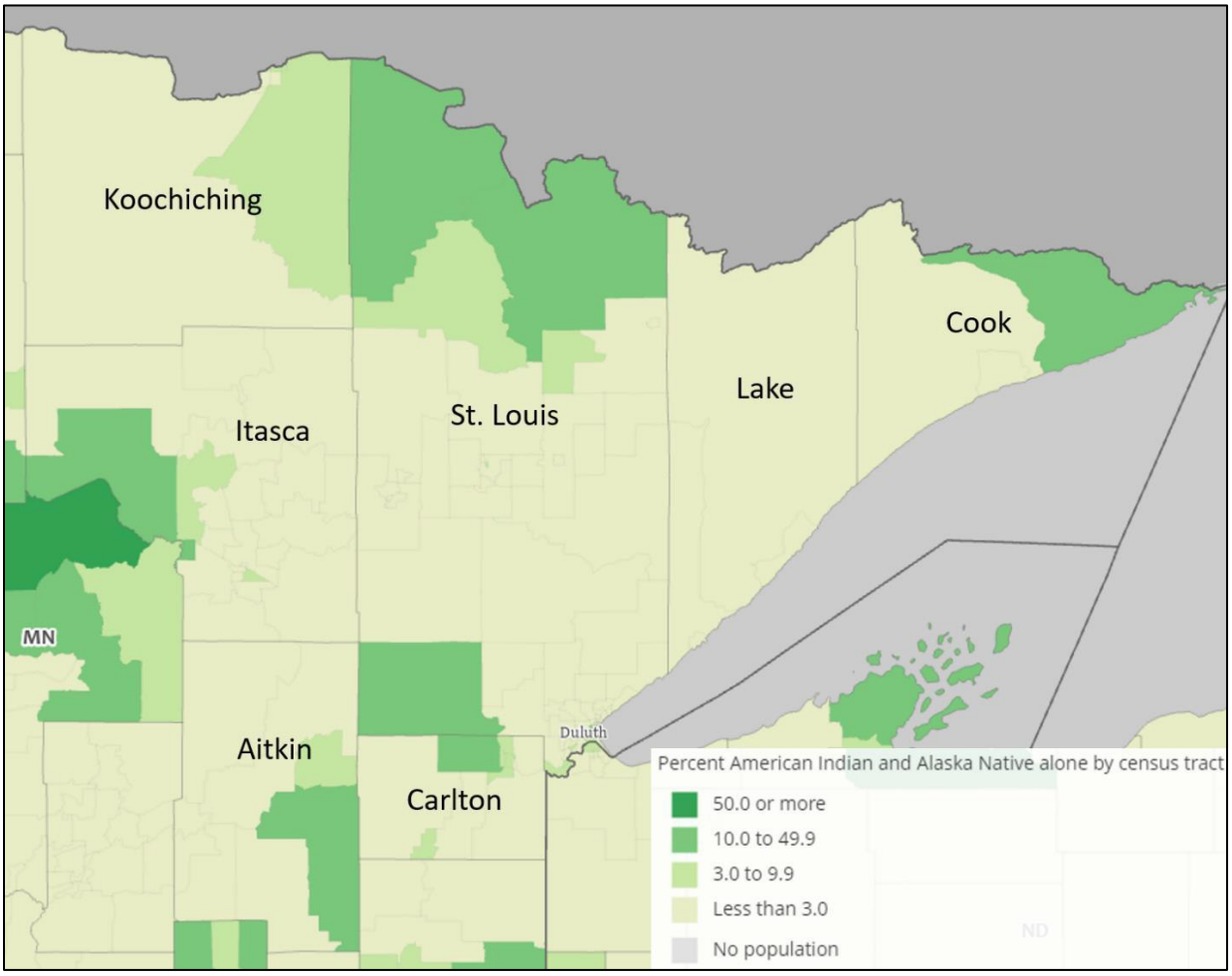
Source: U.S. Census Bureau. https://www.census.gov/quickfacts/fact/table/US/PST045222

Figure 2-3: NE MN Tribal Nations



Source: Minnesota Pollution Control Agency.
https://mpca.maps.arcgis.com/apps/MapSeries/index.html?appid=f5bf57c8dac24404b7f8ef1717f57d00

Figure 2-4: NE MN American Indian Population



Source: 2020 U.S. Census Bureau. https://mtgis-portal.geo.census.gov/arcgis/apps/MapSeries/index.html?appid=2566121a73de463995ed2b2fd7ff6eb7

Note: Represents individual census level tracts within each County.

2.1.2 Regional Geographic Information

Overall, the northeast Minnesota region is a large, geographically diverse area that is predominantly rural. As reflected earlier in **Figure 2-1**, the counties of Aitkin, Koochiching, Cook, and Lake have a population density per square mile of less than 50. St Louis and Carlton counties are more densely populated with larger communities located near Lake Superior. Carlton County is mostly rural, except along the I-35 corridor that runs through the eastern half of the county connecting Duluth and the arrowhead region to the Twin Cities. Growth in the WLSSD area can be described as linear. The City of Duluth, as the major metropolitan area, stretches 23 miles northeast-southwest along the north shore of Lake Superior and has urban land uses and local infrastructure needs. Development activity has historically spread to outlying suburban areas and along transportation corridors extending to the north, south and west of the City of Duluth.

Primary land uses in the region include farming, mining, and timber. The region is home to thousands of lakes, with Cook and Lake Counties containing the highest number of lakes. A large percentage of the land is publicly owned in the northern part of the region, including state parks, state forests, national forests, Boundary Water Canoe Area Wilderness, and Voyageurs National Park. The northern portion of northeast Minnesota (Cook, Koochiching, Lake, and St. Louis Counties) is heavily forested. The iron range in central St. Louis County contains vast deposits of iron ore. Nearly 50-percent of Koochiching County's land is made up of wetlands and water, with much of the remainder as forest and grassland. Less than one-percent of the land in Koochiching County is considered urban.

2.1.3 Regional Economic Trends

Table 2-5 summarizes industry employment projections in the NE region from 2018 to 2028.

Table 2-5: Regional Industry Employment Projections, 2018-2028

Industry	Estimated Employment 2018[1]	Projected Employment 2028[1]	Percent Change 2018-2028[1]
Natural Resources & Mining	5,596	5,700	1.9%
Utilities	1,433	1,405	-2.0%
Construction	6,363	7,145	12.3%
Manufacturing	8,748	8,024	-8.3%
Wholesale Trade	3,275	3,208	-2.0%
Retail Trade	17,469	16,467	-5.7%
Transportation & Warehousing	4,914	4,991	1.6%
Information	1,406	1,240	-11.8%
Finance & Insurance, Real Estate	6,178	6,059	-1.9%
Prof. Services & Management of Companies	5,184	5,407	4.3%
Administrative & Waste Services	3,282	3,594	9.5%
Educational Services	12,797	12,763	-0.3%
Health Care & Social Assistance	33,615	37,375	11.2%
Leisure & Hospitality	18,503	18,451	-0.3%
Other Services, Excluding Public Admin.	6,932	6,692	-3.5%
Public Administration	15,345	15,329	-0.1%
Total, All Industries	**160,443**	**162,980**	**1.6%**

(1) Source: Minnesota Department of Employment and Economic Development. https://mn.gov/deed/data/data-tools/county-profiles/

As reflected above, total employment in the northeast Minnesota region is projected to increase slightly from 2018 to 2028. The industries projected to experience the most growth are the construction, health care, and administrative and waste services industries. The double-digit growth in construction is likely linked to projected growth in other sectors such as health care and social assistance. An increase in the number of employees in the healthcare sector may correspond to the building of new healthcare facilities generating more construction and demolition wastes. Overall, an increase in the total number of employees is likely to increase overall municipal solid waste (MSW) generation. Regulated medical waste also will likely increase as a result of growth in the healthcare sector. **Table 2-6** summarizes economic information for the northeast region followed by discussion specific to WLSSD.

Table 2-6: Regional Economic Information

County[a]	Median Household Income[b]	Per Capita Income	Labor Force Change (2005-2020)	Projected Labor Force Change (2020-2030)	Unemployment Rate (2021)
Aitkin	$49,351	$29,275	-6.8%	-7.9%	7.8%
Carlton	$63,098	$29,440	2.3%	-2.9%	6.9%
Cook	$57,432	$33,194	-6.5%	-3.9%	7.6%
Itasca	$55,139	$30,286	-3.8%	-3.3%	8.1%
Koochiching	$50,870	$29,834	-17.4%	-17.1%	7.0%
Lake	$61,452	$34,207	-11.9%	-11.4%	6.7%
St. Louis	$60,434	$31,537	-1.5%	-5.6%	6.8%

(a) WLSSD is excluded from this table. WLSSD is located in Carlton and St. Louis Counties.
(b) The median hourly wage for the NE region is $20.49 (Minnesota Department of Employment and Economic Development. https://mn.gov/deed/data/data-tools/county-profiles/).

Sources:
- U.S. Census Bureau. https://www.census.gov/programs-surveys/decennial-census/decade/2020/2020- census-main.html
- Minnesota Department of Employment and Economic Development. https://mn.gov/deed/data/data- tools/county-profiles/

Table 2-6 reflects that with the exception of Carlton County, the other counties have had a decline in the labor force between 2005 and 2020. All of the counties in the northeast region are projected to experience a decline in labor force between 2020 and 2030.

The WLSSD service area is included in the Duluth/Superior Metropolitan Statistical Area (MSA), which is comprised of St. Louis and Carlton counties in Minnesota and Douglas County in Wisconsin. The international "Twin Ports" of Duluth, Minnesota and Superior, Wisconsin form the hub of economic and cultural activity, but there are dozens of interrelating communities across the MSA, each with unique strengths, resources and opportunities for development.

The major industries of the area include aviation, wood and paper products, mining, higher education, shipping/transportation, health care, metal fabrication and tourism. Historically, The City of Duluth economy has been driven by the extraction of natural resources (mining, timber, etc.) and the transportation of those goods. In recent decades, Duluth's economy has seen diversification through the expansion of health care, education, aviation, tourism/hospitality, and arts and entertainment. **Table 2-7** summarizes industry employment statistics in the City of Duluth.

Table 2-7: 2019 Duluth Industry Employment Statistics

	2019 Annual Data				2014-2019		2018-2019	
NAICS Industry Title	Number of Firms	Number of Jobs	Total Payroll ($1,000s)	Average Annual Wage	Change in Jobs	Percent Change	Change in Jobs	Percent Change
Health Care & Social Assistance	334	19,123	$1,134,147	$59,308	+1,461	+8.3 percent	+150	+0.8 percent
Accommodation & Food Services	252	6,127	$111,081	$18,130	+94	+1.6 percent	-53	-0.9 percent
Retail Trade	390	5,851	$156,570	$26,759	-566	-8.8 percent	-267	-4.4 percent
Educational Services	68	4,832	$249,450	$51,625	-382	-7.3 percent	-88	-1.8 percent
Public Administration	56	3,650	$238,493	$65,341	-17	-0.5 percent	+80	+2.2 percent

Source: Minnesota Department of Employment and Economic Development.

Overall, the average net change in employment from winter (January, February, and March) to summer (July, August, and September) for all industries in the northeast Minnesota region is 4.2 percent[3]. The industries that have experienced the largest change include construction, retail trade, arts, entertainment and recreation, and accommodation and food services.

2.1.4 Regional Demographic and Geographic Constraints and Opportunities

There are several demographic and geographic constraints that apply to all entities in the northeast region. With the exception of WLSSD, the region as a whole is sparsely populated and spans a large geographic area, which results in a lack of economies of scale. The distance required to haul MSW, recycling, and organics is a significant barrier for the northeast region. As in any successful solid waste management program, convenience of use is paramount to public participation. In addition, the region experiences a substantial population increase in the summer months due to visitors and seasonal residents, which presents

[3] Source: Minnesota Department of Employment and Economic Development, 2015. https://mn.gov/deed/newscenter/publications/review/january-2015/seasonal-variation.jsp

challenges for the stable population base; it also results in the increased demand for waste collection, processing, and disposal. The regional solid waste management system must accommodate both permanent residents and seasonal tourists, including those with a second home. Other changes potentially impacting the solid waste services include mining (Aitkin, Itasca, and St. Louis counties), timber and fiber demand, resorts increasing in size, continued development of lakeshores, and increases in specialized businesses. WLSSD expects continued population, household, and job growth, as well as the growth of rural households within its boundaries, which will need to be accommodated through its solid waste management programs.

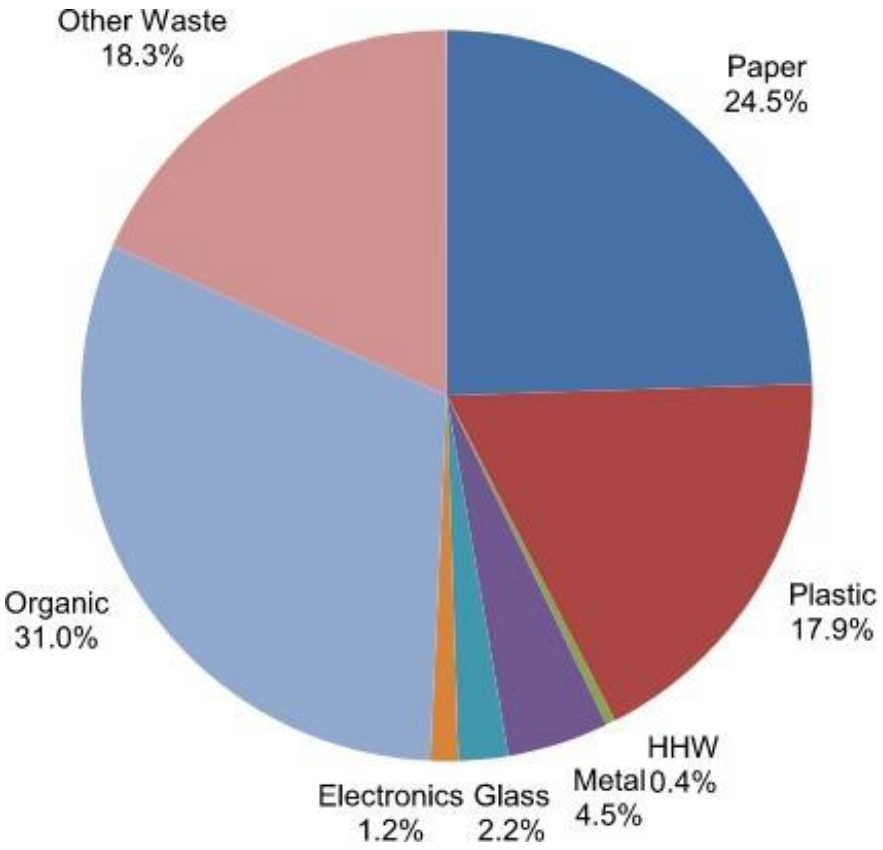
Recycling rates are driven by an array of geographic, demographic and economic factors, including manufacturing activity, waste generation per capita, curbside collection potential, and clustering of population. Counties with more manufacturing, less waste generation per capita, more population centers with greater than 1,000 people and a higher proportion of residents living in larger cities versus small cities are critical factors that drive recycling rates. Several counties such as Aitkin, etc. do not fit the profile of optimal conditions for achieving high recycling rates.

2.1.5 Solid Waste Composition

The most recent Minnesota statewide solid waste characterization study was completed in 2013. **Figure 2-5** summarizes the results of the study. The 2013 statewide waste characterization study estimated the quantities and types of mixed municipal solid waste disposed. The methodology included sampling and sorting of materials per the applicable ASTM standard from a representative set of landfills, transfer stations, and energy-from-waste facilities throughout the state. A comprehensive set of material categories were included in the study and nearly 200 MSW samples of 200 to 300 pounds each were sorted as part of the study. Food waste, compostable paper, film plastic, and wood waste represented the largest materials diversion opportunities.

Figure 2-5: 2013 Statewide Characterization Results

Source: Burns & McDonnell 2013 Minnesota Statewide Waste Characterization



Report. Note: The total may not equal the sum of the material categories due to rounding. The material category of Other Waste includes but is not limited to bulky items, textiles, carpet, and other items not classified in the other categories.

2.1.6 MSW Collection Service

Table 2-8 summarizes the type of MSW collection service in the northeast region.

Table 2-8: Regional MSW Collection Service

County	Mandatory vs. Non-Mandatory Refuse Collection
Aitkin	Not mandatory
Carlton	Mandatory in all cities in the County
Cook	Not mandatory
Itasca	Not mandatory
Koochiching	Not mandatory
Lake	Not mandatory
St. Louis	Not mandatory in SWMA; mandatory in cities of Chisholm, Eveleth, Gilbert, Hibbing, Mt. Iron, Virginia, Aurora, Hoyt Lakes, and Biwabik
WLSSD	Mandatory for all residents and businesses within St. Louis County portion

The northeast region has a combination of private licensed haulers and public haulers. Curbside pickup is generally offered for the incorporated communities while drop-off locations are generally used in the more rural areas of the region. Each county requires licensing via ordinance. **Table 2-9** provides more information on haulers within each county. Additional details regarding collection service for the Counties and WLSSD is provided in **Section 3**.

Table 2-9: Licensed MSW Haulers

County	Number of Haulers	Licensing Fee
Aitkin	10	$100
Carlton	9	$50/company + $25/vehicle
Cook	2	$100
Itasca	10	$50 + one-time $10 per vehicle
Koochiching	2	No Licensing fee
Lake	10	$150
St. Louis	28	$50 + $25 per vehicle
WLSSD	27	$25 per truck (2-year license term)

2.1.7 MSW Rate Structure

Table 2-10 below summarizes the various rate structures within the northeast region.

Table 2-10: MSW Rate Structures

County	Curbside MSW Collection Rates[a]	Transfer Station/Canister MSW Drop Off	Estimated MSW collection service
Aitkin	$24-$40 per month	$4-$6 per 30-gallon bag	95%
Carlton	$20-$31.50 per month	$10-15 per cubic yard	73%
Cook	$20-$50 per month	$3.50/bag or $30/yd3	85%
Itasca	$14.49-$45 per month	$2 per 33 gallons	65%
Koochiching	$16-$31 per month	$12 per cubic yard	90% city 50% rural
Lake	$21-$50 per month	$11-$28 per cubic yard	45%
St. Louis	$16.63-$18.48 per month	$2 per 32-gallon bag, $68.93/ton	99.73% city 50% rural
WLSSD	Haulers required to establish base rates based on 32 gal/weekly service	$63.08/ton tip fee for haulers in-District. $67.08 out-of-District	100%

(a) Depending on cart size, pickup frequency, and location.

Based on **Table 2-10**, collection rate structures are highly variable throughout the northeast region and both curbside and drop-off opportunities are provided in most of the area. All county solid waste ordinances have requirements for volume-based pricing.

2.1.8 Largest Solid Waste Generators

Table 2-11: Largest Solid Waste Generators – NE Region

County	Generators
Aitkin	Riverwood Health Care Center, Aitkin Public Schools, McGregor Public Schools, Aicota Health Care Center
Carlton	School District Facilities, Moose Lake Correctional Facility, Black Bear Casino
Cook	Lutsen, Bluefin Bay Resort, School District, Cook County Courthouse/Government Buildings, Cook County North Shore Hospital
Itasca	Grand Rapids Public Schools, Grand Itasca Clinic/Hospital, Blandin, Keewatin Taconite, Itasca County, Arrowhead Promotion, City of Grand Rapids, MN Power, Search Resources, Deer River Healthcare, Banking, Terex, Yanmar, Walmart, White Oak Casino, Deer River Schools, Bergquist Company, Coleraine Schools, Northern Itasca Healthcare, Super One, Fairview Mesaba Clinics, Lake Country Power, Grand Village, Mnstar Technologies, Target, Lake States Tree Service
Koochiching	Falls High School, Super One, Country Market, South Falls Apartments, International Falls Memorial Hospital, McDonald's, West Falls Apartments, South Falls Apartments
Lake	Gas Station/convenience stores, Lake Superior School District
St. Louis County	Hibbing Sanitation Department, Virginia Public Works, G Men Environmental Services, Waste Management, City of Eveleth, City of Chisholm, City of Mountain Iron, Norland Environmental Services, General Waste and Recycling
WLSSD	Essentia Health, St. Luke's Hospital, Miller Hill Mall, Target, Kohls, Super One, Fleet Farm, Sam's Club, Costco, Duluth Public Schools, University of Minnesota Duluth, College of St. Scholastica, Bellisio Foods, Cirrus Industries, BendTec, Altec, HiLine, Moline Machinery

2.1.9 Regional Solid Waste Collection and Generation Constraints/Opportunities

Because of the low population density and rural nature of the region, curbside collection service is not available to all residents in the region; therefore, some residents must self-haul to transfer stations. Long travel distances, high transportation costs, and isolation from markets make it difficult to develop a solid waste management system that takes advantage of economies of scale for collection and materials processing, with the exception of WLSSD. Increased participation in solid waste programs (like waste reduction, HHW and yard waste disposal, and organics diversion) contribute to increased program costs, while the generation of less waste results in less revenues from Solid Waste Management Fees.

Additionally, new and increasing wastes in the absence of product stewardship or other funding sources require the counties and WLSSD to increase taxes and fees paid by local businesses and residents. The small number of large waste generators and recyclers makes it difficult to achieve the State's recycling goals. Collecting annual reports from local businesses has been challenging but is improving. Funding for programs continues to increase and pose a challenge. Seasonal visitors and inhabitants to the region make dramatic changes to daily solid waste operations and create busy conditions for the region's programs. A successful recycling program also depends upon good market conditions for materials collected. Poor and volatile market conditions have been a problem for all processors that serve the region. Improved market conditions would help to improve recycling in the region. Assistance from the State of Minnesota with the development of recovered materials markets within the area would be highly beneficial to the region.

There are opportunities in several counties to work with private waste haulers to support access to curbside recycling along with examining capture rates and identifying which traditional recyclables are not at their potential. Additionally, there are opportunities to expand solid waste education in the region by increasing public information, education, and awareness programs. There is an opportunity to evaluate whether it is economically feasible to develop a source-separated organics program, or to collaborate with nearby counties to collect organics.

2.1.10 Local and Regional Solid Waste Planning in the Last Five Years

2.1.10.1 Current Regional Planning Activities

Planning over the last five years for several of the counties in the northeast Minnesota region has largely focused on where the counties should haul their solid waste for disposal after the anticipated Superior Landfill in Superior, Wisconsin closure in 2026. All of the counties in the northeast region are continually evaluating and updating aspects of solid waste planning including education, HHW management, recycling, and special waste management.

2.1.10.2 Past Barriers to Development of Regional Projects

The main barrier to successful regional projects stems from hauling distances because the northeast Minnesota region spans a large geographic area and is sparsely populated, except in the Duluth region. Other barriers include increasing solid waste service costs, capital and operating costs associated with potential regional solid waste facility solutions, and lack of local recovered materials markets.

2.1.10.3 Resolution of Overlapping Solid Waste Management Efforts

The northeast Minnesota region has a strong history of coordination and cooperation when it comes to solid waste planning and operating issues. Groups such as the NEWAC and the SWONERS have effectively kept the solid waste officers and elected officials engaged to minimize conflict and unnecessary duplication of efforts and waste of resources. There are opportunities to build upon successful regional cooperation such as the HHW program and MSW disposal programs. The regional HHW program is discussed further in **Section 3**.

Cook, Lake, and Carlton counties and the WLSSD cooperate on MSW disposal by hauling their MSW to the Superior Landfill in Superior, Wisconsin for disposal, with Cook County and Lake County utilizing the WLSSD Transfer Station.

3.0 EXISTING SOLID WASTE MANAGEMENT SYSTEMS

This section provides a summary of the existing solid waste management systems including waste generation, facilities and materials flow, budgets, and summary achievements, opportunities, and challenges for the region.

3.1 Northeast Region Waste Generation

Based on the information and data gathered for the participating Counties/WLSSD, a regional summary of MSW generated, percent residential and commercial/industrial/institutional, and C&D generation in the Northeast Minnesota Region is provided in **Table 3-1**, **Table 3-2**, **Table 3-3**, and **Table 3-4**.

Table 3-1: Historical Annual MSW Generation (Tons)

County	2018	2019	2020	2021
Aitkin	7,619	8,479	9,777	11,245
Carlton	13,113	12,514	10,670	12,501
Cook	3,466	3,606	3,065	3,188
Itasca	24,613	26,036	29,194	30,286
Koochiching	7,232	7,429	7,493	8,016
Lake	7,744	7,822	5,759	5,943
St. Louis	51,842	52,605	53,841	53,952
WLSSD	47,304	48,295	47,689	51,177
NE REGION	**162,953**	**166,788**	**167,129**	**176,949**

Source: Minnesota Pollution Control Agency

Table 3-2: Historical Annual C&D Generation (Tons)

County	2018	2019	2020	2021
Aitkin[a]	No Data	2,876	1,352	1,682
Carlton[b]	4,021	4,660	7,498	5,182
Cook[b]	1,262	1,026	1,496	1,218
Itasca[b]	2,872	3,543	3,722	6,436
Koochiching[b]	6,427	6,260	5,612	8,406
Lake[b,c]	2,947	1,364	1,154	702
St. Louis[b]	7,237	8,241	7,431	7.952
WLSSD[d]	35,937	42,956	40,819	44,688

(a) Source: Minnesota Pollution Control Agency.
(b) Source: Information provided by County.
(c) In 2020 Lake County conducted a significant amount of demolition on tax forfeit structures.
(d) Source: Information provided by WLSSD.

Table 3-3: MSW Percent Residential and Commercial/Industrial/Institutional

County	Percent Residential (Percentage)[a]	Percent Commercial/ Industrial/Institutional (Percentage)[a]	Estimated On- Site Disposal (Percentage)[a]
Aitkin	40%	60%	4.5%
Carlton	55%	45%	4.5%
Cook	73%	27%	1.1%
Itasca	62%	38%	5.4%
Koochiching	60%	40%	6.2%
Lake	90%	10%	3.0%
St. Louis	49%	51%	0.22%
WLSSD	53%	47%	1.7%
Range	**40-90%**	**10-60%**	**0.22%-6.2%**

Source: Information provided by Counties/WLSSD.

Table 3-4: Regional Solid Waste Summary

County	2020 MSW Generated (Tons)[a]	2030 Projected MSW Generation (Tons)[c]	2020 C&D Waste Generated (Tons)[a]	2030 Projected C&D Waste Generation (Tons)[a]
Aitkin	9,777	7,807	1,352	2,348
Carlton	10,670[b]	12,493[b]	7,498[b]	6,538
Cook	3,065	3,554	1,496	1,950
Itasca	29,194	25,951	3,722	3,856
Koochiching	7,493	6,426	5,612	1,281
Lake	5,759	6,352	1,001	635
St. Louis	53,481	52,043	7,431	7,636
WLSSD	47,689	49,687	40,819	37,595
Region Total	**167,129**	**164,313**	**64,498**	**61,839**

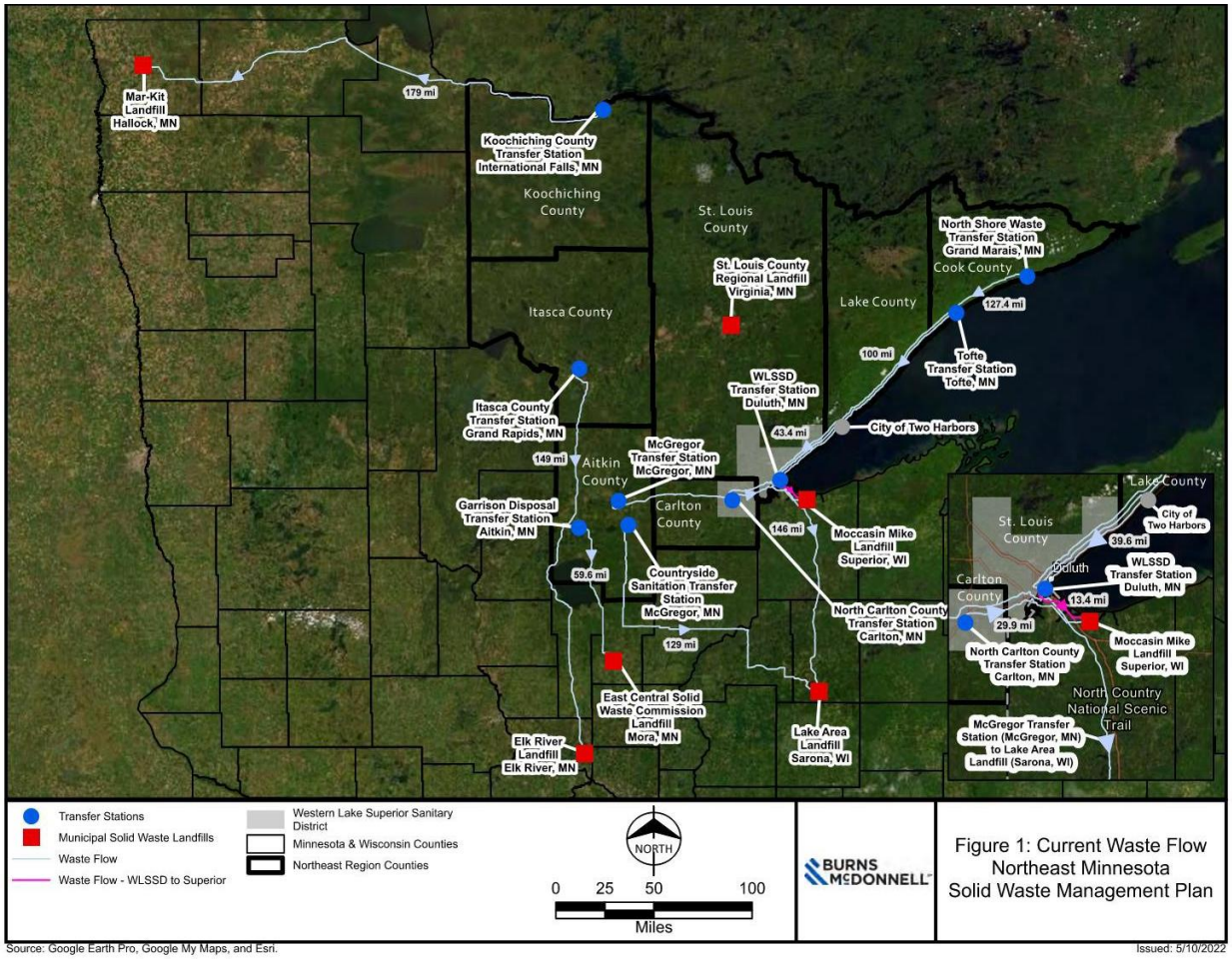
(a) Source: Information provided by Counties/WLSSD.
(b) Represents all waste generated in Carlton County, including the portion of Carlton County within WLSSD boundaries.
(c) Uses forecasted population changes and existing waste diversion programs without program changes.

Based on the above tables, both the on-site disposal and residential vs. commercial estimates vary considerably. Overall, solid waste generation over the 10-year planning period is projected to decline slightly.

3.2 Regional Facilities and Materials Flow

The northeast region provides collection sites and canisters to provide rural residents of the region with access to drop off their solid waste and recyclable materials. Urbanized areas in the region offer curbside collection of solid waste and recycling. There are limited options for yard waste management beyond drop off sites. Several transfer stations in the region serve as a one-stop-shop for problem materials. The regional HHW program operated by WLSSD collects HHW from residents and businesses throughout the northeast region using a mobile unit and is discussed in more detail below. **Figure 3-1** and **Table 3-5** depict the current flow of MSW in the northeast Minnesota region.

Figure 3-1: Current Northeast Minnesota Region Waste Flow



As reflected above, municipal solid waste originating in the northeast region is hauled to a number of landfills for disposal. Excluding St. Louis County generated MSW and small quantities from Lake County hauled to the St. Louis County Landfill, the remainder of the MSW generated within the region is hauled to facilities outside the region for disposal. Small quantities of MSW are hauled to the St. Louis County Regional Landfill from Fall Lake Township in Lake County, via the Northwoods Transfer Station, to reduce hauling distances. WLSSD and Carlton County haul their MSW to the Moccasin Mike

Landfill in Superior, Wisconsin for disposal. Haulers in Lake and Cook counties haul their MSW to the WLSSD Transfer Station in Duluth and WLSSD hauls the MSW to the Superior Landfill for disposal.

Koochiching County hauls its MSW to the Mar-Kit Landfill in Hallock, Minnesota for disposal. Itasca County hauls their MSW to the Elk River Landfill in Elk River, Minnesota for disposal. Aitkin County currently hauls approximately 33-percent of their MSW to the East Central Solid Waste Commission Landfill in Mora, Minnesota, 20-percent to Elk River Landfill in Elk River, Minnesota, and the remaining 47-percent to the Lake Area Landfill in Sarona, Wisconsin.

No MSW is currently hauled to a resource recovery/waste-to-energy facility for management within the region. **Table 3-5** provides the estimated 2020 MSW quantities disposed by Counties/WLSSD and lists the final disposition of these materials.

WLSSD and Carlton County have contracts with the Superior Landfill to deliver MSW. When the WLSSD Solid Waste Transfer Station was built, waste from the Carlton County Transfer Station was transported to the WLSSD facility before final delivery to a land disposal facility, beginning in 1994. The direct delivery of Carlton County waste to the City of Superior Landfill is mutually beneficial, saving wear and tear to the WLSSD Transfer Station and conserves energy and costs.

The City of Superior Landfill serves the City of Superior, Douglas County, and the WLSSD expanded solid waste service area, covering much of northeastern Minnesota. Approximately 125,000 tons of waste was delivered to the landfill in 2019. Banned wastes include hazardous waste, infectious waste, appliances, tires, electronics, and recyclables. The WLSSD disposal contract with the Superior Landfill expires on June 30, 2026.

The Superior Landfill is permitted to accept MSW. Opening in 1976, the Landfill is designed to hold up to 4.4 million cubic yards of material, and is expected to reach capacity in mid-2026. The Landfill takes measures to control environmental impacts by the use of daily cover, controlling litter, leachate collection and methane gas collection. Leachate is pumped to the City of Superior wastewater treatment plant and the methane gas is flared.

Table 3-5: Northeast Region MSW Flow

County	Estimated Quantity Generated for Disposal in 2020 (Tons)	Current Landfill Facilities Being Used
Aitkin	9,777[a]	- East Central Solid Waste Commission Landfill (Mora, MN) - Elk River Landfill (Elk River, MN) - Lake Area Landfill (Sarona, WI)
Carlton	10,670[a]	-Superior Landfill (Superior, WI)
Cook	3,065[a]	-Superior Landfill (Superior, WI)
Itasca	29,194[a]	-Elk River Landfill (Elk River, MN)
Koochiching	7,493[a,b]	-Mar-Kit Landfill (Hallock, MN) -St. Louis County Regional Landfill (Virginia, MN)
Lake	5,759[a,c]	-Superior Landfill (Superior, WI) -St. Louis County Regional Landfill (Virginia, MN)
St. Louis	53,481[a]	-St. Louis County Regional Landfill (Virginia, MN)
WLSSD	47,689[a]	-Superior Landfill (Superior, WI)
Region Total	**167,128[d]**	- -
Total to Superior Landfill (Carlton, Cook, Lake, and WLSSD)	**67,183[d]**	- -

(a) Derived from Goal Volume Table data provided by MPCA and confirmed via County provided data.
(b) Nearly all MSW transported to Mar-Kit Landfill; one township goes to St. Louis County Regional Landfill.
(c) Nearly all MSW generated transported to Superior Landfill; Fall Lake Township goes to St. Louis County Regional Landfill.
(d) Includes all waste generated within Carlton County, including the portion of Carlton County within WLSSD boundaries.

As reflected above, the northeast region disposed of an estimated 167,000 tons in 2020, which translates into approximately 450 tons per day of MSW. An estimated 40-percent of the region's MSW was disposed at the Superior Landfill in Superior, Wisconsin, while 32-percent of the region's MSW was disposed at the St. Louis County Landfill, with the remainder being disposed at other landfills outside the region.

3.3 Recycling

Residential recyclable materials are collected through curbside and/or drop-off throughout the region, as shown in **Figure 3-2** and **Table 3-6**. For the purposes of **Figure 3-2**, "Recycling" refers to any site that stores, processes, or transfers recycling materials. The list of recyclable materials covers at least four major categories per Minnesota Statute 115A.552. Many municipalities in the region through ordinance or contract require haulers to collect residential recyclable materials via curbside. Typically, the remaining unincorporated areas of the Counties/WLSSD offer collection of source-separated materials via drop-offs, to meet the requirements of Minnesota Statue 115A.555. St. Louis County provides the only public residential materials processing facility within the region at its waste management facility located in

Virginia. Since 1998, St. Louis County has contracted with private service providers to operate the County's recycled materials processing facility near the Regional Landfill in Virginia. The facility was built in 2000 and has the capacity to process up to 12,000 tons of recyclables per year. Some of the public and private transfer stations located in the region provide very limited recyclable materials separation and processing before materials are hauled for recovery and/or sale to end markets. Waste Management and Hartel's Disposal, located within the WLSSD area, offer single stream residential curbside recyclable materials collection, consolidate the materials at local transfer facilities, and long haul the materials to a processing facility in the Twin Cities for recovery and marketing for sale.

Goodwill Industries, in partnership with the State and regional solid waste authorities including WLSSD, St. Louis County and Carlton County has initiated a sustainable mattress recycling program. Mattresses are delivered to Goodwill from local retailers, counties, universities and the lodging industry. The mattresses are subsequently deconstructed by Goodwill and the separated materials are marketed to recyclers.

Table 3-6: Cities with Curbside Recycling

County	Cities with Curbside Recycling
Aitkin	Aitkin City, Hill City
Carlton	Cities and Townships within the WLSSD – Major cities include Cloquet, Scanlon, Carlton, and Esko
Cook	None
Itasca	Cities of Grand Rapids, Coleraine, La Prairie, Calumet, Nashwauk, Keewatin, Marble, Deer River, Cohasset, and Taconite
Koochiching	International Falls and Rainier (provided by the County once per month, via sign up)
Lake	Offered County-wide via ordinance
St. Louis	Eveleth, Mountain Iron, Virginia
WLSSD	Duluth, Proctor, Hermantown, and townships

3.4 Transfer Stations/Drop Sites

Table 3-7: Northeast Region Transfer Stations and Drop Sites

County	Facility	Location	Materials Collected
Aitkin	Aitkin County Recycling Center (operated by WM)	Aitkin	Aluminum cans, OCC, glass containers, plastic #1, 2, 4, 5, newspaper, office paper, magazines, used oil/filters
	McGregor Transfer Station (operated by Countryside Sanitation)	McGregor	Aluminum cans, OCC, glass containers, plastic #1, 2, 4, 5, newspaper, office paper, magazines, used oil/filters
	Garrison Transfer Station (private)	Aitkin	MSW, appliances, scrap metal, C & D
Carlton	North Carlton County Transfer Station	Twin Lakes Township	MSW, C&D, recyclables, appliances, tires, used oil, antifreeze, electronics, brush, yard waste, scrap metal, household hazardous waste, product exchange and reuse
	Staffed Recycling Centers	Barnum, Moose Lake, Carlton, Perch Lake Township, Esko	Aluminum cans, glass, mixed paper, magazines, plastic, tin cans, cardboard
	Unstaffed Recycling Centers	Blackhoof, Holyoke, Kettle River, Mahtowa, Cromwell, Wright	Aluminum cans, glass, newspaper, plastic, tin cans
	Nordstrom's Sanitation Transfer Station (private)	Moose Lake	MSW, white goods, C&D, tires, mattresses, newspaper, office paper, OCC, food cans, magazines, phone books, oil, aluminum cans
Cook	Cook County Recycling Center	Grand Marais	Glass, cardboard, magazines, newspaper, mixed paper, aluminum, steel, tin, plastic, oil filters, motor oil, budget shop for reusable items
	Tofte Transfer Station	Tofte	MSW, recycling
	North Shore Waste Transfer Station (private)	Grand Marais	MSW, electronics, tires, C&D. No yard waste or HHW
	Rural Drops	Lutsen, Grand Portage, Poplar Haus, Voyageur Canoe Outfitters	Recyclables
Itasca	Itasca Co. Transfer Station & Recycling Center (operated by WM)	Cohasset	MSW, ferrous and aluminum cans, OCC, glass containers, plastic #1, 2, 4, 5, newspaper, office paper, magazines, C&D, HHW, bulky items
	12 canister sites	Bass Lake, Bigfork, Bray Lake, Deer River, Goodland, Iron Range, Long Lake, Sago, Spring Lake, Squaw Lake, Sunrise, Suomi	The above materials, except C&D.
Koochiching	Koochiching County Transfer Station	International Falls	MSW, office paper, newsprint, magazines, #1 and 2 plastics, aluminum/tin cans, tires, appliances, TVs, scrap metal, OCC, glass bottle
	6 manned canister sites	Big Falls, Birchdale, Littlefork, Loman, Mizpah, Ray, Silverdale	All above materials except glass. Silverdale site is MSW only.
	3 recycling trailers		All above materials, except glass

Table 3-7 (Continued): Northeast Region Transfer Stations and Drop Sites

County	Facility	Location	Materials Collected
Lake	Lake County Recycling Center (operated by Knife River DAC)	Two Harbors	Glass, plastic containers, aluminum cans and foil, magazines, mixed/office paper, newspaper, cardboard, used motor oil and filters
	2 recycling trailers (Thelma and Louise)	Travels to event around the County such as St. Urho's Parade, Grandma's Marathon, Two Harbors 4th of July, Heritage Days, Bay Days, Lake County Fair, etc.	Recyclables
	Fall Lake Canister Site	Fall Lake Township	MSW, recyclables listed above
	John's Sanitary	Silver Bay	Recyclables
St. Louis	Brookston Transfer Station	Brookston	MSW, appliances, scrap metal, recyclable materials, electronics, mattresses and box springs, used oil and filters, anti-freeze, fluorescent tubes, vehicle batteries, demo material, yard waste
	Cook Transfer Station	Cook	All of the above
	Hibbing Transfer Station	Hibbing	All of the above
	Hudson Transfer Station	Aurora	All of the above
	Northwoods Transfer Station	Ely	All of the above
	15 canister sites	Various	MSW, recyclables, appliances, fluorescent tubes, waste oil, demo, scrap metal, tires, and yard waste
	St. Louis County Landfill and Recycling	Virginia	Recyclables, appliances, fluorescent tubes, waste oil, demo, scrap metal, tires, and yard waste
WLSSD	WLSSD Materials Recovery Center (MRC)	Rice Lake Township	Brush, dimensional lumber, mattresses, scrap metal, recyclables, electronics, appliances, tires, batteries, fluorescent lightbulbs, misc. mixed waste, reuse area for items such as furniture, books, bikes, lawnmowers, and building materials.
	WLSSD Transfer Station	Duluth	Open to licensed haulers only to deliver MSW collected within the WLSSD service area, in addition to Lake and Cook County, and Commercial MSW from Douglas County, WI
	Staffed rural recycling drop-off facilities	Canosia, Duluth Township, North Star, Grand Lake, Solway, Lakewood, Fredenberg, Midway, City of Rice Lake	Recyclables
	WLSSD Organics/Yard Waste Composting Facility	Duluth	Grass clippings, leaves, brush, holiday trees, food waste

3.5 Household Hazardous Waste (HHW)

WLSSD supports event collections and transports materials to its HHW facility (2626 Courtland St., Duluth) with the northeast region counties. The counties of the northeast region participate in the Very Small Quantity Generators (VSQG) collection program in cooperation with the MPCA and WLSSD. Each county distributes educational information including print, broadcast, community forums, presentations, and displays at events. Several counties—including Carlton, Itasca, St. Louis, and WLSSD, have a free product exchange area for residents. **Table 3-8** describes the HHW programs within the northeast region.

Table 3-8: Northeast Region HHW Programs

County	HHW Collection	Cost
Aitkin	One mobile event for citizens; One mobile event for businesses	No cost to citizens
Carlton	Facility at North Carlton County Transfer Station open May - October on Saturdays	No cost to citizens, businesses use WLSSD Clean Shop
Cook	Facility at Cook County Recycling Center and annual events with WLSSD	No cost to County residents
Itasca	Facility at County Transfer Station two days/month spring – fall, one day/month in the winter or by appointment and facilitated by WLSSD staff	No cost to County residents
Koochiching	Bi-annual collection by WLSSD at International Falls Transfer Station, annual mobile collection events at five other locations	No cost to citizens, fees apply to businesses registered under Clean Shop
Lake	Facility at Lake County Recycling Center open Wednesdays from May-September	No cost to County residents
St. Louis	Facilities at Virginia Landfill and Hibbing Transfer Station provide year round collection, HHW collection events in remote areas, access to WLSSD facility via contract. VSQG by appointment only, collections at county and township facilities	Fee for VSQG collection in cooperation with WLSSD and B_CLEAN
WLSSD	Facility located on Courtland Street open year round, sponsor and mobile collections in NE region, Clean Shop business assistance and mobile collections, Product Reuse Center, Medicine Cabinet Clean-out events	No cost to citizens, fees apply to businesses registered under Clean Shop

The WLSSD HHW program keeps thousands of pounds of paint, mercury and other potentially toxic products out of our waters, landfills and the environment. Currently, WLSSD makes use of State of Minnesota contracts for affordable disposal, helping to financially sustain its programs. Reducing residential and business use of toxic materials continues to be the best approach to preventing pollution and is a cornerstone of WLSSD public education campaigns. The WLSSD HHW program consists of several components:

- HHW Facility – operations, northeast Minnesota region sponsor and mobile seasonal collections in the northeast region;
- Clean Shop – operations, business assistance and mobile seasonal collections in the northeast region;
- Product Reuse Center;
- Collection of unwanted pharmaceuticals through its Medicine Cabinet Cleanout collection events

A permanent HHW facility was constructed in 1994 adjacent to WLSSD's regional wastewater treatment plant. This permanent facility has seen several improvements since that time. The WLSSD operates the HHW Facility and sponsors the MPCA's Regional HHW Program for the seven-county northeastern Minnesota region. There are five county-operated collection facilities located in St. Louis (2), Carlton, Lake and Itasca counties (with a hazardous waste storage shed in Cook) in addition to the main facility at WLSSD. The WLSSD owns and operates a mobile collection unit used to stage household and business hazardous waste collections in the counties. The WLSSD staffs all event collections and provides technical support to county-operated local facilities.

Accepted materials include pesticides, cleaning solvents, mercury-bearing products, paints, hobby chemicals, wood preservatives, fluorescent lamps, aerosol products and more. Motor oil, oil filters, antifreeze, and other vehicle fluids are accepted from the public at the HHW Facility. An oil tank is available for self-service during the hours the HHW Facility is open. Commercial generators are referred to vendors for disposal of oil, filters, antifreeze, and automotive fluids. The WLSSD HHW Facility accepts all types of batteries from households. Residents are advised to place alkaline batteries in the trash. All other batteries are recycled with various vendors. The WLSSD provides disposal information for materials not accepted at the facility. Residents are responsible for keeping HHW out of their garbage and transporting it to the HHW Facility.

WLSSD operates the Clean Shop, a collection program for Very Small Quantity Generators (VSQGs generate less than 220 pounds of hazardous waste per month) of hazardous waste. The Clean Shop is a program designed to help businesses with small amounts of hazardous waste manage it properly, easily and affordably. The program's objective is to eliminate hazardous materials from the region's waste stream by providing disposal services and technical assistance for VSQGs. The program can also accept up to 2,200 pounds in a one-time clean out from businesses, which no longer generate hazardous waste. Services are available locally by appointment. WLSSD also provides residential and VSQG hazardous waste collection services to the seven counties in the northeastern Minnesota region through a regional contract, providing staff and a mobile collection truck. The mobile collections enable counties without regular collection facilities to hold seasonal collection events for residents and businesses. Participating businesses may also dispose of universal wastes (also known as "over-the-counter" wastes) on a first come, first serve basis (no appointment necessary) when the HHW Facility is open to the general public. WLSSD operates its Product Reuse Center in conjunction with the HHW collection program in the WLSSD regional facility. As unwanted materials are brought to the facility by residents and businesses, they are evaluated by staff and sorted according to best use: reuse, recycling or disposal. Materials placed for reuse in this facility are governed by the requirements established in the HHW program and state

agency contract, Minnesota Department of Agriculture recommendations, Minnesota Criminal Code, Stat. § 609.684, and the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA) [Minn. Stat. § 18B.30 and 18B.07].

Safe and usable products are available free-of-charge, reducing the amount of usable materials wasted. Unsafe and unusable waste is processed for shipping to the proper disposal and recycling sites. Product reuse areas are also set up at mobile collection events. The Product Reuse Center furthers WLSSD's goals of pollution prevention and waste reduction by offering a safe and legal alternative to disposing of hazardous items in the trash or down the drain. Waste is prevented by making smaller amounts of these materials available for residents at no charge.

Staff continues to locally source vendors for more efficient management of recyclable materials (such as empty compressed gas cylinders) and supplies used for handling the hazardous wastes (like pallets and closed head 55-gallon steel drums). Utilization of the Product Reuse Center is on the rise, as a result of increased product availability and promotion of the facility. WLSSD offers residents two safe and legal options to dispose of unwanted medications: Medicine Cabinet Cleanout events and the Take it to the Box drop box program. These programs are supplemented by additional collection efforts taking place at local pharmacies.

Medicine Cabinet Cleanout events provide residents with a free, safe and confidential drive-through option for disposing of unwanted medications. Medicine Cabinet Cleanout events are a community effort aimed at preventing accidental poisonings, diversion of medicines for illicit purposes and the introduction of pharmaceuticals into local waterways via improper disposal down the drain or toilet.

The Take it to the Box medication disposal program is a partnership with local law enforcement offering safe, free and anonymous disposal of unwanted medicines. Residents drop unwanted medicines in secure, monitored drop boxes located within law enforcement facilities. Collected medicines are incinerated at a permitted facility. WLSSD coordinates promotion of the boxes, provides technical support for the law enforcement agencies and pays for ultimate disposal.

Through its HHW program and very small quantity generator (VSQG) program, WLSSD collects architectural paint and utilizes the State of Minnesota contractor to manage and transport paint materials collected from the public in the northeast region. The counties in the northeast region and across the state have an agreement with PaintCare, a "stewardship organization", appointed by "producers" of Architectural Paint in compliance with MN statue that provides reimbursement to the counties for the proper management of Architectural Paint while also incentivising reuse efforts as a best management practice.

3.6 Yard Waste

Several Counties (Carlton, Cook, Itasca, Lake, St. Louis and WLSSD) within the region encourage residents to manage yard waste through backyard composting and mulching with a lawnmower. Otherwise, **Table 3-9** describes the yard waste programs within the northeast region.

Table 3-9: Northeast Region Yard Waste Programs

County	Drop Site Location	Finished Product
Aitkin	McGregor, Shamrock Township, Oak Ridge Demo Landfill	Compost available to residents at no cost
Carlton	North Carlton County Transfer Station, Moose Lake Compost Site, City of Carlton Compost Site, City of Cloquet Compost Site, WLSSD, Christmas tree recycling via Sappi Paper	Compost available for a cost at WLSSD
Cook	Cross River Pit, Big Bay Point Pit, Ball Club Road Pit, Pike Lake Pit, Caribou Lake Pit, East Bearskin Pit (with permit), Cook County Recycling Center (grass clippings only)	Compost available to residents at no cost to residents
Itasca	Itasca County Transfer Station, City of Grand Rapids, City of Keewatin, WM curbside	Compost available to residents at no cost
Koochiching	Koochiching County Transfer Station and sites in Littlefork, Big Falls, and Mizpah	Compost beneficially used as final cover at demo site and county landscape projects
Lake	Lake County Demolition Landfill, Two Harbors facility for residents only, Fall Lake Transfer Station, Silver Bay	Chipped and used as C&D landfill cover material
St. Louis	St. Louis County Landfill, Brookston Transfer Station, Cook Transfer Station, Hudson Transfer Station, Northwoods Transfer Station, County Highway 77 Site, Soudan Site, other township and city sites and collection services throughout the year	Compost available to residents free of charge
WLSSD	WLSSD Yard Waste Compost Site (spring through fall), Materials Recovery Center, Holiday tree collection (2-4 week duration)	Garden Green® Compost (meets standards for Class 1 compost) available for a cost

3.7 Source Separated Organic Materials (SSOM)

In 2001, WLSSD began operating a source separated organic material (SSOM) composting facility, with construction funded through a grant from the MN Office of Environmental Assistance. The facility is permitted to process 60 tons/day of material (16,000 tons/year), including 40 tons/day of SSOM and 20 tons/day of yard waste. In 2010, significant investments were made to the facility with the construction of a 200'x300' concrete pad to improve operations and stormwater/leachate management. The WLSSD Board of Directors has adopted a $0 tip fee for source-separated organic materials generated to encourage both in-District and out-of-District participation in the organics program.

The WLSSD Solid Waste Ordinance, initially adopted in 2006, required certain types of commercial and institutional entities within the St. Louis and Carlton County portion of the WLSSD to source-separate pre-consumer organic material. Since then, additional updates to the Ordinance have broadened the categories of entities who must comply with the requirements. At present, about 160 commercial establishments participate, yielding approximately 2,200 tons of SSOM annually.

WLSSD manages six residential food waste drop site locations throughout the community in addition to locations at the WLSSD Materials Recovery Center, and Household Hazardous Waste Facility, and Yard Waste Compost Site. Waste from these drop sites are collected by a local hauler and transported to the WLSSD SSOM facility for processing. These drop sites generate about 150 tons or more each year that would otherwise remain in the waste stream and end up in the landfill. In 2021, WLSSD processed 2,156 tons of food waste at the facility while in 2022 a total of 1,837 tons were processed.

3.8 Construction and Demolition (C&D) Debris Management

The Counties/WLSSD have a goal of minimizing the amount of construction and demolition debris that required land disposal. The Counties/WLSSD continue to encourage reuse, material recovery and recycling programs that reduce the amount of construction and demolition debris requiring land disposal. These programs include education regarding the reuse and recycling of recoverable materials to reduce the amount of material deposition in landfills. Efforts to enforce ordinance policies regarding the proper separation of recyclable materials are also in place in parts of the region. **Table 3-10** provides detail on C & D material management locations within the region.

Table 3-10: Northeast Region C & D Debris Management

Location	City/County
Businesses	
Garrison Disposal	Aitkin, Aitkin County
Countryside Sanitation	Aitkin, Aitkin County
North Shore Waste	Grand Marais, Cook County
Core Advantage	Superior, WI, Douglas County
Cloquet Shamrock Landfill – SKB Environmental	Cloquet, Carlton County
Trout Demolition Landfill	Grand Rapids, Itasca County
DEM-CON dba General Waste	Keewatin, Itasca County
Demolicious	Duluth, MN, WLSSD
Duluth Superior Landfill, LLC	Superior, WI, Douglas County
Normandy Roll-Off & Disposal	Duluth, MN, WLSSD
Vonco V Landfill (Veit)	Duluth, MN, WLSSD
Waste Management Canyon (Voyageur) Landfill	Canyon, MN, St. Louis County
Transfer Stations	
McGregor Transfer Station	McGregor, MN, Aitkin County
Tofte Transfers Station	Tofte, MN, Cook County
Koochiching County Transfer Station (SW550)	International Falls, Koochiching County
Brookston Transfer Station	Brookston, St. Louis County
Cook Transfer Station	Cook, St. Louis County
Northwoods Transfer Station	Ely, St. Louis County
Hudson Transfer Station	Aurora, St. Louis County
Hibbing Transfer Station	Hibbing, St. Louis County
WLSSD Materials Recovery Center	Duluth, MN, WLSSD
WLSSD Transfer Station	Duluth, MN, WLSSD
Canister Sites	
Bray Lake	Itasca County
Spring Lake	Itasca County
French	St. Louis County
Highway #77	St. Louis County
Soudan	St. Louis County
Portage	St. Louis County
Birchdale	Koochiching County
Big Falls	Koochiching County
Littlefork	Koochiching County
Loman	Koochiching County
Mizpah	Koochiching County
Ray	Koochiching County
Silverdale	Koochiching County
County Landfills	
Itasca County Demolition Landfill (SW-448)	Cohasset, Itasca County
Big Falls Demolition Landfill (SW-450)	Big Falls, Koochiching County
Lake County Demolition Landfill (SW-398)	Silver Creek Township, Lake County
St. Louis County Regional Landfill	Virginia, St. Louis County

3.9 Closed Landfills

The Minnesota Pollution Control Agency (MPCA) Closed Landfill Program (CLP) exists to maintain certain mixed municipal waste landfills in the state over the long-term. Once landfills are enrolled in the CLP, the MPCA is responsible for their long-term care. The MPCA contracts with businesses to perform many services, including mowing, sampling and analysis, operating gas and groundwater treatment systems, and leachate collection and disposal. The current closed landfills in the northeast region are shown below in **Table 3-11**.

Table 3-11: Northeast Region Closed Landfill Sites

County	Landfill Name	Year Closed	Closed Landfill Program
Aitkin	Aitkin Area Sanitary Landfill (SW-145)	1990	Converted to SW-541
	Waste Management Oak Ridge Landfill (C&D)	2020	2030
Carlton	North Carlton County Landfill (SW-102)	1994	1997
	South Carlton County Landfill (SW-253)	1990	1996
Cook	Cook County Sanitary Landfill (SW-294)	1999	2002
Itasca	Bray Lake Demolition Landfill (SW-495)	2011	Converted to PBR
	Spring Lake Demolition Landfill (SW-494)	2011	Converted to PBR
	Grand Rapids Area Landfill	---	1996
	Iron Range Landfill	---	1996
Koochiching	Northome Landfill (SW-225)	---	1995
	Landfill near International Falls (SW-191)	---	1995
Lake	Lake County Castle Danger Sanitary Landfill (SW-140)	1990	1996
St. Louis	16 landfills	---	1996
WLSSD	Rice Lake MSW Landfill (SW-232)	1994	2001

3.10 County/WLSSD Policies and Goals

The Counties/WLSSD endorse Minnesota Statutes 115A.55, 115A.5501, and 115A.5502 which address and encourage waste reduction at its source through waste education programs, promotion of waste reduction, technical and financial assistance to solid waste generators, and reduction of packaging. The specific policies and goals for each of the Counties/WLSSD are further described in **Table 3-12**.

Table 3-12: Northeast Region Solid Waste Policies and Goals

County	Policy and Goals
Aitkin	Maintain and expand opportunities for waste reduction, recycling and reuse. Increase the amount funding and staff with cooperation from legislature, region, and private sector
Carlton	Maintain and expand existing cost-effective solid waste management programs, maximize waste reduction and reuse, education, recycling, create opportunities for cost-effective organics composting, reduce hazardous components, minimize MSW that must be landfilled.
Cook	Ensure viable outlets for waste materials, expand programs, increase levels of public information, education, and awareness, to work with waste haulers and support efforts of curbside recycling in Grand Marais, evaluate expansion of yard waste and source separated organics composting, and e-waste
Itasca	Goals outlined by the State which is to foster an integrated waste management system in a manner appropriate to the characteristics of the waste stream and thereby protect the State's land, air, water, and other natural resources and the public health.
Koochiching	Source separation efforts for waste mitigation and reduction (increased fees for unwillingness to separate, as per Mixed Load Policy), recycling efforts for some waste accepted at demo landfill, after hours policy prohibiting disposal outside of posted hours
Lake	Ensure viable outlets for waste materials via joint cooperation with private enterprises, enforcement of the Lake County Solid Waste Ordinance
St. Louis	Continue to provide outreach and implement collection of additional recyclable materials, consider a reasonable range of resource recovery options,
WLSSD	Reduce toxicity in waste generated, coordinate solid waste management among political subdivisions, reduce indiscriminate dependence on disposal of waste, separate and recover materials and energy from waste, and orderly and deliberate development and financial security of waste facilities including disposal facilities.

3.11 Tribal Information

The Fond du Lac Band of Lake Superior Chippewa Reservation lies in Northeastern Minnesota adjacent to the city of Cloquet, Minnesota, approximately 20 miles west of Duluth. The Fond du Lac Reservation, established by the LaPointe Treaty of 1854, is one of six Reservations inhabited by members of the Minnesota Chippewa Tribe.

The Fond du Lac Band (Band) operates a Solid Waste Transfer Station located at 36 University Drive, Cloquet, MN. Band members are not charged for use of the transfer station. The Band uses two pick-up trucks with 6-foot boxes for curbside collection for band members unable to transport their refuse.

Waste Management currently has a contract with the Band to haul refuse to the Carlton County Transfer Station or directly to the Superior Landfill in Superior, WI. The Band does not have a curbside recycling program, but does accept cardboard, aluminum, plastic, appliances, electronics, mattresses, metals, batteries, and HHW for recycling and disposal as necessary at their transfer station.

The Band works in partnership with the Carlton County and St. Louis County Transfer stations, as well as the local area waste collection vendors. **Table 3-13** summarizes the Fond du Lac Band solid waste budgets between 2018 and 2020.

Table 3-13: Fond du Lac Band Solid Waste Budgets

Year	Actuals
2018	$759,959
2019	$894,821
2020	$677,109

The Grand Portage Reservation is located in Cook County in the extreme northeast corner of Minnesota, approximately 150 miles from Duluth. It is bordered on the north by Canada, on the south and east by Lake Superior and on the west by Grand Portage State Forest.

The Grand Portage Band (Band) owns a transfer station in Grand portage that accepts household waste, HHW, and various recyclables (cardboard, aluminum, plastic, paper, tin, and glass), as well as mattresses. Household waste within the Band is picked up from the transfer station and brought to the WLSSD. Recyclables are collected in county trailers and picked up by the county recycling center. The Band uses one C&D landfill, and partners with Cook County on some waste issues. Costs to operate and maintain

the Grand Portage Band's solid waste and recycling system include two part time positions plus waste hauler costs, electricity, and propane.

The Bois Forte Band of Chippewa is located in northern Minnesota, approximately 60 miles south and west of International Falls, Minnesota. The Bois forte Band instituted curbside collection of MSW and recycling for their residents in 2011, this material is brought to the St. Louis County Material Recovery Facility (MRF).

3.12 Solid Waste Budgets

Table 3-14 summarizes each County/WLSSD's reported (unaudited) solid waste program expenses for their respective solid waste program between 2018 and 2020.

Table 3-14: Northeast Region Solid Waste Program Expenses

County	2018[a]	2019[a]	2020[a]
Aitkin	$260,360	$311,171	$289,878
Carlton	$1,678,892	$1,736,217	$1,795,420
Cook	$498,510	$548,449	$615,268
Itasca	$1,815,473	$2,404,394	$2,237,751
Koochiching	$1,207,569	$1,308,864	$1,618,198
Lake	$244,534	$248,957	$300,744
St. Louis	$10,712,478	$8,184,499	$8,051,132
WLSSD	$2,719,809	$2,866,246	$2,880,343

Source: Information provided by Counties/WLSSD.
(a) May not include all program expenses.

3.13 Summary of Achievements, Opportunities, Challenges, and Problems

3.13.1 Market and Economic Conditions

One of the most significant challenges within the northeast Minnesota existing regional solid waste management system is transportation and hauling distance. St. Louis County, Minnesota's largest county by geographic size, provides canister sites throughout the County to facilitate collection and transfer of MSW to its MSW landfill centrally located in Virginia. WLSSD, more densely populated, provides a transfer station centrally located in Duluth for the consolidation of MSW for hauling to the Superior Landfill. The other counties in the region also use drop-offs and transfer stations to consolidate MSW. However, these counties long haul materials up to 180 miles one-way for disposal.

As for traditional curbside collected recyclable materials, the predominant approach is to consolidate and long haul the materials to the Twin Cities Metropolitan Area or out-of-state for additional processing and/or sale to end markets. The exception would be St. Louis and Lake Counties, which process the collected recyclable materials at their own materials recovery facilities. Overall, the lack of adequate materials processing capacity and regional end markets within the northeast Region results in challenging economic conditions for materials recovery.

3.13.2 Availability of Resource Recovery Programs or Facilities

There are no available resource recovery programs or facilities in the northeast Minnesota region since WLSSD ceased its processing of solid waste into refuse derived fuel to incinerate biosolids in 1999.

3.13.3 Availability of Local and State Funding Resources

This regional solid waste management plan was funded by the Counties/WLSSD and, in part, by the MPCA. Based on regional stakeholder meetings, there is a consensus that significant funding directed from the State of Minnesota to the northeast Minnesota region is needed to overcome key barriers to provide for the long-term success of the regional solid waste system, programs, and services.

4.0 ALTERNATIVES ANALYSIS

4.1 Current Regional Program Cooperation

There are two current programs/service areas where regional collaboration between the Counties/WLSSD has been very successful. First, household hazardous waste management programs offer individual county drop-off locations and/or collection events. The WLSSD provides support for each of the County programs including educational resources, technical assistance, access to a product reuse center, and transport of the materials to the WLSSD regional HHW facility for consolidation and final disposition via a state of Minnesota hazardous waste management contractor. This program has been very effective offering comprehensive services throughout the region with consistent program costs. Second, the WLSSD facilitates regional MSW disposal. It operates a transfer station in Duluth to consolidate MSW for disposal originating not only from within WLSSD, but also from Lake County, Cook County, and the City of Superior. WLSSD has a competitively procured agreement with the Superior Landfill located in Superior, Wisconsin for the disposal of MSW from the entities listed above. Moreover, WLSSD works collaboratively with these counties and Carlton County on several other solid waste programs. **Section 14.1** provides a description of the comprehensive regional stakeholder engagement process used to initiate the regional planning process and identify regional barriers and opportunities. One of the most critical barriers impacting materials diversion programs and cost-effective disposal are hauling distances. As a result, a detailed transportation analysis was conducted to compare hauling distances, costs, and greenhouse gas (GHG) emissions for alternative disposal locations for the various participating Counties/WLSSD.

4.2 Transportation Analysis

The participating Counties/WLSSD currently use multiple solid waste landfills for disposal as depicted in **Figure 3-1**. The costs for disposal vary considerably depending on the specific facility tipping fees and the distance the waste materials are hauled for disposal. The participating Counties/WLSSD propose to cooperate to develop MSW landfill disposal capacity within the region. Potential locations include the existing MSW-permitted St. Louis County Regional Landfill near Virginia for intermediate-term MSW disposal (20 years beginning in 2026-27), and General Waste and Recycling industrial landfill near Keewatin and the St. Louis County proposed comprehensive solid waste management campus, which includes an MSW landfill located in Canyon for long-term MSW disposal capacity. It should be noted the General Waste and Recycling industrial landfill and the St. Louis County proposed comprehensive solid waste management campus locations do not represent the only potential locations in the northeast Region where an MSW landfill could be considered. These locations were used solely for this analysis.

4.2.1 Methodology

To quantify the benefits of the region moving forward with proposed MSW landfills in Keewatin and Canyon, a transportation analysis was performed for the northeast Minnesota region to characterize the one-way hauling distance, cost per ton benefits, estimated reduction in fuel usage, GHG reductions, and total fuel costs savings associated with the proposed system. A quantitative model was developed that incorporated the following key parameters as inputs:

- Hauling distance from each transfer station in the region to the current landfills the Counties/WLSSD in the region are hauling MSW*
- Hauling distance to the proposed Keewatin landfill for Aitkin, Itasca, and Koochiching counties*
- Hauling distance to the Virginia Regional Landfill and the proposed Canyon landfill for Carlton, Cook, and Lake Counties, and the WLSSD*
- Annual MSW tonnage for each County/WLSSD (based on 2020 data)
- Fuel cost (set at $5.00 per gallon diesel)
- Estimated personnel and equipment costs for hauling MSW for the respective Counties/WLSSD

* It was assumed that the route taken from each transfer station to its respective landfill was the route identified via Google Maps when entering the addresses of the transfer stations and landfills.

Table 4-1 identifies the transfer stations located within the region, the respective landfills each currently hauls MSW, and the designated landfill each would haul MSW under the proposed system. The proposed landfills represent potential locations for new MSW landfills based on preliminary discussion with the participating Counties/WLSSD. It was assumed St. Louis County will continue to dispose of MSW at its landfill in Virginia, therefore St. Louis County was excluded from the transportation analysis.

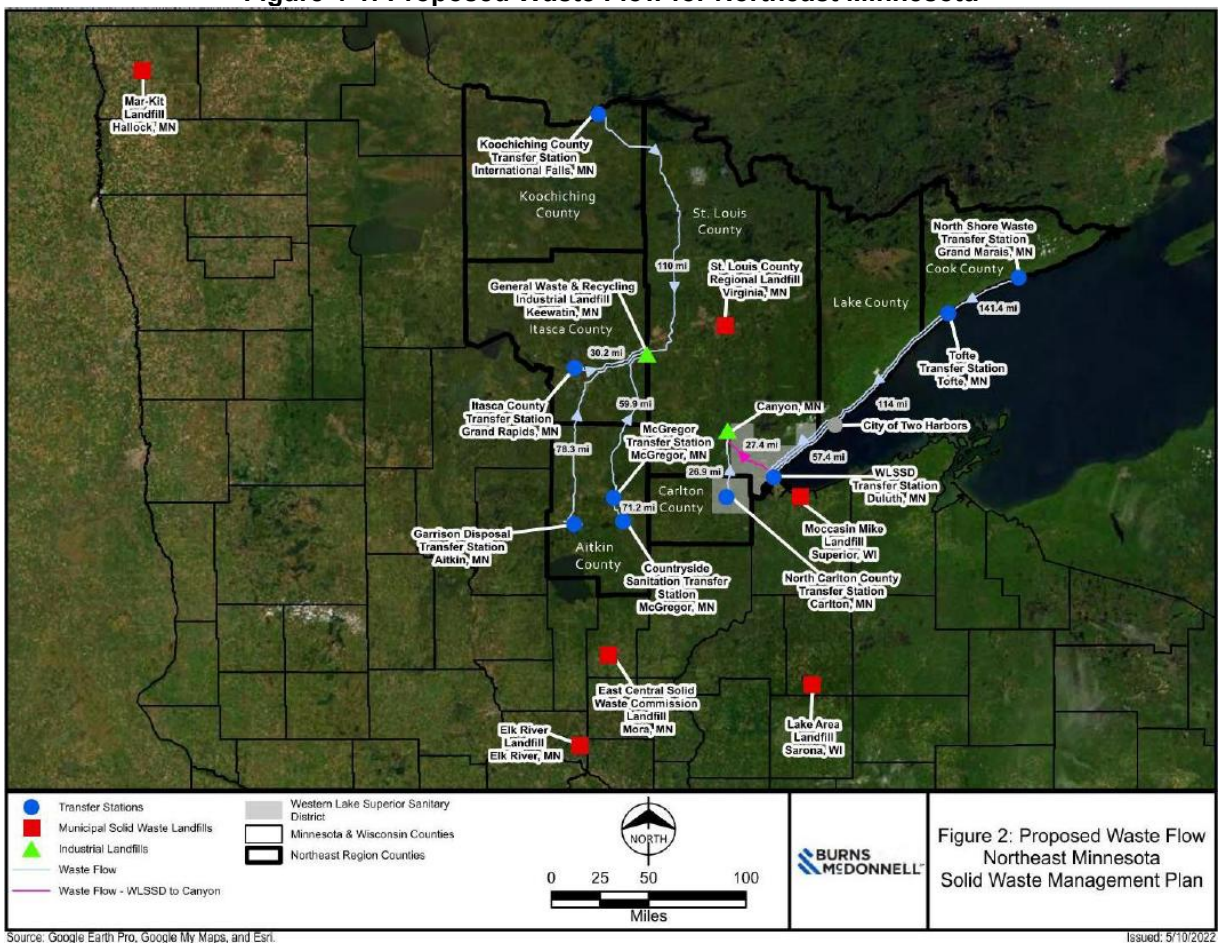
Table 4-1: Current and Proposed Landfills for Each Transfer Station

County	Transfer Station	Current Landfill	Proposed Landfill[b]
Aitkin	Garrison Transfer Station	East Central	Keewatin
	McGregor Transfer Station	Sarona	Keewatin
	Countryside Transfer Station	Sarona	Keewatin
Carlton	North Carlton Transfer Station	Superior	Canyon
Cook	Tofte Transfer Station	Superior	Canyon
	North Shore Transfer Station	Superior	Canyon
Itasca	Itasca County Transfer Station	Elk River	Keewatin
Koochiching	Koochiching County Transfer Station	Mar-Kit	Keewatin
Lake	City of Two Harbors[a]	Superior	Canyon
WLSSD	WLSSD Transfer Station	Superior	Canyon

(a) Because Lake County does not have a transfer station, hauling distances were calculated from the City of Two Harbors.
(b) Proposed Landfills represent potential locations for new MSW landfills based on preliminary discussion with the participating Counties/WLSSD.

A map depicting current MSW hauling routes from each transfer station in the region is provided in **Figure 3-1** in **Section 3.2**. A map depicting proposed MSW hauling routes and distances to the Keewatin and Canyon landfills is provided below in **Figure 4-1**.

Figure 4-1: Proposed Waste Flow for Northeast Minnesota



Based on the inputs listed above, the cost per ton, gallons used per year, and annual fuel cost were calculated for each County/WLSSD. The metric tons of CO2 emitted per year was calculated based on the gallons of diesel used per year using the U.S. EPA's conversion, found at https://www.epa.gov/energy/greenhouse-gases-equivalencies-calculator-calculations-and-references. These outputs were then aggregated for the following regions:

- The entire northeast Minnesota region
- Counties in the northeast region that would haul MSW to Keewatin under the proposed system (Aitkin, Itasca, and Koochiching Counties)
- Counties in the northeast region that would haul MSW to Canyon under the proposed system (Carlton, Cook, and Lake Counties, and the WLSSD)
- Counties in the northeast region that would haul MSW to Virginia under the proposed system (Carlton, Cook, and Lake Counties, and the WLSSD)

Using the results of this analysis, a set of summary tables and figures were generated that characterize the one-way hauling distance, cost per ton benefits, estimated reduction in fuel usage, GHG reductions, and total fuel costs savings for the proposed system compared to the current system.

4.2.2 Findings

The results of the analysis for the entire northeast region, the sub region hauling MSW to Keewatin under the proposed system (Aitkin, Itasca, and Koochiching Counties), and the sub region hauling MSW to Canyon under the proposed system (Carlton, Cook, and Lake Counties, and the WLSSD) are summarized in **Table 4-2**, **Table 4-3**, **Table 4-4**, respectively. The region wide annual fuel costs savings is estimated at more than $440,000 and annual GHG reduction is nearly 900 metric tons of carbon dioxide.

Table 4-2: NE MN Transportation Analysis: Region-Wide Totals

Parameter	Current	Proposed (To Keewatin & Canyon)	Reduction
One-Way Haul Distance	976	716	260
Cost per Ton	$36.71	$25.67	$11.04
Gallons Used/Year	217,326	129,180	88,145
Metric Tons of CO_2	2,212	1,315	897
Annual Fuel Cost	**$1,086,628**	**$645,901**	**$440,727**

Table 4-3: NE MN Transportation Analysis: Aitkin, Itasca, & Koochiching Totals

Parameter	Current	Proposed (To Keewatin)	Reduction
One-Way Haul Distance	663	350	313
Cost per Ton	$63.31	$30.67	$32.63
Gallons Used/Year	179,251	75,064	104,187
Metric Tons of CO_2	1,825	764	1,061
Annual Fuel Cost	$896,254	$375,319	$520,934

Table 4-4: NE MN Transportation Analysis: Carlton, Cook, Lake, & WLSSD Totals

Parameter	Current	Proposed (To Canyon)	Reduction
One-Way Haul Distance	314	367	-53
Cost per Ton	$18.32	$22.21	$-3.89
Gallons Used/Year	38,075	54,116	-16,042
Metric Tons of CO_2	388	551	-163
Annual Fuel Cost	$190,374	$270,582	$-80,208

For the sub-region potentially hauling MSW to Keewatin under the proposed system (Aitkin, Itasca, and Koochiching Counties), it is estimated these counties would accrue annual fuel savings of nearly $521,000 and an annual GHG reduction of more than 1,000 metric tons of carbon dioxide. For the sub-region potentially hauling MSW to Canyon under the proposed system (Carlton, Cook, Lake, and WLSSD), it is estimated these counties would accrue a moderate increase in fuel costs and GHG generation. However, **Figure 4-5** characterizes the benefits associated with hauling to Canyon compared to the most likely alternative of hauling MSW to Sarona, Wisconsin, for disposal.

The results of the analysis for one-way haul distance, gallons used per year, and metric tons of CO2 emitted per year are depicted in **Figure 4-2**, **Figure 4-3**, and **Figure 4-4**, respectively.

Figure 4-2: NE MN Transportation Analysis: Current vs. Proposed One-Way Haul Distance

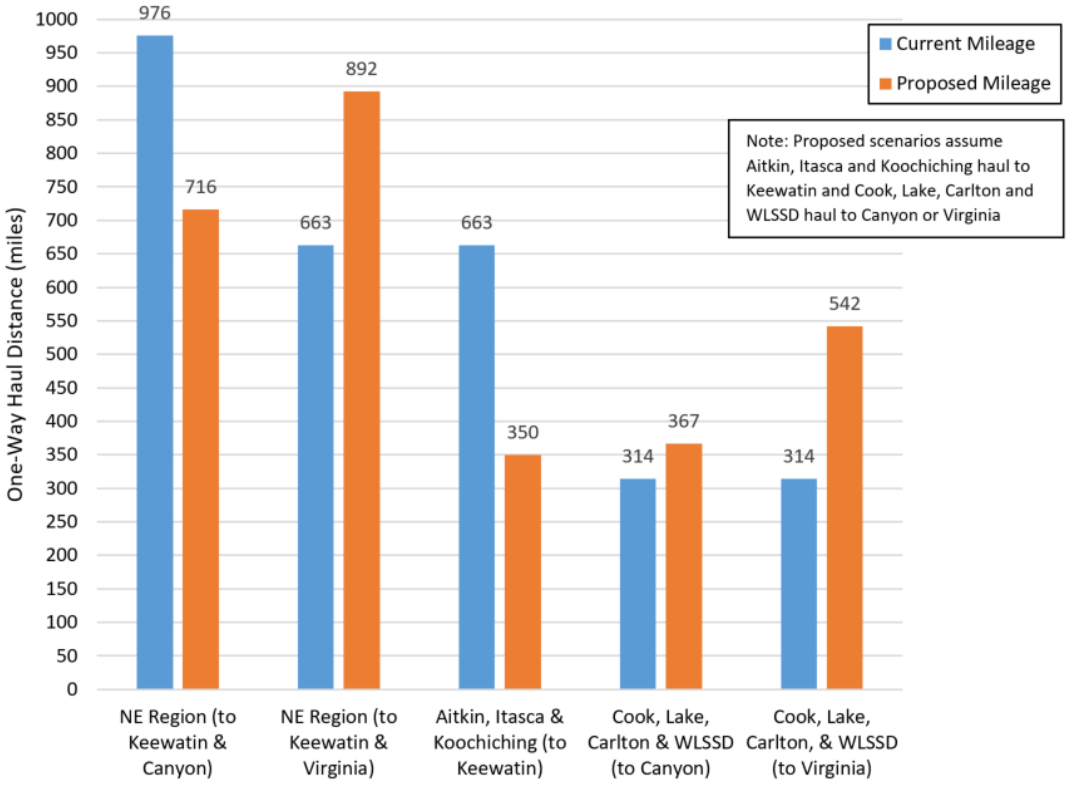
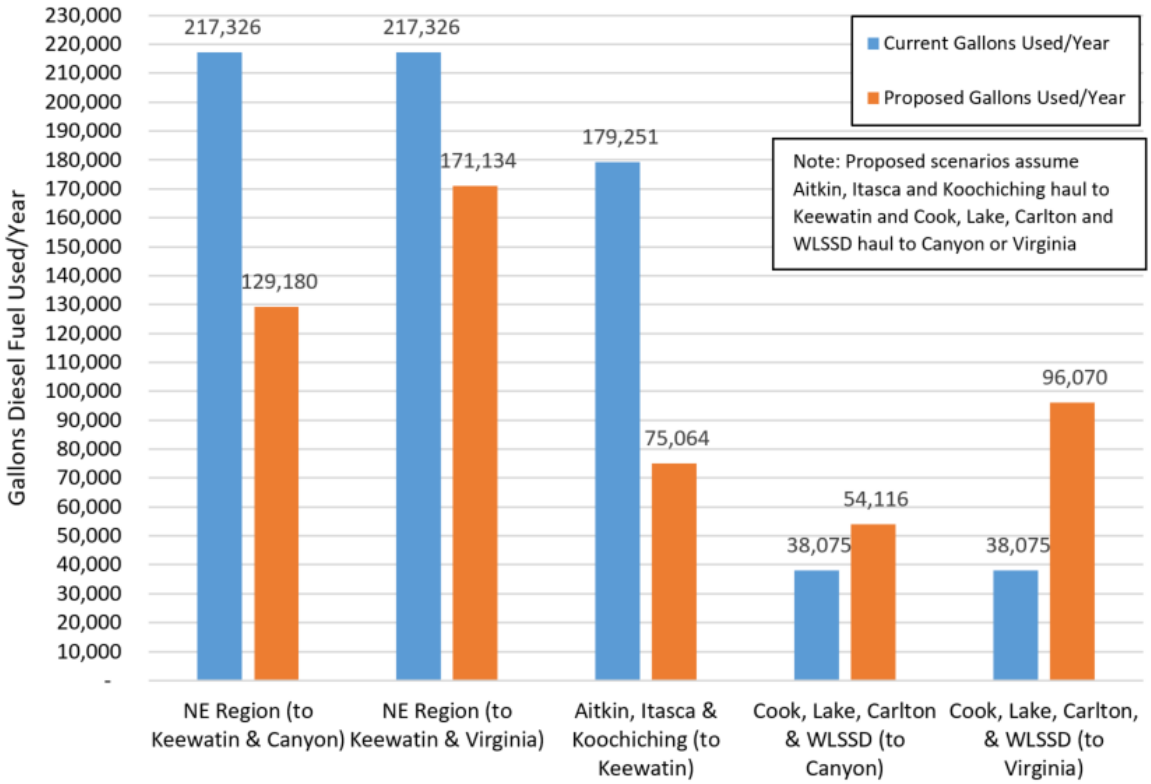


Figure 4-3: NE MN Transportation Analysis: Current vs. Proposed Gallons Used/Year



It should be noted that for Carlton County, Cook County, Lake County, and the WLSSD, the proposed distance to the Canyon landfill is greater than the current hauling distance to the Superior Landfill. As such, the cost per ton, annual fuel usage, total cost, and annual GHG emissions are slightly higher for the proposed scenario than for the current scenario of hauling to Superior. Excluding the Canyon landfill, the next closest alternative for these Counties/WLSSD after the closure of the Superior Landfill is most likely the Lake Area Landfill in Sarona, Wisconsin. The aggregate distance for Carlton, Cook, and Lake Counties and the WLSSD to haul MSW to Sarona is nearly twice as much as hauling to Canyon.

Therefore, while hauling to Canyon results in a slight increase in mileage over hauling to the Superior Landfill, it is significantly closer than hauling to the next closest alternative. The aggregate hauling distances for Carlton, Cook, and Lake Counties and the WLSSD to Canyon and Sarona are provided below in Figure 4-5. Detailed results of the transportation analysis are provided in **Appendix B**.

Figure 4-4: NE MN Transportation Analysis: Current vs. Proposed Metric Tons of CO2/Year

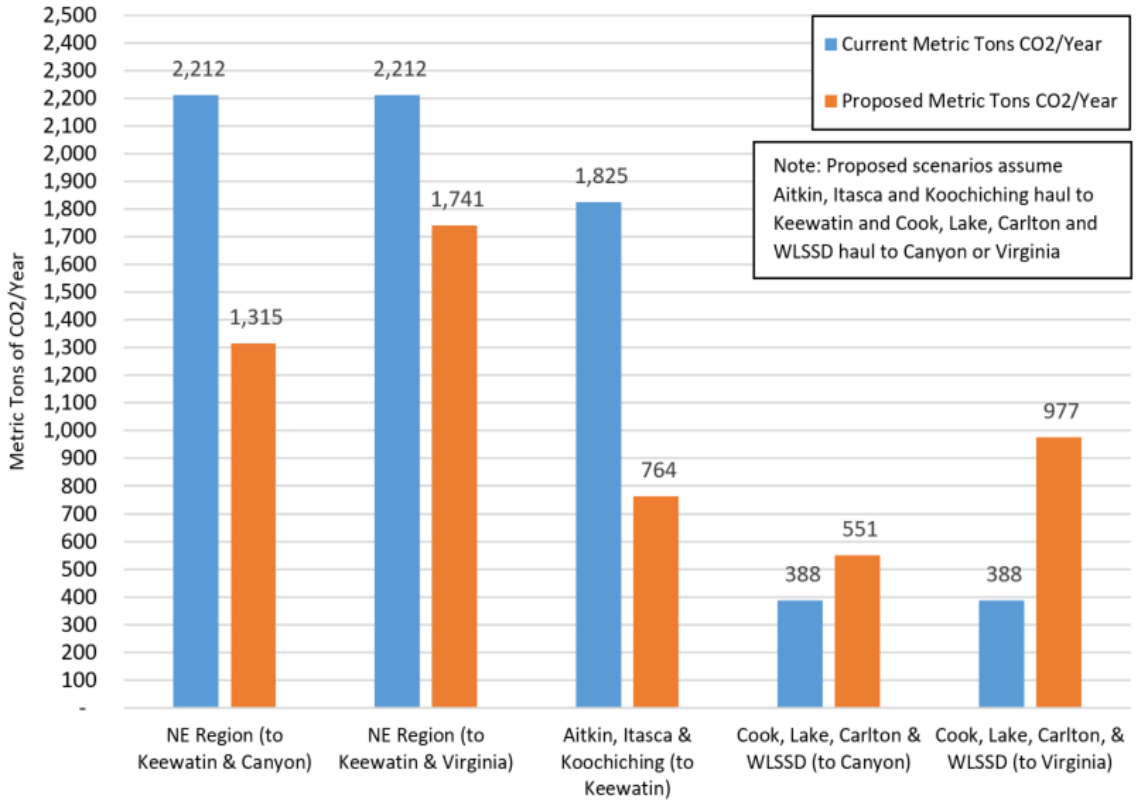
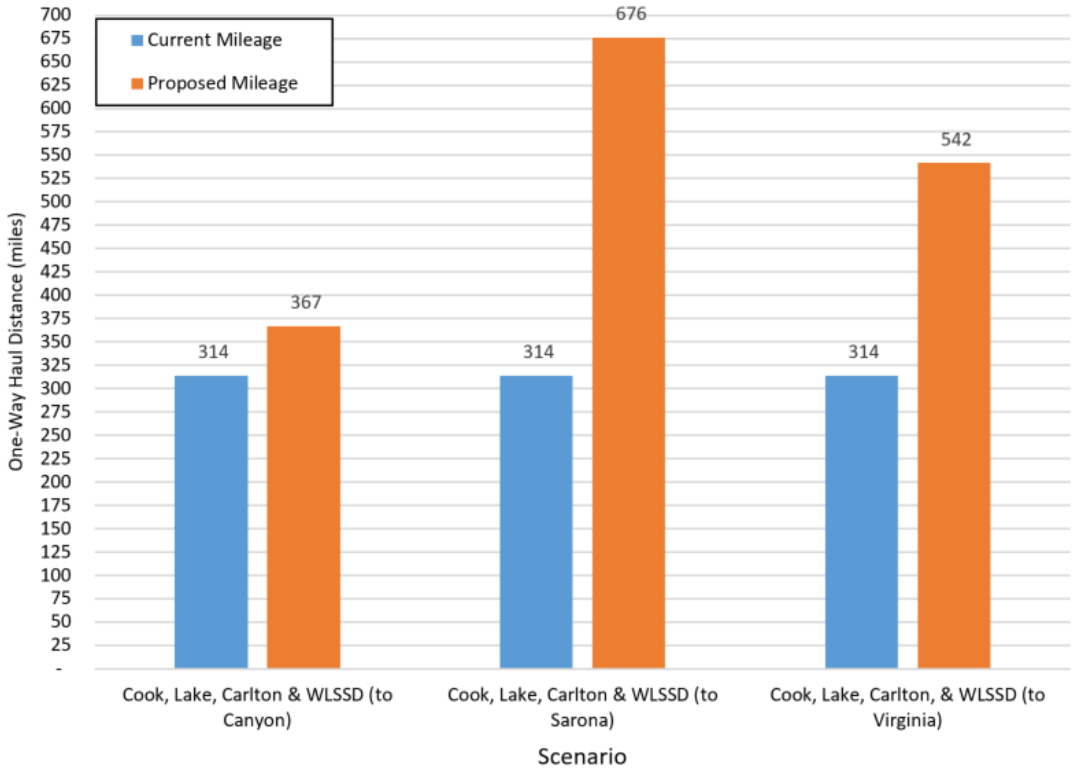


Figure 4-5: NE MN Transportation Analysis: Current vs. Proposed One-Way Haul Distance



4.3 Constraints and Barriers Limiting Independence from Land Disposal

The northeast region has well-established programs to address reduction, reuse, recycling and composting as characterized in the waste management hierarchy. There are no waste to energy recovery (WTE) facilities located in the northeast region and no region-generated MSW is currently being exported out of the region for energy recovery. Based on the volumes and types of materials generated, the northeast region proposes to use land disposal as the primary MSW management method over the next 10-years. The system constraints or barriers that limit the ability of the northeast region to achieve greater independence from land disposal are described below.

4.3.1 Geographic and Demographic

The northeast region with its seven counties and the WLSSD compose a very large geographic area. The nearest WTE facilities located in Fosston, Alexandria, Perham and Newport (refuse derived fuel (RDF) processing) range from more than 100 to over 200 miles from various locations within the region. The overall size and rural nature of the region makes it problematic to consolidate adequate quantities of MSW to long haul materials to these WTE facilities. For example, Grand Marias in Cook County located in the northeast corner of the region is nearly 200 miles from Aitkin County located in the SW corner of

the region. Moreover, the northeast region is relatively rural in nature with Duluth representing the only community greater than 50,000 in population.

4.3.2 Financial

Transporting MSW from the northeast region to a WTE or RDF facility also faces financial hurdles. The current cost of fuel (e.g., >$5 gallon of diesel) is prohibitive to long haul all of the region's MSW these distances when compared to the current and proposed system of land disposal. Aitkin, Itasca, and Koochiching currently long haul their MSW more than 100 miles for disposal and consider these costs as unsustainable.

4.3.3 Technical

Even if it were geographically and financially feasible to transport waste from the northeast region to one or more WTE or RDF facilities, it is uncertain if these facilities would have capacity to manage more solid waste in the future. Each of these WTE facilities currently serves their respective jurisdictions/regions and likely would need to expand to accommodate MSW from the northeast region.

4.4 Demonstration of No Alternatives More Feasible Than Land Disposal

The discussion in **Section 4.3** provides an explanation of the geographic, demographic, financial, and technical constraints to considering alternatives to land disposal outside the region. As part of the regional stakeholder engagement process, research was conducted and information presented on other potential MSW processing technologies such as gasification, pyrolysis, anaerobic digestion, fermentation, and a few other emerging technologies. Excluding anaerobic digestion, there are no commercially operating facilities in the United States applying these technologies to the management of MSW. As a result, the northeast region proposes to utilize land disposal as its primary management method upon maximizing materials diversion.

5.0 PROPOSED REGIONAL SOLID WASTE MANAGEMENT SYSTEM

Overall, the participating Counties/WLSSD have well-established integrated waste management systems designed within the framework of the waste management hierarchy. The primary differences between the Counties/WLSSD programs are program emphasis. The participating Counties/WLSSD offer an array of waste abatement and recycling programs supported by various approaches to MSW disposal. This section provides a description of the proposed County/WLSSD programs.

Additionally, based on multiple regional stakeholder meetings and interviews with SWONER and NEWAC representatives from each of the participating Counties/WLSSD, several priority solid waste management programs and services were identified along with a proposed approach for providing these programs/services using local resources, regional resources, or both. These regional efforts supplement the existing and proposed programs within the individual Counties/WLSSD.

Provided in the following section is a summary description of the proposed system in each of the primary programs/service areas. A timeline of the proposed regional initiatives is provided in **Figure 5-2** in **Section 5.12.** The northeast region envisions benefits through regional cooperation and proposes the program initiatives described below.

5.1 Solid Waste Reduction and Education

Each participating County/WLSSD has developed solid waste management education information resources (e.g., booklets, website, public service announcements) addressing a range of issues from source reduction and preparing and identifying materials for recycling to illegal dumping. The NE Minnesota region envisions benefits with regional cooperation to expand program education to multiple issue areas such as source reduction, sustainable materials management, organics management, construction & demolition materials management, recycling and possibly others.

A goal of the Solid Waste Officers of the Northeast Region (SWONER) and its member counties is to educate businesses and residents to move waste up the waste hierarchy and to ensure an environmentally sound waste management system. An informed and aware population will understand long-term effects of purchasing, consumption, and disposal habits with regard to composting, illegal backyard burning, special waste, waste reduction, reuse and recycling.

5.1.1 NE MN Region Coordinated Initiatives – Solid Waste Reduction and Education

Development and Implementation of a Regional Communications Plan

The northeast region Counties/WLSSD will create a regional communications plan that develops a coordinated solid waste management message and increasing community awareness on waste reduction, reuse and recycling, special wastes, composting, illegal backyard burning, etc.

The SWONER and its member counties will begin the process of developing a regional communications plan in 2024 with completion of the first draft in 2025. The communications plan will be developed by the SWONER counties with the WLSSD serving as the facilitator. The communications plan will be a living document that is monitored annually by the SWONER for needed updates and revisions. The communications plan will provide and enhance cooperation and a coordinated action and uniform solid waste management method message, increase awareness and participation by all sectors, reduce duplication of effort, and will be seen as an ongoing project. As a component of the communications plan, the development of a regional webpage will be considered as a location for regional solid waste resources, educational materials, regional messaging, and more.

Funding for the facilitation and development of the communications plan will be incorporated into the existing operating solid waste budget of WLSSD. Potential printing or distribution costs of developed materials would be covered by the individual counties.

In addition to the regional communications plan outlined above, the Counties/WLSSD intend to maintain current waste reduction programs. Each entity recognizes that it must serve as an example to local municipalities, businesses, and residents by reducing waste generated at the source. It is a goal of each of the Counties and WLSSD to educate the citizens, businesses, and institutions about the important aspects of solid waste management, including education about how, why, when, and where to reduce, reuse, recycle, and that disposal of solid waste in the region must be carried out in an environmentally sound manner.

5.1.2 County/WLSSD Local Initiatives – Solid Waste Reduction and Education

Western Lake Superior Sanitary District

The WLSSD's primary goal is to provide area residents, businesses, organizations, and local units of government with the necessary information to comply with all applicable solid waste rules and

regulations. Additionally, WLSSD aims to provide information that will help constituents to go "beyond the basics" and make other solid waste management decisions that reduce their impact on the natural environment. Over the next 10 years, WLSSD will:

- Focus on diverting reusable materials to reduce materials sent for land disposal.
- Continue its public education programming devoted to waste reduction and reuse.
- Use data derived from waste characterization studies to identify additional opportunities for waste diversion and reduction.
- Increase efforts to work with event organizers to reduce the waste created at special events
- Participate and collaborate with regional partners including NEWAC, SWONER, municipalities and other groups to develop and promote innovative and cooperative reuse, recycling and waste reduction efforts.

WLSSD will continue to evolve its utilization of information delivery methods as new technologies emerge and information consumption preferences change and use surveys, focus groups, and other data collection methods to understand gaps in community waste management knowledge. Over the course of the next ten years, WLSSD education and public outreach will evolve to fit the changing needs of the solid waste programs and those of the general public. A variety of new programs and improvements to existing programs will likely occur. The underlying goal to help citizens make good choices about solid waste management may be realized in different ways as new technologies develop and community needs change.

St. Louis County

St. Louis County considers public education the most important component in its strategy to achieve waste abatement goals and is planning accordingly. Over the next 10 years, ongoing public education will be provided for all elements of the solid waste management program that can benefit from an informed public. The goal of the County is to provide public education to all solid waste management area (SWMA) residents. St. Louis County will increase its waste reduction efforts on the business and industrial sectors with emphasis on source reduction, buying recycled, procurement, waste reduction and recycling, and hazardous waste management. Solid Waste staff will provide technical assistance and on-site visits when requested.

The County education programs will continue to address such topics as source reduction, reuse, recycling, and proper disposal of household hazardous waste. The staff will utilize the following media resources to achieve maximum program awareness including paid advertising, news releases, newsletters and flyers, radio announcements, staffed booths and displays the County web site, YouTube, Facebook and other social media. The County will inform businesses about and encourage participation in the Minnesota

Materials Exchange program, which connects generators and potential users of unwanted materials. St. Louis County intends to continue existing waste education programs with emphasis on recycling, source reduction and business waste management alternatives utilizing staff presentations, pamphlets, and displays and mailings. Staff will facilitate networking with resources such as Minnesota Technical Assistance Program (MnTAP).

Carlton County

Future solid waste reduction activities will be based on strategies that motivate residents and businesses to manage waste in a manner that reduces overall waste generation. Carlton County plans to continue existing source reduction activities including continued enforcement of Ordinance No. 17, and amendments, that governs the collection and disposal of all solid waste materials, requires recycling by residents and businesses, bans illegal dumping activities and the disposal of recyclable materials (including electronics) in the Superior, Wisconsin landfill, expansion of the food waste collection program, starting with a collection site in the City of Cloquet, supporting and continuing funding for the Product Exchange area for use by businesses and residents at the North Carlton County Transfer Station.

Carlton County will continue funding for solid waste education to residents and businesses through a quarterly Resource and Recycling newsletter, the distribution of specialized waste reduction/recycling materials pertaining to techniques and programs, and on-site visits to certain facilities including schools and public institutions and will promote a product stewardship initiative for manufacturers and retailers aimed at specific wastes including consumer electronics, paint and mercury switches.

Additionally, Carlton County will continue the current waste education activities over the next 10 years, including the following:

- Staffing and supporting materials for on-site visits to certain public facilities including schools and institutions, businesses and other organizations.
- Distributing materials to business and residents regarding alternatives to illegal dumping, and waste reduction and recycling information and opportunities.
- Funding periodic newspaper education campaigns with continued articles and advertisements in local news media.
- Support and distribution of informational brochures at sites around the County such as the courthouse, Human Services building, public schools, and libraries.
- Support and funding for hazardous waste education at schools, community and regional events, community group meetings, businesses.

Carlton County will provide waste education information to residents, businesses and organizations about reducing waste through reuse, reduction and recycling strategies and will provide waste education

information to the public to discourage improper disposal and illegal dumping of waste materials through local media, locally produced pamphlets, newsletters and community education programs.

Aitkin County

In Aitkin County, solid waste reduction is regarded as the primary solid waste issue. Over the next 10 years, Aitkin County will strategize on diverting more recyclable and reusable items from the waste stream, offer more canister and yard waste sites throughout the county, offer incentives to residents to increase backyard composting, and increase efforts to collaborate with event organizers, regional partners, and the general public to create a reuse, recycling and waste reduction revival county-wide.

Aitkin County's future solid waste education and public outreach will continue to execute past and very effective forms of communication through the County website, through newspaper advertisements, local radio interviews, on-site visits to area public schools, and an educational booth at the Aitkin County Fair. A variety of new programs will and must evolve to remain effective at our unwavering goal of providing residents, businesses, and organizations with the necessary information to comply with all county and state waste rules and regulations going into the future.

Cook County

Cook County considers public education the most important component in its strategy to achieve waste abatement goals and is planning accordingly. Over the next 10 years, ongoing public education will be provided for all elements of the solid waste management program that can benefit from an informed public. The goal of Cook County is to provide public education to all businesses, residents, and tourists. Cook County will focus its future waste reduction programs to encourage residents and businesses to manage their solid waste and keep it out of the waste stream. There is an economic incentive for non-residential units to reduce waste through the volume-based commercial hauling fees. The system of allowing hauling companies to set collection rates will continue for the foreseeable planning future.

Cook County will support efforts made by MPCA and other agencies to reduce waste generated by businesses and residents. Cook County's role may be to answer questions, hand out literature, make presentations to businesses or civic groups, or advertise at Grand Marais festivals.

Cook County will increase its solid waste education programs to encourage proper management and disposal waste. By educating the public, Cook County gains and maintains public support and involvement in solid waste programs, projects, and activities.

The Cook County proposed solid waste management system involves online education. Proper waste management and waste disposal information may be found on the Cook County website, along with relevant addresses and phone numbers. Cook County staff developed flyers and informational handouts for placement in various local businesses and will continue to provide material upon request. Cook County's participation at Grand Marais festivals will continue, as will participation in local talk radio promotional campaigns to encourage recycling and proper solid waste management. While no specific budget has been dedicated to the management of new programs for waste reduction within Cook County, the County expends between $1,000 and $2,000 annually.

Itasca County

Itasca County recognizes that waste reduction is a primary activity in solid waste abatement efforts. Waste reduction is identified as the highest priority waste management method in accordance with State goals.

Itasca County is committed to researching the possibilities of impacting the disposal process through the expansion of its reduction and recycling program. Regional studies have shown that a substantial portion of the County waste steam is organic in nature and could avoid landfilling. Itasca County will be working with its partners to implement organic collection and composting of waste where practical. Itasca County Environmental Services Staff will be working with the Itasca County Board of Commissioners through its lobbyist and Association of Minnesota Counties (AMC) to support legislative efforts that will promote statewide waste reduction programs.

The County will encourage businesses to develop a Waste Reduction Program with County Assistance by participating in the MnTAP statewide program grant being launched in rural areas and towns with a population of 10,000 or less to improve the economy and quality of life in rural America. Contact between County staff businesses, municipalities, and government entities will be made through continued presentations to schools, local business associations, and Chambers of Commerce. The County staff also maintain contact with government entities on a regular basis through regional and local planning meetings. Itasca County will continue to implement the existing waste education programs previously discussed as well as to develop new waste education programs. Continual training of staff and keeping them up to date is primarily an in-service function. Staff will keep informed of available materials and activities through mailings, seminars, networking with other solid waste professionals and contact with agencies such as the MPCA MnTAP, University of Minnesota Extension Service, and others.
Itasca County will continue to implement a comprehensive public education program. Proper participation in the source separate education program including reviewing the types of materials

recycled, proper preparation of materials, and the location of drop off centers will be available on the County website, as well as brochures and hand-outs. Waste Reduction, litter prevention, and yard waste composting will also be emphasized in the public information program. Information about the proper handling of household hazardous waste is an important part of the education program. Commercial, industrial, and institutional recycling will be promoted by the way of personal contact with key personnel within businesses and organizations in the County.

Koochiching County

The Koochiching County Environmental Services Department understands the importance of having an informed public. The business of managing solid waste is continually evolving. The County invests, heavily in advertising in local venues. This includes radio, television, and newspaper. Most of these advertisements focus on informing the public about general facts involving MSW, and recycling. The County considers education to be the cornerstone of its waste management plan. Ongoing public education and input has become an integral part of developing and modifying, day to day operations. An informed and educated public is an essential requirement for achieving our long-term goals of reducing MSW and increasing recycling. Koochiching County understands that there are avenues available that may fit into its current solid waste strategies that could reduce the volumes of MSW and demolition waste currently going to landfills. Koochiching County plans to invest more into rural advertising in the smaller papers, as this seems to be the County's weakest areas of performance in regards to MSW mitigation and involvement in recycling programs. There is an opportunity for the County to partner with businesses and local units of government (e.g., City of International Falls) to provide more accessibility for recycling and increase recycling rates.

Lake County

Lake County will continue to support efforts made by MPCA and other agencies to reduce waste generated by businesses and residents. Lake County will continue its waste reduction programs to encourage residents and businesses to manage their solid waste and keep it out of the waste stream. There is an economic incentive for non-residential units to reduce waste through the volume-based commercial hauling fees offered by some collectors. Lake County will continue working with NEWAC and SWONER regional groups to promote waste reduction in northeast Minnesota.

Lake County plans to increase its solid waste education programs to encourage proper management and disposal of County waste. By educating the public, Lake County gains and maintains public support and involvement in solid waste programs, projects, and activities. Lake County education includes web-based and social media platforms. Proper waste management and waste disposal information can be found on

the Lake County website, along with relevant addresses and phone numbers. Lake County also provides residents and businesses education materials. In 2019, Lake County published a Residential Waste and Recycling Guide that was mailed to every household in the county. The Guide was distributed to Lake County facilities (recycling center and landfill) and local organizations (SWCD, 4H etc.). The guide is currently available on the Lake County website. It is anticipated that the guide will be updated every few years to keep the information up to date. The Lake County budget for solid waste education is expected to remain steady over the next 10-years as the integrated solid waste system becomes more established and understood in the County.

5.2 Recycling

Each of the participating Counties/WLSSD offers a combination of drop-offs and curbside collection in cooperation with its municipalities and townships for the collection of recyclable materials. The extent to which each of these collection services are offered varies based on several factors including population density, private hauler engagement, available SCORE funding, and extent of cooperation between local governments. The Northeast Minnesota region envisions benefits with regional cooperation to grow recycling programs throughout the region through the initiatives outlined in this section.

5.2.1 NE MN Region Coordinated Initiatives - Recycling

Regional "Recycle Right" Campaign

The Counties/WLSSD in the Region will improve recycling programs though establishing a "recycle right" education campaign and purchase recycling carts for residential curbside recycling collection programs. The Recycling Partnership (TRP) is the largest recycling non-profit in the United States. TRP offers both technical assistance and financial resources to local governments to improve recycling programs throughout the United States. TRP has experience providing assistance to regions where local governmental recycling programs vary related to the types of materials and form of collection. Wheeled containers/cart purchases would be explored in conjunction with current residential curbside recycling programs to provide more capacity and convenience for customers.

The Counties/WLSSD will seek funding from The Recycling Partnership through initiating discussions and submitting a grant application in the second half of 2024 with potential funding in 2025. The campaign would be a two-year program to strengthen existing education programs by implementing a region-wide campaign to inform residents and businesses of the "dos" and "don'ts" of recycling and providing wheeled containers/carts for select municipal programs.

Retrofit the St. Louis County materials recovery facility (MRF)

This would create a state-of-the-art multi-stream processing facility with increased capacity to handle the region's residential and commercial recyclable materials. St. Louis County's MRF is the only publicly owned recyclable materials processing facility located in the NE MN region. It currently processes up to 6,000 tons per year (TPY) of recyclable materials collected through curbside programs, drop sites, and canister sites located throughout the County. The MRF retrofit would include the addition of a state-of-the-art automated single stream processing system capable of processing up to 15 tons per hour of commingled recyclable materials and updated state-of-the-art processing equipment to process source separated materials.

St. Louis County has submitted a grant application to the U.S. EPA (Recycling Infrastructure Act) to fund the design and construction of the MRF retrofit. St. Louis County would seek to enter into agreements with the other Counties/WLSSD in the region to accept and process their recyclable materials upon completion of the retrofit. If funded in 2024, it is anticipated the design and construction would take place in 2024 and 2025 and the MRF would begin serving multiple counties by 2026.

Upgrade existing publicly owned transfer stations to accept and consolidate commingled recyclables and/or separate other recoverable materials from the waste stream:

This initiative would develop regional collection points for recyclable materials for long haul to the proposed St. Louis County retrofitted MRF or an alternative cost- competitive, commingled materials processing facility. As a result of the proposed "recycled right campaign" and increased use of recycling carts, the projected increase in quantities of recyclable materials collected will need to be cost effectively consolidated and hauled to a commingled materials processing facility. Upgrading materials handling capabilities at public transfer stations will improve program efficiencies by reducing hauling costs.

The plan participants would secure funding through their own capital improvement programs or MPCA Capital Assistance Program. The proposed schedule would align with the planned upgrade of the St. Louis County MRF to begin operations in 2027.

In addition, publicly owned transfer stations may be upgraded or modified to separate additional recoverable materials from the waste stream prior to landfilling (e.g., scrap metal, lumber, etc.) The WLSSD has funds allocated in its capital improvement program to complete a feasibility study at the existing transfer station to explore operational and waste handling/processing alternatives that build upon existing scrap metal and wood pallet separation that are already being done on a trial basis on a smaller scale. This analysis of the WLSSD transfer station is planned for 2024 at a cost of $125,000.

Establish partnerships with local manufacturers

WLSSD will have discussion with local manufactures including USG in Cloquet and ST Paper 1, LLC in Duluth to accept targeted sorted office paper from the NE Region as feedstock for manufacturing new tissue, paper towels, and related products. WLSSD, in cooperation with local haulers, will reach out to the local ST Paper materials procurement officer to discuss the potential to accept additional sorted office paper directly from the region in 2024. Likewise, northern areas of the region will look to establish a partnership with Package Corporation of America (PCA) in International Falls to accept office paper from the NE MN Region as feedstock for manufacturing writing paper and associated products. Koochiching County will reach out to the local PCA materials procurement officer to discuss the potential to accept additional recyclable fiber directly from the region in 2024. No additional funding is necessary for this initiative.

Develop a regional film plastic collection and recycling program

The opportunity exists to build upon an existing WLSSD public/private partnership for the collection of film plastic from residents and local businesses and marketing of the material for recycling. The WLSSD has developed a program with a local solid waste hauler to accept source separated film plastic collected at township recycling sheds and the WLSSD Materials Recovery Center (MRC) for recycling and use in product manufacturing. Through recent conversations, this hauler expressed interest in expanding the program and working with WLSSD, the Fond du Lac Band and other counties in the region.

There may be additional opportunities to expand upon another current program offered by NexTrex where some local schools are collecting film plastics as part of a regional challenge against other schools. The plastics are collected and delivered to participating partners. One of those partners is Cub Foods in Duluth. Additionally, Myplas USA is establishing a flexible film recycling plant in Rogers, MN, which will begin operation in 2023 and provide additional film plastic recycling capacity in the State of Minnesota.

A description of the current program and its metrics (e.g., quantities collected, costs of collection, recovered materials revenues, lessons learned) will be developed by WLSSD in 2023 and shared with the northeast region counties to identify the feasibility of expanding the program. In addition to WLSSD, the Fond du Lac Band, Carlton County, St. Louis County, Aitkin County and Itasca County have identified film plastic collection and recycling as an initiative to implement. It is anticipated that an additional 20 film collection locations will be added throughout 2024 and 2025 at strategic regional locations at transfer stations and/or public recycling locations within these identified counties.

It is expected that 96-gallon carts would be the standard cart used for collecting film plastic at these locations, which are equivalent to 0.48 cubic yards in capacity. According to the EPA, one cubic yard of film plastic weighs 35 pounds. A 96-gallon cart would hold approximately 17 pounds of film plastic. As this program expands regionally, potential large generators will also be identified, and hauling logistics will be evaluated to maximize economies of scale. With an additional 20 sites added this would result in the additional removal of 17,680 (8.8 tons) of film plastic from the waste stream for landfilling.

Funding for the implementation of film plastic collection would be incorporated into the existing operating budget of each county. Based on a frequency of one pick up per week, it is estimated that the monthly fee would be between $150 and $200 per site or $1,800 and $2,400 annually. Frequency of pick-ups would be adjusted based on usage at each site.

5.2.2 County/WLSSD Local Initiatives – Recycling

Western Lake Superior Sanitary District

The WLSSD goals for recycling are to ensure the availability of recycling opportunities to all residents and business owners within WLSSD and to continue to increase the recycling rate or, at a minimum, meet state-mandated recycling requirements. The WLSSD will focus on the following action steps to increase recycling with in the WLSSD area:

- Focus on targeted on-the-go recycling by identifying problem areas and implementing programming to address them.
- Improvement in identified problem areas such as multi-family residential recycling, sporting/entertainment venues and commercial recycling.
- School recycling programs and implementation of food waste diversion programming.
- Compliance measures with local haulers for illegal delivery of recyclable materials.
- Assist businesses in developing or improve recycling programs.
- Examine waste stream to identify additional opportunities for recycling and resource recovery.

St. Louis County

Emphasis will continue to be placed on fostering sustainable recycling in the schools. Department staff are currently working with five school district “Green Teams” providing links to services and available information such as the MPCA’s school waste composition study and the “What a Waste” curriculum. The Department will continue to work with the cities to facilitate collection of recyclable materials from schools into the curbside programs. Rural schools are encouraged to use the County’s drop-off locations when school staff or student organizations are available to do so or to contract with local haulers. These efforts will be continued over the next decade. The County will assist other area school districts in the

development and implementation of school recycling programs upon request. Assistance will also be provided for rural schools to transport students to the County's recycling processing facility for tours.

Additional materials will be added to the County recycling stream in the next 10 years. Primarily, the program is assessing including #5 plastics in acceptable recyclables lists. The County will also be reviewing incentives for haulers to offer curbside recycling collection. Mandatory recycling will be reviewed during this planning cycle as well as single-sort collection and the technology needed for upgrades to the St. Louis County recycling processing facility.

Carlton County

Carlton County anticipates that the greatest opportunities for increasing the amount of recycling are in the business community and institutional organizations that are located within the County. Carlton County is committed to supporting increased efforts by the business community and institutions to recycle. The County will continue to operate the North Carlton County Transfer Station and recycling sheds for residents that do not have curbside recycling or prefer to self-haul. The County will continue to participate with other northeastern Minnesota counties to collect mattresses and box springs at the North Carlton County Transfer Station for deconstruction and recycling by other partners. The County will continue current recycling activities over the next ten years and support new cost- effective initiatives by:

- Enforcement of Ordinance No. 17 requiring recycling by residents and businesses and bans the disposal of recyclable materials.
- Funding and operation of the 12 public recycling facilities for residents that do not have curbside pickup or prefer to self-haul.
- Funding and support for specialized recycling projects, composting programs, and community event program and education campaigns.
- Funding and support for recycling information in the quarterly Resource and Recycling newsletter.
- Funding and support for cost-effective recycling programs for certain designated items such as mattresses and box springs, and other items.
- Support and education for private and institutional sector initiatives such as specialized recycling collections and events, including source separated organics.

Aitkin County

Aitkin County supports the idea of working on a regional approach to reduce costs of recycling. A regional materials recovery facility and/or locating recyclable material markets in the northeast region may help reduce cost. Aitkin County will continue to strategize and apply for state and federal recycling grants in order to provoke increased education, awareness, and practical recycling countywide. Lastly, Aitkin County will increase its educational efforts to residents and businesses by beginning research and

discussions on organized collection service, increasing educational efforts with the businesses to increase participation and reporting of materials collected, exploring opportunities to enhance or implement recycling opportunities focused on tourism and recreation, and locating sites for unattended recycling drop-off bins.

Cook County

The goal of Cook County recycling is to recover usable materials and reduce total waste that needs to be landfilled by working with residents and businesses. Cook County will investigate opportunities to increase the amount of waste that is recycled. One potential option would be to encourage curbside recycling in Grand Marais and take advantage of the greatest population density. The local hauling companies would be responsible for the establishment of the curbside recycling program. Cook County has strived to increase the level of recycling within all governmental facilities and will continue to work with the local schools, hospitals, and transportation buildings to further enhance the amount of recycling accomplished. The amount of recyclables collected is expected to increase over the next ten years. Since the haulers would be responsible for the collection program and bill customers directly, the Cook County recycling program budget is expected to also remain stable over the next ten years.

Itasca County

Itasca County anticipates increasing total recycling percentages over the next 10-year planning period. This will be achieved through participation in the single stream recycling program, which has been proven to significantly increase participation levels due to the ease of the system. In the past several years, the outlying canister sites have transitioned from source separated recycling to single stream recycling (except for glass), along with the County transfer station (except for glass and cardboard).

Itasca County participated in a Firewise Grant for the removal of wood waste throughout the county that is collected at the Itasca County Transfer Station which is then chipped by independent contractors and transported to their preferred sites. Although conditions will change with time, Itasca County will continually reassess its program to best utilize local resources and get the best program at the least cost.

Koochiching County

Two of the three school districts in Koochiching County have recycling programs. The County will work with the remaining district to develop a recycling program that works with their current waste disposal programs. Additionally, the County has discovered that there is a high recycling rate among individuals in assisted living complexes if the service is made easily accessible. The County will expand current curbside recycling routes to include more of these facilities.

Lake County

Lake County will investigate opportunities to increase the amount of recycling conducted by residents, businesses and institutions. Seasonal fluctuations in part-time residence and visitors creates challenges for recycling collection because they tend not to have scheduled waste/recycling pickup. Potential programs include working with haulers to advertise their curbside recycling programs in Two Harbors, Beaver Bay, Silver Bay, and Fall Lake Township to take advantage of the greatest population density. Lake County recycling program budget is expected to also remain stable over the next 10 years.

5.3 Yard Waste Management

Each of the participating Counties/WLSSD has developed educational/informational materials encouraging residents and businesses to separate yard waste from their refuse for management and encourage backyard composting, mulching, or transporting the materials to a local drop-off or existing yard waste composting facility for recovery. Because of the maturity of these programs, the rural nature of the region, and the cost prohibitive nature of long hauling these materials, the participating Counties/WLSSD will continue to use local resources to provide these programs.

The WLSSD goals for yard waste management are to achieve source reduction of yard waste for disposal by encouraging homeowners to leave clippings on the lawn, to promote backyard composting, and to promote the use of the yard waste/compost site for yard and garden vegetative residue. To further these goals, the WLSSD will continue to operate and promote the yard waste/compost site an effective option to manage vegetative yard and garden residue. The WLSSD will continue to develop and offer educational programs and information in multiple formats to encourage proper disposal, non-toxic lawn care, backyard composting, and proper use of compost in lawn and garden applications, and work with community garden clubs and school garden programs to assist them in establishing on-site composting at their locations.

St. Louis County will continue the present yard waste program providing finished compost from Department sites to the public at no charge and offering back yard compost bins to the public each spring.

Carlton County will continue to work with haulers to encourage collection of yard waste through current waste collection programs and will promote and provide educational materials and host or attend events to encourage yard waste reduction, backyard composting and other methods to reduce yard waste and encourage composting. Over the next ten years, the County will continue to operate the yard waste and compost site located at the North Carlton County Transfer Station and will continue to provide education

to residents that include yard waste reduction techniques such as backyard composting and other methods for source reduction.

Carlton County will work with residents to encourage collection of yard waste through current waste collection programs. Additionally, the County will promote and provide educational materials and host or attend events to encourage yard waste reduction, backyard composting and other methods to reduce yard waste and encourage composting. Over the next ten years, the County will continue to operate the yard waste and compost site located at the North Carlton County Transfer Station and provide education to residents that include yard waste reduction techniques such as composting and source reduction.
Aitkin County will maintain its current program but collaborate with County townships and municipalities to increase the number of yard waste sites, and to within a reasonable distance to our small cities. Due to the fact that most of Aitkin County is rural, most residents continue to individually compost, which has been practiced for generations.

Cook County encourages residents to manage yard waste through backyard compost piles or by using a mulching lawnmower. Residents using yard waste in their own compost piles and/or mulching lawnmowers keeps yard waste out of the overall waste stream. The yard waste management program has been successful and is expected to continue. Cook County also allows residents to drop yard waste off at the Recycling Center in Grand Marais for composting as well and will evaluate expanding the yard waste composting site in the future.

Over the next 10-year planning period, Itasca County will work with municipalities to provide yard waste composting sites available to residents. The goal of Itasca County is to continue to work with residents to encourage, educate, and promote yard waste reduction program participation. The County will work with haulers to encourage collection of yard waste through current waste collection programs and will promote and provide educational materials and host or attend events to encourage yard waste reduction, backyard composting and other methods to reduce yard waste and encourage composting. The City of Grand Rapids, Public Utilities Commission and Itasca County have partnered to create a public compost site for yard waste such as grass clippings and leaves. The composted material is turned twice a year and once compost material has decayed it is available to the public. The compost site is strictly for residential use and not commercial, and does not accept branches or garbage. The City of Keewatin also has a smaller scale compost site.

Koochiching County has not accepted yard waste mixed in with MSW since the closure of its MSW Landfills in 1991. Since the County started inspecting the incoming yard waste loads, unacceptable waste

mixed into yard waste has become minimal. The system in place appears to be working and will continue for the duration of this Plan.

Lake County has yard waste collection facilities in the City of Two Harbors, City of Silver Bay, at the Lake County Landfill, and at the Fall Lake Transfer station. Since Lake County is predominately rural, composting of yard waste on residential properties is common and encouraged.

5.4 Source Separated Organic Materials (SSOM) Composting

Because of the limited quantities of organics generated in many locations throughout the region and distances between population centers, it is more efficient and cost effective to strategically target and manage materials in "subregions" rather than across the entire region.

5.4.1 NE MN Region Coordinated Initiatives – SSOM Composting

The Counties/WLSSD will collaborate in developing and implementing a coordinated and multi-faceted regional organics collection and diversion program that increases the amount of organic material recovered from the waste stream. The individual components of this coordinated regional effort are described in the following regional initiatives.

SSOM Community Drop Site Program Expansion

The existing organic waste management program in WLSSD and Carlton County includes educational efforts that target residents and businesses. This messaging discusses the food recovery hierarchy, acceptable materials for collection, where food waste can be dropped off, and the overall benefits of recovery this resource. It is estimated that one strategically placed 2-yard drop site bins may collect an estimated 800 pounds per week of material (21 tons/year).

The lessons learned from the establishment of the Carlton County and WLSSD SSOM collection programs will be shared with the SWONER and NEWAC beginning in 2024 and 2025. With the modified regulations for the permitting of SSOM drop-off sites counties will work with the MPCA to site facilities to align with local interests (e.g., Finland, Grand Marais) in 2025 and going forward.

In 2024, WLSSD and Carlton counties will further develop this effort by adding a combined eight (8) new drop sites within the area with the potential of diverting an estimated 168 tons annually of additional food waste. Waste collected from these drop sites will be diverted to the WLSSD organics composting site or future anaerobic digestion for combined heat and power generation. Costs associated with servicing drop site bins will vary with the average cost associated with servicing one bin in WLSSD being

approximately $25 per weekly pickup. This initiative will be funded the participating Counties/WLSSD operating budgets and will continue beyond 2024 looking to add additional drop sites in strategic locations in these counties and the WLSSD.

Curbside Organics Collection Rollout

Curbside food waste collection has been identified as a logical next step in WLSSD's continued effort to divert food waste in its more urban neighborhoods. Despite drop sites located throughout the area, there are still underserved areas of the community where curbside collection may be a more successful approach. WLSSD will be a resource for an existing hauler in the WLSSD who is currently operating a curbside collection program modeled after a successful business in southern Minnesota that has shown to be a convenient service for a wide demographic of that community. Curbside collection of food waste could effectively collect approximately 0.32 tons/household/year).

WLSSD has applied for an EPA grant to increase the amount of organic waste collected annually in a combined effort to reduce organic waste sent to landfills, increase the amount of compost produced each year, and collect additional tonnages that can be used as feedstock for anaerobic digesters, continuing to move the WLSSD wastewater treatment plan toward energy independence. These goals will be met by implementing a residential curbside organics program, acquiring food de-packaging equipment, establishing organic waste separation programs with primary education facilities, and collaborating with other municipalities in the region that can adopt the practices established in WLSSD's Organics Recovery Pilot Program.

WLSSD intends to lead an effort to bring curbside collection of food waste to 1,000 households in the area by 2026, which would divert an additional 320 tons of food waste each year.

Increased Residential Backyard Composting

For several years, Carlton County has provided education to residents about backyard composting through its recycling newsletter and has advertised the availability of compost bins at a reduced rate. Other composting techniques and information available through the University of Minnesota Extension Service have also been shared. Backyard composting systems have been identified as a viable food diversion strategy for this largely rural region of the State where efficient transportation of food waste from smaller communities hasn't yet been established. The potential exists for the average household to divert an estimated four (4) pounds of suitable backyard composting waste per household weekly

Carlton County will continue to encourage backyard residential organics composting and Aitkin, Koochiching and Itasca County intend to rollout a new food diversion education effort along with the sale of backyard composting bins beginning in 2023.

Further Development and Support of Fond du Lac Reservation Community Composting Program

The Fond du Lac Band is proposing to relocate their 0.5-acre multi-use solid and hazardous waste collection site to a proposed 16-acre parcel, which is band-owned. A component of this project would include the development of a community composting facility. This effort is seen as a key element to food sovereignty initiatives, identified in the Band's Agricultural Division Strategic Plan that promotes rebuilding the local food system in order to improve community health and resiliency.

This new site would include a 30'x60' composting building that would house two (2) Earth Flow in-vessel composting systems to process an estimated 160 tons of organic waste each year after implementing an organic waste collection system at band-owned commercial kitchens and facilities. The Band will start this project in 2023 and anticipates it will take three years to fully implement.

Implement Lake and Cook County and Grand Portage Reservation Community Composting

Lake and Cook counties, including the Grand Portage Reservation, are currently collaborating to jointly develop initiatives to increase food waste diversion in their communities. These initiatives will be launched in three parts described below:

Recycling and Composting

The communities will continue to emphasize recycling activities and implement composting education and outreach to organizations, communities, businesses, and individual residents. This will be done beginning in late 2023 by offering workshops and coordinating materials collection in locations already identified as having interest in hosting collection bin/trailers. A private hauler in Cook County has expressed interest in offering compost collection and developing a permitted composting facility that could serve a large portion in and surrounding the City of Grand Marais. Grand Portage Band currently operates an in-vessel composting system for members of their community and the community of Finland has shown interest in operating a recycling/composting facility.

Feasibility Study

In 2024 Lake and Cook counties and the Grand Portage Reservation will conduct a feasibility study to evaluate; current recycling/composting activities, quantities and successes; potential collection participation, collection logistics, material quantities and processing locations. Following completion of the feasibility study, the communities will begin implementation in 2025 by engaging with the area's organizations, communities, businesses, and individual residents. Local resources and potential grants could help fund this effort.

Implementation of Feasibility Study Outcomes

The Lake and Cook County and Grand Portage Band community composting initiative will be implemented beginning in 2023 through 2025 and measured through three primary outcomes including increased educational outreach, recycling literacy and community networking to obtain sustainable outcomes, reduction in landfill disposal by 30-percent (approximately 2,700 tons based on 2021 MSW disposal tons), and building a positive compost image and understanding, reduction of solid waste disposal costs and disposal of food waste, and creating compost resources for gardeners and farmers. Cook County will evaluate hosting backyard composting exhibitions and educational sites to encourage residents to manage their organic waste. Cook County will also meet with local groups to evaluate the possibility of a local source-separated organics composting site that could provide residents and businesses of Cook County with another option for managing organic waste. Since Cook County has a high level of tourism, the resorts, hotels, and restaurants provide a potential starting point for source-separated organics composting. The budget for organics management is expected to remain steady over the next ten years.

WLSSD, Carlton and St. Louis County Community Composting Program Expansion

WLSSD will continue its efforts to maximize the amount of organic waste diverted for composting and to promote the use of compost, through education, to improve local soils and reduce erosion. Future plans for the Organics Composting Facility involve diverting more organics from the waste stream for compost production by expanding the WLSSD Solid Waste Ordinance to include additional commercial entities, encourage commercial participants to include post-consumer organic material in addition to pre-

consumer, work with area communities develop additional residential and/or business drop sites and improve food residuals collection efforts at various local events.

St. Louis County will initiate collection of SSOM from targeted generators for transport to WLSSD for composting or co-digestion. Currently, the WLSSD SSOM composting facility is permitted for up to 10,400 tons per year of SSOM and up to 5,600 ton/year of yard waste to be co-composted. The facility received 2,156 tons of SSOM and 1,572 tons of yard waste in 2021, having substantial available capacity for program growth. The proposed collaborative approach would leverage the assets of the two entities and increase materials diversion. This initiative would be planned and developed by the WLSSD and St. Louis County. Planning discussions would begin in 2024 to develop the terms of the agreement by 2026.

Carlton County will continue to support and collaborate with the WLSSD efforts, planning to work with large public institutions to develop and implement individualized organic waste management programs. Carlton County plans to continue SSOM activities over the next ten years by supporting SSOM programs outside County jurisdiction including WLSSD and the Fond du Lac Reservation. As discussed in the above sections, Carlton County will continue to encourage backyard composting and add additional food waste drop sites within the County.

WLSSD Co-Digestion of SSOM

WLSSD will implement a combined heat and power (CHP) project including the installation of engine generators and the construction of a high strength waste receiving station. Anaerobic digestion generates biogas composed primarily of methane that can be used to generate electricity at the WWTP. The implementation of the engine generators will allow WLSSD to generate electricity from biogas produced in the WLSSD digesters. With the additional capacity of the existing digesters, additional biogas can be generated through the co-digestion of food waste in addition to fats, oils, and greases, resulting in a further reduction in fossil fuel use and GHG emissions.

WLSSD has awarded the contract for generator installation and work is underway as of early 2023 with the commissioning of the equipment in early 2024. The approved WLSSD 10-year Capital Improvement Plan includes design in 2026 and construction in 2027 of a high strength waste receiving facility. Operations of the high strength waste collection and utilization of this material in the digesters would begin in 2028. Upon completion of these upgrades, additional SSOM can be sourced to the WLSSD facility for digestion and conversion to biogas for renewable energy recovery. This would include investigating the potential addition of food and/or beverage de-packaging equipment to recover additional organic material from unsalable or expired products while also capturing various recyclable materials.

5.5 Municipal Solid Waste Composting Facilities

There are no MSW composting facilities located in the northeast region and the Counties/WLSSD do not plan to implement any MSW composting facilities during the next 10-year planning cycle.

5.6 Solid Waste Incineration and Energy Recovery

There are no solid waste incineration/energy recovery facilities located in the northeast region and the Counties/WLSSD do not plan to implement any incineration/energy recovery facilities during the next 10-year planning cycle.

5.7 Land Disposal

The St. Louis County Regional Landfill, located in Virginia, Minnesota, is the only active landfill in the Northeast Minnesota Region. The participating Counties/WLSSD currently use multiple solid waste landfills for disposal as depicted in **Figure 3-1**. The costs for disposal vary considerably depending on the specific facility tipping fees and the distance the MSW is hauled for disposal. The NE Minnesota region envisions through regional cooperation the opportunity to develop long-term disposal capacity, ensure pricing stability and reduce costs associated with the hauling of MSW through actions outlined in the section below.

5.7.1 NE MN Region Coordinated Initiatives – Land Disposal

Support formation of public/private partnerships to permit, design, and develop MSW disposal facilities

St. Louis County proposes the County owned/operated Regional Landfill near Virginia for intermediate-term disposal of MSW for the northeast region. The County will seek major permit modification approval from the MPCA to expand the MSW landfill's footprint to provide additional disposal capacity to serve the northeast region for 20 years, beginning in 2027. Concurrently, the County is in the planning/design phase to develop a comprehensive solid waste management campus, which includes an MSW landfill, in Canyon for long-term regional MSW processing and disposal.

The participating Counties/WLSSD envision the need for two MSW disposal facilities to serve the northeast region on a longer-term basis because of the region's large geographical size and the need to reduce overall hauling distances and costs. Per initial discussions with the stakeholders, potential locations may include the existing General Waste and Recycling industrial landfill near Keewatin and the proposed St. Louis County comprehensive solid waste management campus located in Canyon discussed above.

Work cooperatively to procure MSW disposal agreement(s) to serve the region:

Recognizing the projected timeframe to plan, permit, design, and construct a new MSW facility is 7 to 10 years, the participating Counties/WLSSD will work together to procure MSW disposal agreement(s) with the St. Louis County Regional Landfill when needed. These agreements would be structured to serve the region's disposal needs in the interim while additional disposal capacity is being permitted within the region. This approach will build upon the current successful regional approach for transfer and MSW disposal with the WLSSD, Carlton County, Lake County, Cook County, and the City of Superior. Some of the northeast Minnesota region counties may elect to individually continue with current disposal arrangements until and after the new MSW landfill facilities are operational and economically competitive.

Representatives from WLSSD, St. Louis County, Carlton County, Lake County, Cook County, and the City of Superior will form a joint task force in 2024 to begin developing an approach to procure needed MSW disposal capacity with the St. Louis County Regional Landfill. The City of Superior Landfill is currently projected to close in 2026. The estimated quantities of MSW currently managed will serve as a basis for developing a regional disposal agreement. The WLSSD will play the lead role in securing a new disposal agreement for MSW disposal prior to the closure of the Superior Landfill. The WLSSD currently operates an MSW transfer station, which can be used to consolidate materials for long haul and disposal. Negotiations to procure an MSW disposal capacity agreement with the St. Louis County Regional Landfill will begin in the second half of 2024 and finalized in 2025 based on a range of agreed upon criteria.

Itasca and Koochiching Counties currently receive most of the MSW generated in their counties at their respective transfer stations and contract for long haul disposal. Aitkin County currently supports private hauler collection, transfer, and disposal. St. Louis County has its own MSW landfill that receives the MSW within its borders. In the future, Itasca and Koochiching may choose to work together to procure MSW disposal capacity; join WLSSD, Carlton County, Lake County, Cook County, and the City of Superior to procure an agreement for regional disposal; or continue working independently.

5.8 Waste Tire Management Program

The WLSSD will continue to provide convenient and affordable options for problem materials by implementing education and awareness programs for area residents and businesses regarding the proper management of problem materials and evaluating product stewardship initiatives that ensure manufacturers and retailers are responsible for end-of-life management of the items they sell.

St. Louis County plans no specific additions to the waste tire program in the near future and is satisfied with the results in the nine years that the no-charge policy has been in place. The transfer station permits limit the number of tires that will be stored on-site and the County-contracted licensed tire transporter periodically visits these sites to ensure compliance with MPCA regulations. The program budget in 2023 is $244,200 for management of waste tires at the landfill, transfer, and canister facilities in St. Louis County. It is estimated that the same level of funding will be necessary for future collection and the disposal costs. The source of program funding is the solid waste service fee.

Aitkin County has established and is maintaining a program that provides for the proper management of, and complies with Minnesota Statutes for, all waste tires generated within Aitkin County. The County will continue to provide collection events for the disposal of waste tires, work with local nonprofit and charitable organizations to see if they will sponsor waste tire collections as fund raising events and begin discussions with other counties on sharing services, facilities and collection events.

Itasca County will continue to evaluate its tire program through conversations with other counties and companies on new uses for recycled tires. The County will also continue to educate the public on proper tire disposal and care. Within Koochiching County, the current waste tire program will remain the same for the duration of this Plan. Koochiching County will continue to have discussion regarding a County wide cleanup effort where waste tires would be accepted for free during a special collection.

The current Carlton, Cook and Lake County waste tire programs will be maintained over the next ten years with no significant changes proposed.

5.9 Electronic Products

WLSSD will continue to provide convenient and affordable recycling options for problem materials generated by area residents and businesses through continued education and awareness programs for residents and businesses regarding the proper management of problem materials. WLSSD will evaluate product stewardship initiatives that ensure manufacturers and retailers are responsible for end-of-life management of the items they sell. WLSSD will support these initiatives when appropriate to the organization. The WLSSD will work with municipalities and other government entities to improve documentation and collection of abandoned wastes, such as tires, in order to identify problem areas and minimize them and collaboration with other governmental agencies to secure cooperative agreements that meet financial and environmental goals.

St. Louis County staff has participated in state and regional discussions of electronics waste management. The County will continue to make referrals to licensed electronics recyclers within the state. County staff will continue to review alternatives for land disposal of residential electronics wastes generated within the solid waste management area (SWMA) and to provide collection events for SWMA residents. The County will also continue discussions with the Iron Range Partnership for Sustainability (IRPS) about e-waste recycling, with the overall goal of providing beneficial e-waste recycling opportunities to the region. More information about IRPS can be found at the following link: https://www.irpsmn.org/ewaste-recycling.

Aitkin County will continue to hold free waste electronic collection events provided the cost to hold these events remains at a minimum. No substantial changes to the existing program are anticipated during the planning period. Aitkin County will have discussions with other counties on potential joint efforts to manage waste electronics.

Itasca County will continue to promote through education the current program and work towards the development of more cost-effective business fees to encourage participation within the County. The County will, with their partnership with Waste Management, continue to enhance their electronics recycling program by locally capturing the valuable components of the electronics. Local contractors within the County accept computer towers and other computer residuals. No fees are charged for residential electronic waste at this time. Fees may have to be adjusted in the future to cover increasing costs. There are on-going discussions with the Occupational Development Center to disassemble electronic equipment. The lack of space to perform this work is one of the overriding issues.

The Lake, Carlton, Koochiching, and Cook County collection programs will be maintained and expanded over the next ten years as the counties explore potential partnerships with local and regional organizations.

5.10 Major Appliance Management

WLSSD will review contracts for options to divert materials for reuse, rather than disposal. For example, WLSSD works with a local appliance contractor who salvages complete white goods or parts for resale before recycling and disposal is considered.

St. Louis County will continue to fund the above major appliance and scrap metal program at adequate levels to ensure that appliances and scrap metal received at St. Louis County facilities will be properly managed. The County will continue to evaluate and monitor the program for possible enhancements to better serve the public with no plans for modifications of the program at this time.

Aitkin County will continue to hold waste appliance collection events as needed, and will work with local non-profit organizations to hold waste appliance collection events as fundraisers. Aitkin County will continue discussions with other Counties on joint efforts to manage waste appliances. Carlton County will maintain the current waste appliance program over the next ten years. In Cook County, major appliances are being managed through the private sector, along with the special collection events and the County has no plans to further develop the program until the need arises. Itasca County will continue with the current program, supervise contractor's performance and will investigate the strength of the current market to consider removing the fee for appliances in an effort to capture additional material from residents and businesses visiting the county sites. Koochiching County and Lake County do not anticipate any changes to their successful major appliance management programs.

5.11 Automotive Mercury Switches, Motor Vehicle Fluids and Filters, and Lead-Acid and Dry Cell Batteries

Aitkin County does not accept automotive mercury switches. Aitkin County will explore the locations of other waste oil collection sites with local retailers. Locations in the northern and southern-eastern areas of the County will be pursued first. If grant money is available and willing local retailers are found, additional collection sites will be established. Aitkin County will expand the button battery and nickel/cadmium battery collection program and expand the lead acid battery collection.

Carlton, Cook, Itasca, Koochiching, Lake and St. Louis Counties and WLSSD have mature automotive waste programs that will be maintained for the next ten years with no plans for expansion at this time.

5.12 Household Hazardous Waste (HHW) Management

5.12.1 NE MN Region Coordinated Initiatives – HHW Management

The Western Lake Superior Sanitary District will continue to operate its Household Hazardous Waste Facility and Clean Shop Program and will sponsor the Regional Household Hazardous Waste Program. Some of the areas of growth will be to expand participation in the Clean Shop Program with innovative and targeted promotion and continued promotion of the Product Reuse Center to expand use, broaden community awareness and increase the type and amount of material diverted for reuse. Additionally, WLSSD will continue to seek cost-effective contracts and alternatives to disposal, reevaluate processes frequently for cost savings and alternative management options, and promote Healthy Homes, Healthy Families concepts and programming through advertising and workshops.

5.12.2 County/WLSSD Local Initiatives – HHW Management

The St. Louis County HHW program is currently established and successful. Collection locations are modified on an annual basis. In the future, cold storage capability at the Virginia facility will be expanded, and facility hours may be expanded if there is a demonstrated need. The County will continue to contract with WLSSD for contract administration and staff support. Pick up and disposal with the State HHW contractor will continue to be on an as-needed basis.

Carlton County will continue operation of the HHW site at the transfer station, including the product exchange area, and public education programs and activities for the proper disposal of HHW at the transfer station or the WLSSD regional HHW facility over the next 10 years. Additionally, Carlton County is currently working on adding a new program to safely dispose of household pharmaceutical wastes (over-the-counter and prescription drugs) to prevent disposal in the sanitary sewer and solid waste stream as well as prevent illicit drug use. The program will be directed toward all controlled and non-controlled pharmaceuticals that residents may anonymously deposit in a non-retrievable container. Carlton County will continue funding for its HHW program, including the enforcement of Ordinance 17, providing facilities for the collection and disposal of hazardous materials, and specialized HHW projects such as the disposal of household pharmaceutical wastes. The County will also continue to provide education about the environmental consequences and health risks associated with the illegal or improper disposal of HHW and problem materials to residents and businesses.

Cook County will continue to work with WLSSD through the special HHW collection events held within the County, as well as maintaining the secure hazardous waste locker facility that is situated on the

Recycling Center premises. Cook County will coordinate with WLSSD in evaluating whether additional collections are needed in different locations within the County due to increased material use.

Itasca County intends to refine and expand programs where possible based on experienced gained from the operation of current programs. Public information concerning hazardous waste is a primary focus of the County. Education materials that are provided include fact sheets, disposal guides, and specific materials brochures produced by the MPCA and WLSSD. County staff prepares news articles and provides group presentations and tours for schools, civic associations, and community groups.

Aitkin County will increase education efforts regarding HHW and will continue to discuss HHW and problem material management with other counties and other program managers.

Koochiching County will continue providing the Environmental Services staff with the proper training to allow the County to continue the small HHW collections in the rural areas of the County just prior to the large collection at the Transfer Station Complex. The County is committed to providing the proper equipment to facilitate safe rural HHW collections that also comply with the rules and regulations of the MPCA and Minnesota Department of Transportation.

5.13 Construction and Demolition (C&D) Debris

The WLSSD will continue to look for ways to divert construction and demolition waste to alternative permitted sorting and processing facilities or demolition landfills. This will be accomplished through hauler, residential, and business education programming, potential tip fee pricing changes, limiting acceptance at the WLSSD Transfer Station, and through increased inspections of permitted facilities. WLSSD staff will review current hauler waste agreements and solid waste ordinance requirements to look at ways to increase the separation of C&D from mixed waste loads though regulatory options.

The WLSSD has budgeted for and will conduct a waste characterization study in 2024 to further understand the composition and source of mixed waste loads to limit the amount of C&D waste coming into the WLSSD Transfer Station.

The current WLSSD Transfer Station operator has been implementing additional ways to recover scrap metal from the incoming waste stream at the WLSSD transfer station. This includes purchasing equipment with a magnetic grapple to remove items to put in a separate roll-off box to haul to a recycling facility. Depending on the success of this initiative, the contractor will potentially look at other recoverable materials to remove, such as wood pallets, from the waste stream prior to transfer of waste to

the City of Superior Landfill. WLSSD will continue to accept C&D waste at the Materials Recovery Center while looking for additional opportunities to recycle those materials.

St. Louis County staff is currently reviewing alternative landfill abatement options for C&D waste. Options include source separation, reuse of materials, as well as alternative uses for aggregate, pavement, mulch and biofuel. Currently clean demolition waste is accepted at several locations around St. Louis County. Once a suitable volume is received, it is transferred to a regional C&D landfill. An option for deconstruction is emerging within St. Louis County due to a new company expanding into the area. Deconstruction would be encouraged as part of the County tax forfeit property demolition and clean-up projects.

Carlton County anticipates that the amount of construction and demolition debris generated will remain stable for the next several years. It is believed that the amount of construction and demolition waste landfilled will decrease, due to increased educational efforts to recycle certain materials and programs that promote the reuse of marketable materials. Carlton County plans to continue the existing construction and demolition debris program that includes education regarding the reuse and recycling of recoverable materials to reduce the amount of material deposition in landfills. Educational efforts are directed towards the promotion of the Minnesota Materials Exchange (MME) Alliance program, the WLSSD Materials Recovery Center, and the Minnesota Recycling Markets Directory for the reuse and recycling of construction and demolition materials.

Additionally, Carlton County will continue to participate in the MPCA sponsored Northeast Minnesota Building Deconstruction Work Group that encourages and publicizes sources for reusable materials and markets for recyclables. The County will monitor the success of the construction and demolition debris program by review of the annual amounts collected at the transfer station.

The Lake and Cook County programs monitoring and regulating C&D debris will be maintained over the next ten years. Cook County will continue to work with private sector haulers to ensure they are adequately equipped to manage all of the C&D waste generated within the County. Aitkin County will increase education to residents and businesses on source separation of materials and types of acceptable materials.

Itasca County will continue to work with commercial and private self-haulers to divert concrete to existing recycling facilities within the County. Currently, Hawkinson Construction, Schwartz Excavating, Hammerlund Construction, and the Trout Demolition Landfill accept and recycle concrete for beneficial

reuse projects. Because the scaled price at the County facility is much higher than the private recycling sites, very little concrete shows up at this site. In the event that it does, haulers are provided education on recycling, reuse, and cost saving options. Itasca County will continue to work with "The Habitat for Humanity Restore" on deconstruction projects prior to demolition and will continue to educate the public on available reuse, recycling and recovery services provided for construction and demolition materials listed in the Minnesota Recycling Markets Directory developed by the MPCA.

5.14 Counties/WLSSD Support

Based on multiple regional stakeholder meetings and interviews with SWONER and NEWAC representatives from each of the participating Counties/WLSSD, several priority solid waste management programs and services were identified along with the proposed approach for providing these programs/services using local resources, regional resources, or both. These regional initiatives supplement the existing and proposed programs within the individual Counties/WLSSD.

The proposed regional implementation program initiatives discussed in Section 5.0 were initially presented to members of the SWONER and NEWAC at the NEWAC meeting on September 9, 2022, with the goal of obtaining documented support on the initiatives from the Counties/WLSSD. Members of the SWONER and NEWAC were given an opportunity to provide feedback on the proposed initiatives during and subsequent to the meeting. An additional NEWAC meeting was held on October 3, 2022, to answer questions about the proposed initiatives and discuss select initiatives in more detail.

The northeast region envisions benefits through regional support and cooperation and proposes the regional program initiatives described in **Table 5-1** below.

Table 5-1: NE Region Coordinated Program Initiatives

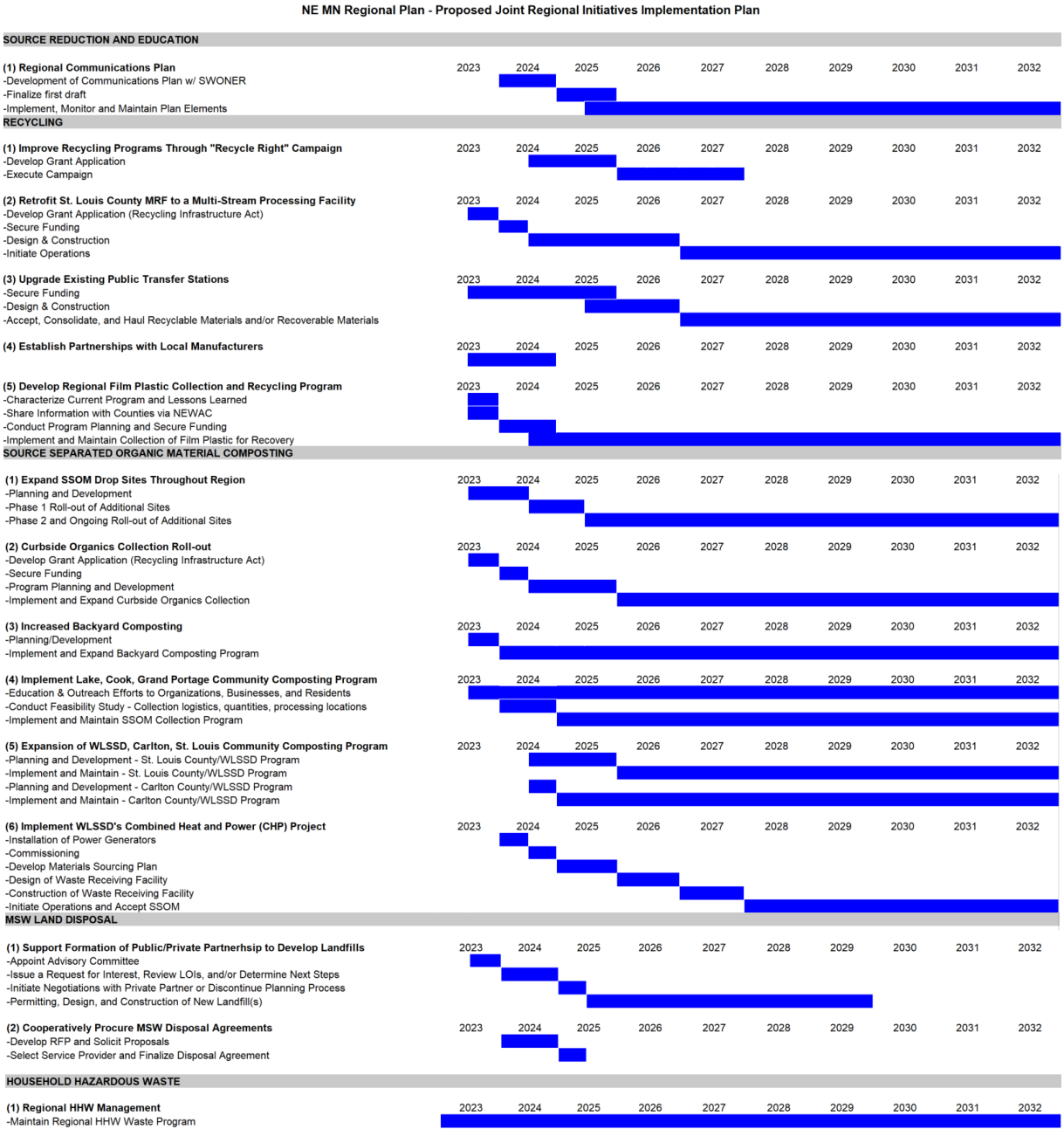
Initiative
Develop and Implement a Regional Communications Plan
Improve Recycling Programs Through "Recycle Right" Campaign
Implement a Coordinated and Multi-faceted Regional SSOM Collection/Diversion Program
Support Formation of Public/Private Partnership to Develop Landfills
Cooperatively Procure MSW Disposal Agreements
Regional Household Hazardous Waste Program Management

The above initiatives were considered in developing waste and diversion projections in the Goal Volume Tables (GVTs) based on current County/WLSSD programs. See **Section 9.0** for a discussion on the GVTs.

5.15 Schedule of Implementation

The proposed implementation plan, including the proposed timeline of each regional initiative, is summarized in **Figure 5-1** below.

Figure 5-1: Proposed Regional Implementation Plan



Note: Timeline reflects overall regional initiatives. Individual county timelines and participation may vary within each initiative.

5.16 Summary

The proposed program initiatives and timeline were used to develop the waste and diversion projections for the GVTs included in **Appendix X**. The key focus for the northeast region is building upon existing program success to divert nearly double the quantities of organics by the end of the 10-year planning period. Based on the outcomes of the GVT analysis, the proposed regional system is projected to impact the management of the material streams over the 10-year planning period as characterized in **Table 5-2** and **Figure 5-2**.

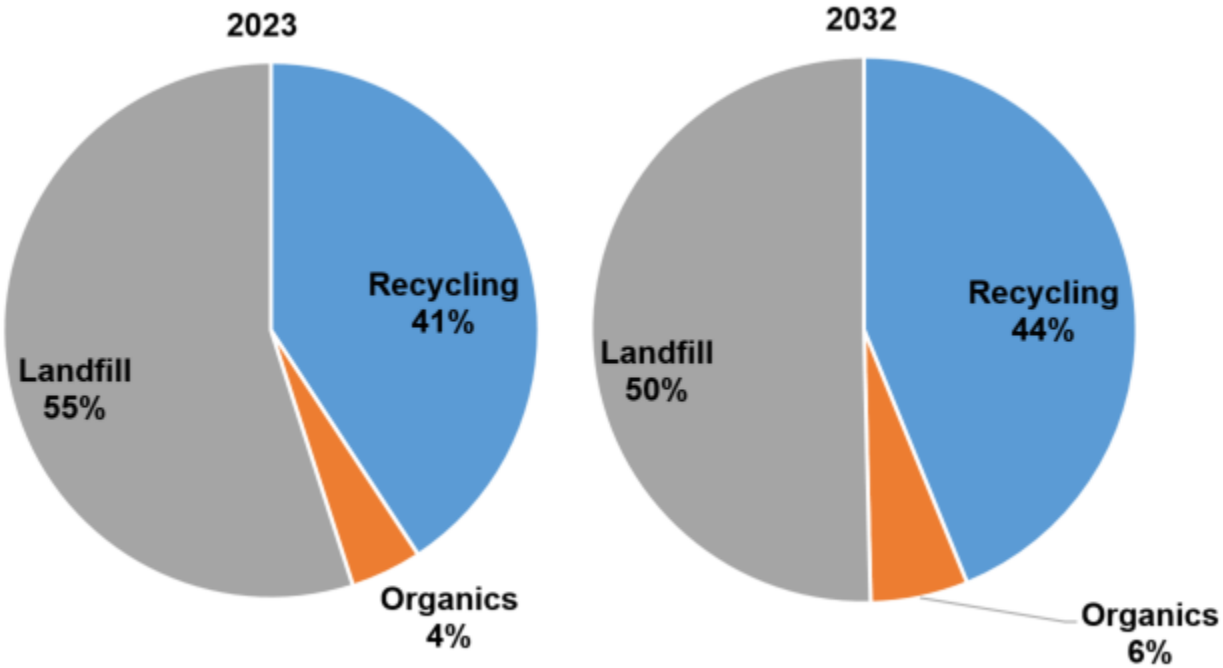
Overall, the proportion of the municipal solid waste stream generated in the region will be reduced from 55-percent to 50-percent over the 10-year planning period.

Table 5-2: Proposed Regional System Quantities of Materials (Tons)

Material Streams	2023[a]	2032[a]	Percent Change
Recycling	125,432	135,758	+ 8.2%
Organics	13,243	17,560	+ 32.6%
Landfill	169,144	157,411	- 7.0%

(a) Based on the Goal Volume Table analysis, which considers both projected population change and new program implementation.

Figure 5-2: 2023 and 2032 Projected Waste Quantities



Section 5 Amendment

Carlton County is currently in the process of moving one of their recycling drop sites from private land to publicly owned land and replacing with a garage structure within the year. Additionally, in reference to the NE regional initiative in section 5.4.1: SSOM Community Drop Site Program Expansion, Carlton County added three more organics drop sites, with locations now at the Transfer Station, Carlton, Cloquet, and Thomson town hall. Compostable bags are distributed at all locations with educational signage. There is interest within the county to build a new transfer station to better serve the communities, improve safety, and handle increased waste streams, to include reuse, wood waste separation, the ability to accept clean demo daily, a tip floor for mixed waste, and more separation in general. The County is working with Burns and McDonnell on a feasibility study for the transfer station, which will be done Q1 of 2026. Lastly, pharmaceutical collection has been implemented within the county.

Aitkin County established a new yard waste site behind the recycling center in Aitkin on 6/19/25, per section 5.3: Yard Waste Management. Hill City is adding an additional canister site, hopefully in 2026. It will be a 75'x75 foot fenced in area (Section 5.2.2. County/WLSSD Local Initiatives – Recycling). After putting out an RFP, Aitkin County ended its contract with Waste Management, and now contracts with Garrison Disposal to operate their recycling facility in Aitkin The County received a grant from the MPCA to pilot an uber-style recycling pick-up program with a company called Recyclops, which has now come to completion and was not continued after the grant period ended. In reference to section 5.4.1, the county would like to apply for a Green Corps member to develop a program to collect food waste from the Aitkin County Jail within this planning cycle.

Cook County has established a new permit-by-rule (PBR) transfer station in Hovland, which is operated by NorthShore Waste. There is also interest in the County to establish a PBR transfer station up the Gun Flint Trail, near Loon Lake. NorthShore Waste has taken over the operation of the Tofte transfer station. NorthShore Waste operates its own PBR transfer station near Grand Marais. Cook County is working with NorthShore Waste to build a new transfer station, which would be an individually permitted facility. NorthShore Waste owns the property, which it is leasing to Cook County, in turn, Cook County will be leasing the new building back to NorthShore Waste. It is set up this way so that state funding could be acquired for the construction of the new facility. Into the future, Cook County is looking at a phased approach to pass off management of solid waste programs to NorthShore Waste.

Itasca County has contracted with General Waste to operate their transfer station, where General Waste added a compactor for recycling. They are also looking at MSW compaction at canister sites; the board approved this in October, and it is to be implemented in spring of 2026. A budding relationship with Habitat for Humanity is happening, where sites are selecting suitable items for reuse (furniture, tools, lumber, etc.), and hauling those items to the Habitat for Humanity Restore in Grand Rapids. Itasca County hopes to have a location at the transfer station for Restore items. Habitat for Humanity codes items for tracking and reporting for the County. The County has applied for an MPCA grant to continue developing reuse programs. Additionally, an MPCA C&D planning grant was applied for and awarded. Itasca County has contracted with Burns & McDonnell to develop the plan. Currently, Itasca County is allowing residential users to continue using their C&D landfill and is directing all commercial users to the General Waste Industrial Landfill in Keewatin. A permit modification for the transfer station has been submitted. This would take the transfer station from a PBR to an individually permitted facility, allowing it to be the hub for all the canister sites (spokes). Additionally, a canister site has been added at Danson. The yard waste site, operated in cooperation with the City of Grand

Rapids, has been relocated to southeast Grand Rapids. In 2022 and 2023, the Itasca County board set aside $100,000 for the Fight Blight program to clean up properties and hold cleanup events. The County partnered with townships and municipalities to implement the program. Keewatin, Balsam, Harris, and Blackberry are continuing this program and using the county as a resource. To boost community education, advertisements were run, called “did you know” ads. Lastly, the county did a tire clean up in 2023, which resulted in 100 tons of tires collected.

Lake County has made several changes to their recycling center in Two Harbors. The County took over previous contract operations from the DAC in March of 2024. Since then, two compactors have been added, one single-sort, and one for cardboard. Glass continues to be collected separately for transport to the Lake County Demolition Landfill for beneficial use as landfill drainage material. Electronics, mattresses, tires, and appliances have been added to the items that are now collected every day and are no longer collected at the landfill. There was also a reuse library added for books. A recycling trailer has been parked at the Silver Creek Town Hall and will stay there long-term as there has been huge community support of this. There will be two bear proof compost containers and educational signage added to this location as well. The County has added one pound propane tank collections at Split Rock and Gooseberry state parks that will be collected at the end of the camping season and are added to the propane tank collections at the Lake County HHW. As of 2025, a new HHW area was added at the recycling center, to include a reuse area, and collection has moved from seasonal to year-round. The grant that Lake County received from the MPCA for food waste diversion has been completed. What initially started out as a joint venture with Cook County and Grand Portage Reservation became just Lake County. The County purchased an organic waste collection hopper, compost turner, bins, and a tractor to begin a small-scale composting operation (Section 5.4.1: NE MN Region Coordinated Initiatives – SSOM Composting). The county has built two new cells at their C&D landfill (Section 5.13: Construction and Demolition Debris). The County is not allowing concrete in the landfill and instead it will be crushed and reused by the highway department. Lake County is looking at a proposal from Burns and McDonnell to overhaul their solid waste ordinance to include better established requirement for haulers (Section 6.0 Ordinances). A goal of the county is to investigate more sustainable options for processing wood waste.

WLSSD’s engine generators were commissioned in 2024 and are currently in use (Section 5.4.1: NE MN Region Coordinated Initiatives – SSOM Composting). In support of expanded access to solid waste services in underserved areas, WLSSD began a community clean-up assistance program for those that cannot easily access facilities. This program is free to residents in underserved neighborhoods and is primarily event-based, with two clean-up events anticipated each year. The WLSSD Transfer Station is a part of the waste sort that is happening across the state with two sorts happening in October 2025 and January 2026. The District contracted with Burns and McDonnell to do an analysis of their Transfer Station. As of Fall 2025, a decision is still in discussion on how to move forward with the transfer station (Section 5.2.1: Upgrade existing publicly owned transfer stations to accept and consolidate commingled recyclables and/or separate other recoverable materials from the waste stream). A federal grant through the EPA was applied for purchase depacking equipment, however, the award date has been pushed to the end of 2025. If this grant is not awarded, WLSSD will continue to explore alternative funding options. One identified option consists of funds collected from unacceptable materials fines paid by waste haulers at the Disctrict’s Transfer Station. A pilot project for business composting began with a restaurant to collect pre-consumer food waste. Through this pilot, a framework was developed for other businesses to follow. A local company called Duluth Composting, which does curbside organics hauling, received a grant for the purchase of some equipment. The District has been supporting this business to encourage the growth of curbside organics collection. A grant was submitted for multi-family organics drop sites. The proposal

would include 2-3 sites at different complexes around the community. A mattress pilot project with Carlson Timber was also done to salvage steel from dirty mattresses that would have gone to the landfill. Instead of the whole mattress going to the landfill, just the shredded materials were landfilled.

St. Louis County submitted a grant application to the EPA for $4.5 million to retrofit their MRF, which they are still in the running for. Even without the retrofit, the county would consider opening the MRF to other counties (Section 5.2.1: NE MN Region Coordinated Initiatives – Recycling). To encourage education, St. Louis County has been giving presentations at local libraries.

Koochiching County partnered with the Minnesota Department of Corrections (DOC) in funding a Sentence to Serve (STS) program which included a crew leader who supervised offenders. The MN DOC has since stopped funding the STS program. The STS program provides courts with an alternative sanction for non-dangerous offenders and allows offenders to perform restorative work, which among other things, was typically work at our Recycling Center located at the Transfer Station. Due to the State terminating funding the program, in 2026, the county has decided to move forward with hiring a new transfer station operator that will focus on solid waste management duties while also leveraging benefits from leading a new redefined STS program. Koochiching County participated in the free HHW trucking grant, in which two semi-loads were collected and hauled. The county did some advertising in more rural newspapers to spread the word on the free collection. The County is planning on holding another e-waste collection in 2026 subject to funding. The County has added a cooking oil collection tank at the Transfer Station which will allow users to recycle this material. Midwest Grease from Redwood Falls, MN services the tank as needed.

Regional Updates: Section 5.1.1 proposes the development of a regional communications plan. This proposal is being amended to developing a shared repository of educational resources for each County to use and tailor to their own needs. The Recycle Right campaign will no longer be taking place, as there is no longer funding available for this program (5.2.1 NE MN Coordinated Initiatives – Recycling – Regional Recycle Right Campaign) ST Paper has been sold and is operating under the name Sofidel. They are no longer accepting paper to use in their process (Section 5.2.1: NE MN Region Coordinated Initiatives – Recycling – Establish partnerships with local manufacturers). Meetings have been held between A1, WLSSD, and St. Louis County to start discussions of developing a film plastic collection and recycling program. MyPlas was purchased by GDB Circular in September of 2024 and continues to accept film plastic (5.2.1 NE MN Region Coordinated Initiatives – Recycling – Develop a regional film plastic collection and recycling program).

Landfill Update

WLSSD put out an RFP for disposal in 2024 and awarded the contract to St. Louis County (SLC) in 2025. MSW will begin to be hauled to SLC in July 2026. WLSSD continues to have hauler contracts with haulers in Cook and Lake Counties, thus all waste from Cook, Lake, and WLSSD will be going to the St. Louis County Regional Landfill in Virginia. Carlton County will dispose of MSW at St. Louis County Regional Landfill through a joint powers agreement with WLSSD. Carlton County has terminated its contract with Carlson Timber, effective June 30, 2026, and will haul their own MSW to the St. Louis County Regional Landfill. Koochiching County has also entered into a contract with St. Louis County to haul their MSW to the Regional Landfill, starting January 1, 2026. SLC has noted that they will be looking into the opportunity for backhauls down to Duluth when MSW hauling commences from WLSSD. Itasca County has entered into a contract with Dem Con to manage their transfer station and haul their MSW. Currently it is going to Sarona, WI while Dem Con dba General Waste goes through the process

of environmental review, permitting to convert their industrial landfill to MSW, and a final CON determination. This process is expected to be complete spring of 2026, with Itasca MSW then being hauled to General Waste in Keewatin (5.7.1 NE MN Region Coordinated Initiatives – Land Disposal).

6.0 SOLID WASTE ORDINANCES

The status of the solid waste ordinance for each County/WLSSD is summarized in **Table 6-1** below.

Table 6-1: Solid Waste Ordinances

County	Status of Ordinance	Implementation and Enforcement Issues	Plans to Amend Ordinance
Aitkin	Revised 2022	None reported	Will amend within next 10 years
Carlton	Adopted 1991	Enforcement issues are mainly tied to junk properties	Will amend within next 2 years
Cook	Adopted 1979	Since Cook County has worked directly with MPCA staff with regards to any solid waste violation enforcement, the County has not had many challenges other than the illegal dumping of materials in gravel pits or in front of the Recycling Center. Since the County installed a video surveillance system at the Recycling Center and blocked after hours traffic, there have not been many additional violations	Will amend within next 5 years
Itasca	Revised 1992	None reported	None reported
Koochiching	Revised 2014	None reported	None reported
Lake	Revised 1992	Lake County's current ordinance does not include adequate deterrent to regulate junk yards/properties that are full of vehicles etc. Garbage burning is also still very prevalent in Lake County. Because of the County's large size, it is difficult to communicate it is the law that garbage cannot be burned (which includes paper that people don't see as garbage). Finally, haulers are required to pick up recycling once a month for regular customers. Not all municipalities are recycling	Will amend within next 5 years
St. Louis	Revised 2008	None reported	None reported
WLSSD	Revised 2018	The WLSSD does not have statutory enforcement authority. As a result, the WLSSD contracts with St. Louis County when needed to enforce ordinance provisions.	Will amend within next 5 years

7.0 SOLID WASTE PROGRAM STAFFING, EXPENSES AND FUNDING

Each of the Counties/WLSSD approach solid waste program staffing differently using both internal staff and external contractors. Staffing levels available for implementation of the programs in this section are shown in **Table 7-1** below.

7.1 NE Region Staffing for Solid Waste Programs

Program	Estimated Annual Labor (FTE or Hours)							
	Aitkin (Hours)	Carlton (Hours)	Cook (FTE)	Itasca (Hours)	Koochiching (FTE)	Lake (FTE)	St. Louis (FTE)	WLSSD (FTE)
Solid Waste Reduction	As Needed	50	0.05	As Needed	0.1	2.25	0.4	4.05
Solid Waste Education	104	50	0.05	128.0	0.03		0.1	
Recycling Programs	2,080	100	4.0	1,208.0	1.0		0.4	
Yard Waste Management	72	20	0.01	As Needed	0.1		N/A	2.0
SSOM Composting	N/A	72	N/A	As Needed	---		N/A	
MSW Land Disposal Facilities	---	10	---	As Needed	---		3-4 County Staff 3-5 Contract Staff	0.25
Tire Management Programs	As Needed	30	---	As Needed	0.08		0.1	7.0
Electronic Products	48	30	0.2	As Needed	0.08		0.1	
Major Appliance Management	As Needed	30	---	As Needed	0.1		2.25	
Auto. mercury switches, motor vehicle fluids, lead-acid & dry cell batteries	As Needed	---	0.3	As Needed	---		0.1	4.25
HHW Management	587	430	0.7	1522.5	0.03		2.65	
Demolition Debris Management	As Needed	466	---	As Needed	0.5		0.2	0.5

7.2 Funding Sources and Program Expenses

Similar to staffing, each of the Counties/WLSSD have their own approach to program budget development and funding. However, the total program expenses for each County/WLSSD in 2020, along with funding sources, are described in **Table 7-2** below. **Section 10.0** provides a planning level budget for the proposed regional solid waste management system initiatives.

Table 7-2: NE Region Program Expenses and Funding Sources (2020)

County	Total Program Expenses	Funding Sources
Aitkin	$289,878	MPCA HHW grants, SCORE funding, solid waste levy, license fees
Carlton	$1,795,420	Solid waste fee, licenses, gate/tipping fees, sales tax, refunds/reimbursements, SCORE grant, intergovernmental revenue, special assessment/service fees, and service charges
Cook	$615,268	MPCA HHW grants, SCORE funding, solid waste disposal fees and taxes, solid waste management fee, license fees, general revenue tax fund,
Itasca	$2,237,751	Solid waste assessment, state grants, landfill tipping fees, demo fees, reimbursements, reimbursements for HHW supplies
Koochiching	$1,618,198	Solid waste assessment, MSW coupons, commercial hauler tipping fee, solid waste management tax, state grant, commodity sales, and demolition fees
Lake	$300,744	MPCA HHW grants, SCORE funding, sale of recyclables, mixed municipal licenses, landfill licenses, demolition landfill fees, general revenue tax fund
St. Louis	$8,051,132	Tipping fees, solid waste service fees, SCORE funding, license and surcharge fees, fees received from leasing property for operation of a contaminated soil treatment facility, recycling revenue, special waste revenue, grant funding, licensing
WLSSD	$2,880,343	Solid waste fee revenues, transfer station fees, solid waste grant revenue, MRC fees, St. Louis County reimbursement, compost/yard waste fees, SCORE grant, WLSSD HHW grants, County HHW payments/Grants, PaintCare

7.3 Program Annual Budgets

Table 7-3: Northeast Regional Solid Waste Program Budgets

Program	ANNUAL BUDGET							
	Aitkin	Carlton	Cook	Itasca	Koochiching	Lake	St. Louis	WLSSD
Solid Waste Reduction	$1,637	Not available	$1,800	Not available	Not available	$2,052	Not available	$816,000
Solid Waste Education	$1,638	Not available	$2,095	$8,294	Not available	$2,052	Not available	
Recycling Programs	$145,742	$107,000	$135,000	$147,184	Not available	$160,834	$2,000,960	
Yard Waste Management	$607	Not available	$759	Not available	Not available	$5,000	$5,000	$333,000
SSOM Composting	N/A	$1,300	N/A	N/A	N/A	N/A	N/A	
MSW Land Disposal Facilities	Not available	$750,000	Not available	$609.323	$870,731	Not available	$1,766,941	$5,007,000
Tire Management Programs	Not available	$6,400	Not available	$28,382	$35,442	$1,951	$244,200	$1,172,000
Electronic Products	$4,443	$21,000	$4,200	$23,106	$13,868	$4,343	$82,500	
Major Appliance Management	Not available	Not available	Not available	Not available	$3.860	$2,620	$200,866	
Auto. mercury switches, motor vehicle fluids, lead-acid & dry cell batteries	Not available	Not available	$2,220	$713	$490	Not Available	$5,000	$867,000
HHW Management	$6,473	$16,000	$8,193	$87,997	$12,384	$61,635	$332,685	
Demolition Debris Management	Not available	$50,000	Not available	$83,798	$161,913	$115,770	$261,500	Not available

*See updated individual County budgets in Appendix D

8.0 PLAN REVIEW AND TEN-YEAR UPDATE

The Counties/WLSSD will abide by the planning rules and guidelines of the State of Minnesota, providing plans every ten years or as mandated. Each participant in the Northeast Minnesota Regional Solid Waste Management Plan will be responsible for updating their plan in ten years. However, prior to the due date for the updated plans, the NEWAC will discuss the potential for initiating an update to the regional plan. This plan was updated in March of 2026 to reflect changes in programs and MSW final destination.

9.0 GOAL VOLUME TABLE

Goal Volume Tables (GVT) for each County/WLSSD, as well as a regional GVT, are located in **Appendix X**. Key assumptions used in developing the GVTs are as follows:

- The 2020 population for the plan participants was taken from the U.S. Census.
- 10-year population growth projections were taken from county profiles on the Minnesota. Department of Employment and Economic Development website.
- These two sources were used to project population change each year through 2032 to update MPCA population projections.
- Estimated quantities for landfill disposal, organics, and recycling were correlated with the projected change in population.
- Recycling rate goals for 2032 were chosen for each County/WLSSD based on current recycling rates, existing programs, demographics, and feasibility.
- The increase in the individual recycling and organics numbers were adjusted for each County/WLSSD based on the proposed program initiatives.
- The "Total" numbers on the "Forecast and Sector Composition" tab include recycling, organics, and amount landfilled. On-site disposal numbers are not included in this total.
- Values in the GVT for St. Louis County reflect those associated with the population that resides outside of the WLSSD boundaries, to avoid double counting.
- Values in the GVT for Carlton County were adjusted to only include those associated with the population that resides outside of the WLSSD boundaries, to avoid double counting.
- The GVTs were then finalized for each County/WLSSD.
- The results from the individual Counties/WLSSD were used to develop a regional GVT.
- Updated GVTs for 2026 amendment are attached in Appendix C

10.0 DEVELOPMENT OF PROGRAM BUDGET

Based on the proposed regional implementation plan, planning level budget estimates were developed for the respective program initiatives. These planning level budgets for each proposed initiative are provided in **Table 10-1**. The key assumptions used in the development of the 10-year planning budget include the following:

- Program budget estimates represent 2022 dollars and are not inflated over the 10-year planning period.
- Program budgets for initiatives 3, 4, and 12 reflect one-time capital costs and could be annualized over the planning period with financing costs as an alternative approach.
- Budget estimates may vary depending on whether staffing and coordination is undertaken by County staff or external contractors.
- As specified in the implementation plan, federal, state, and non-governmental grants and loans will be actively pursued to offset program costs. Numerous grant opportunities are available for several of the initiatives.
- Specific assumptions for each initiative are provided below.

Table 10-1: Proposed Regional Initiatives Planning Level Budget

Program Initiative	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	Total
SOURCE REDUCTION AND EDUCATION											
(1) Development of Regional Communications Plan	$0	$7,500	$5,000	$2,500	$2,500	$2,500	$2,500	$2,500	$2,500	$2,500	**$25,000**
RECYCLING											
(2) Improve Recycling Program Through "Recycle Right" Campaign	$5,000	$55,000	$100,000	$50,000	$0	$0	$0	$0	$0	$0	**$210,000**
(3) Retrofit St. Louis County MRF to a Multi-Stream Processing Facility	$0	$1,000,000	$4,500,000	$4,500,000	$0	$0	$0	$0	$0	$0	**$10,000,000**
(4) Upgrade Existing Public Transfer Stations for Recyclable Materials	$0	$0	$1,000,000	$5,000,000	$0	$0	$0	$0	$0	$0	**$6,000,000**
(5) Explore Partnerships with Local Mfg. (e.g., ST Paper 1, USG, PCA)	$5,000	5,000	$0	$0	$0	$0	$0	$0	$0	$0	**$10,000**
(6) Develop/Maintain Regional Film Plastic Collection and Recycling Program	$16,800	$24,000	$36,000	$48,000	$48,000	$48,000	$48,000	$48,000	$48,000	$48,000	**$412,800**
SOURCE SEPARATED ORGANIC MATERIAL COMPOSTING											
(7) Expand SSOM Drop Sites Throughout Region	$10,000	$19,485	$25,980	$25,980	$25,980	$25,980	$25,980	$25,980	$25,980	$25,980	**$237,325**
(8) Curbside Organics Collection Roll-out	$0	$458,866	$142,725	$233,705	$40,637	$40,637	$40,637	$40,637	$40,637	$40,637	**$1,079,748**
(9) Increased Backyard Composting	$0	$4,225	$4,225	$4,225	$4,225	$4,225	$4,225	$4,225	$4,225	$4,225	**$38,025**
(10) Lake, Cook, Grand Portage Community Composting Program	$0	$10,000	$30,000	$10,000	$0	$0	$0	$0	$0	$0	**$50,000**
(11) Expansion of WLSSD, Carlton, St. Louis Composting Program	$0	$11,200	$15,000	$15,000	$100,000	$100,000	$100,000	$100,000	$100,000	$100,000	**$641,200**
(12) Implement WLSSD Combined Heat and Power (CHP) Project	$0	$0	$0	$500,000	$3,970,000	$5,072,000	$0	$0	$0	$0	**9,542,000**
MSW LAND DISPOSAL											
(13) Support Formation of Public/Private Partnership to Develop Landfills	$50,000	$75,000	$75,000	$20,000	$20,000	$20,000	$20,000	$0	$0	$0	**$280,000**
(14) Cooperatively Procure MSW Disposal Agreements	$0	$50,000	$50,000	$0	$0	$0	$0	$0	$0	$0	**$100,000**
HOUSEHOLD HAZARDOUS WASTE MANAGEMENT											
(15) Regional Household Hazardous Waste Program	$1,633,976	$1,633,976	$1,633,976	$1,633,976	$1,633,976	$1,633,976	$1,633,976	$1,633,976	$1,633,976	$1,633,976	**$16,339,760**

Notes:
(a) Budget estimates represent 2022 dollars.
(b) Capital costs reflect one-time costs, which could be annualized over the planning period.
(c) Budget estimates may vary depending on whether staffing is undertaken by County staff or external vendor.
(d) Program budgets may be offset by federal, state, and NGO grants.

Assumptions for each initiative:
(1) WLSSD/County staffing, program promotion, and implementation resources.
(2) Staff coordination with participating entities and the resources for developing the educational campaign.
(3) Planning level capital budget estimate for design, construction and equipment installation.
(4) Planning level capital budget estimate for design, construction, and equipment installation for up to three facilities.
(5) WLSSD/County staff time to plan and participate in multiple meetings.
(6) Pilot program planning costs and budget allowance for materials collection.
(7) Assumes 7 SSOM drop sites in 2023, 15 in 2024, and 20 ongoing beginning in 2025
(8) WLSSD staff time, equipment purchases, development of educational materials – timeline may change dependent on funding
(9) Assumes 0.01 FTE of time annually for three participating counties. Compost bins to be purchased and sold at cost.
(10) County/Reservation staffing, program promotion, feasibility study costs, implementation resources
(11) WLSSD/County staff time to plan and participate in multiple meetings, County service agreement development costs and budget allowance transportation of materials
(12) CIP budget estimate for design, construction and equipment installation
(13) Development of RFI, review of proposals, selection of partner, contract negotiations, and technical support through the permitting process
(14) Development of up to two RFPs (east and west subsets of counties/WLSSD), review of the proposals, selection of a service provider, and contract negotiations
(15) Annual county/WLSSD budgets for maintaining regional HHW program

11.0 ALTERNATIVES TO PROPOSED SYSTEM

If particular components of the proposed solid waste management system were to experience major operational difficulties, the Counties/WLSSD have contingency plans as outlined below.

11.1 MSW Disposal

Itasca County currently contracts for the hauling of its MSW to the Elk River Landfill in the northern Metropolitan Twin Cities area. If there was an operational disruption, Itasca County would consider entering into a short-term agreement to take their MSW to the St. Louis County Regional Landfill in Virginia or a private landfill outside the region. Because Aitkin County MSW is collected and transferred through three privately owned transfer stations to multiple landfills, the private transfer station operators would likely haul MSW to one of the private landfills currently used if operational disruptions occur.

Koochiching County currently hauls its MSW to a publicly owned Mar-Kit Landfill. If there were operational disruptions, Koochiching County would consider entering into a short-term agreement to take their MSW to the St. Louis County Regional Landfill in Virginia, Crow Wing County Landfill in Brainerd, or a private landfill outside the region.

Cook, Lake, and Carlton Counties and the WLSSD would competitively procure a contract for long-term MSW disposal. If an alternative is needed on a short-term basis, similarly, the WLSSD would collaborate with St. Louis County to enter into a short-term contract to take their MSW to the St. Louis County Regional Landfill in Virginia. Solid waste from Cook, Lake, and Carlton Counties and the WLSSD could continue to come to the WLSSD transfer station, but would be directed in the near-term to St. Louis County. If hauling to St. Louis County is not feasible, the Lake Area Landfill in Sarona, Wisconsin, would be the most likely alternative. The WLSSD has contracted with the Lake Area Landfill in the past to accept MSW. St. Louis County would continue disposing of the County's MSW at the Regional Landfill in Virginia. If the St. Louis County Regional Landfill in Virginia became inoperable or temporarily could not accept MSW, St. Louis County would enter into a short-term contract with the WLSSD to accept MSW from St. Louis County at the WLSSD transfer station.

11.2 Waste Diversion

The Counties/WLSSD would continue to work independently from one another to continue to successfully divert organics and recyclable materials from landfill disposal.

11.3 Household Hazardous Waste and Problem Materials

The Counties/WLSSD would continue to work together on a regional basis to implement their HHW programs. For the management of problem materials, the Counties and WLSSD will continue with their respective programs.

12.0 ENVIRONMENTAL AND PUBLIC HEALTH IMPACTS

12.1 On-Site Disposal

The approximate percentage of residents disposing of solid waste on-site in each County/WLSSD is summarized in **Table 12-1**. This solid waste never enters the "official" waste management collection system and is managed through burying or burning.

Table 12-1: Regional On-Site Disposal

County	On-Site Disposal Percentage
Aitkin	4.5%
Carlton	1.7%
Cook	1.1%
Itasca	2.0%
Koochiching	6.2%
Lake	3.0%
St. Louis	0.2%
WLSSD	1.0%
Region Total	**1.5%**

Although this method is easy and low cost to the waste generator, there are significant risks to public health and the environment from on-site disposal of MSW. These risks include:

- Contaminated surface and groundwater from the leachate resulting from the inappropriately burned or buried garbage;
- Air pollution from particulates and chemicals released during open burning in burn barrels;
- Health risks to nearby residents caused by open burning. Those especially at risk are young children, the elderly, and those with respiratory problems;
- Aesthetic issues from on-site dumping; and
- Grass/brush fires from trash fires.

Smoke from burning trash may contain arsenic, benzene, cadmium, carbon monoxide, chromium, dioxin, formaldehyde, hydrochloric acid, lead, nitrogen oxide, polyaromatic hydrocarbons and sulfuric acid. These pollutants and the small particulates which come from burning trash may cause such health problems as eye, nose, and throat irritation, lung irritation and congestion, skin irritations or burns, stomach or intestinal upset, eye damage and headaches or memory loss.

Under Minnesota law, only farmers are allowed to bury or burn solid waste generated from the household and farming operation, if the burying is done in a nuisance free, pollution free and aesthetically acceptable

manner on the land used for farming. The Counties/WLSSD Boards have the option to require collection by passing a resolution that states solid waste collection services are reasonably available throughout the Counties/WLSSD. Residents living on a farm, but not actively farming, are not eligible for this exception to State law (Minnesota Statute, Section 17.135).

The Counties/WLSSD may prohibit the deposit of other solid waste within the Counties/WLSSD through additional ordinance. The Counties/WLSSD may further require the owners or occupants of the property to remove the unauthorized deposit of solid waste or provide for the removal of the solid waste at the owner's expense (Minnesota Statute Section 375.18, subd. 14).

12.2 Illegal Disposal

There are significant risks to public health and the environment from illegal disposal of MSW. These risks include:

- Contaminated surface and groundwater from the leachate resulting from the illegally disposed garbage and
- Aesthetic problems from litter and the financial cost of cleanup.

Unlawful disposal of waste in or on public or private lands, shorelands, roadways, or water is cause for a civil penalty based on the cost to legally remove, process and dispose of the waste (Minnesota Statute, Section 115A.99). A person unlawfully depositing such material is guilty of a misdemeanor (Minnesota Statute Section 609.68).

12.3 Plans to Mitigate Impacts of On-Site Disposal and Illegal Dumping

The effects of both on-site and illegal disposal are increasingly being recognized as detrimental to public health and the environment. A small portion of residents in the northeast region are not currently served by a solid waste collection system, and a portion of those are assumed to be managing their waste on-site.

Complaints of illegal dumping are occasionally filed with the Counties' Sheriff's Office or the Department of Natural Resources. The county solid waste management departments respond to these complaints of illegal dumping on a case-by-case basis. The Counties/WLSSD encourage voluntary compliance through direct dialogue with the alleged violators.

Presently, the Counties/WLSSD conduct public education to discourage on-site disposal. In addition, the Counties/WLSSD encourage recycling by supporting municipal curbside collection and providing drop-off centers.

13.0 SOLID WASTE FACILITY SITING PROGRAM

As discussed in **Section 5.7**, the Counties/WLSSD will evaluate the potential of converting the General Waste and Recycling, LLC industrial landfill near Keewatin into an MSW landfill, and/or development of the St. Louis County proposed comprehensive solid waste management campus, which includes an MSW landfill, located in Canyon, or development of a new landfill at an alternative site, to serve the long-term MSW disposal needs of the region after the closure of the Superior Landfill and the St. Louis County Regional Landfill. The purpose of pursuing the conversion of these sites into MSW landfills is to provide the region with adequate disposal capacity and reduce overall hauling distances and the related costs associated with the region's current MSW disposal system (summarized in **Figure 3-1**). As discussed previously, several Counties are currently hauling their MSW over 100 miles for disposal. The hauling distance reduction, cost per ton savings, estimated reduction in fuel usage, GHG reductions, and total fuel cost savings associated with this proposed system are summarized in **Section 4.2.2**. Provided below is a discussion on two existing industrial landfills in the region and the siting criteria and permitting process for potentially converting the industrial landfills into MSW landfills.

13.1 Siting Criteria for MSW Landfills

Chapter 7035 of the Minnesota Administrative Rules addresses solid waste management. Rule 7035.2555 provides the location standards that apply to solid waste management facilities. The location standards contain exclusionary criteria that specify that solid waste management facilities may not be located in a floodplain, within a shoreland or wild and scenic river land use district, within a wetland, or within a location where emissions of air pollutants would violate ambient air quality standards. Additional criteria may be considered during the siting process based on stakeholder feedback.

13.2 Existing Industrial Landfills

Provided below is a description of each of the two industrial landfills currently located in the northeast region[6].

13.2.1 Keewatin

The General Waste & Recycling LLC industrial landfill located in Keewatin (Keewatin Landfill) is owned and operated by General Waste & Recycling, LLC. The landfill is located at 35005 Highway 571,

[6] Information on the Keewatin and Canyon Landfills, including their permitted capacity and design capacity, was taken from their draft permits (2017).

Keewatin, MN 55753 in Itasca County, on the south side of Highway 169. The Keewatin Landfill is adjacent to a mining lake on its west side and the City of Keewatin on its north side, across Highway 169, and is located on a 140-acre parcel.

The Keewatin Landfill is currently permitted for four unlined Class II C&D landfill cells and two lined industrial landfill cells. Class II C&D landfills are permitted to accept incidental nonrecyclable packaging consisting of paper, cardboard, and plastic, and demo-like industrial wastes comprised of wood, concrete, porcelain fixtures, shingles, and window glass. Industrial landfills such as the Keewatin Landfill are permitted to accept the wastes outlined in their approved Industrial Solid Waste Management Plan (ISWMP). The Keewatin Landfill is currently not permitted to accept MSW or industrial solid waste that is not identified in its approved ISWMP. The Keewatin Landfill is permitted for 370,226 total cubic yards of demolition debris and 1,054,704 total cubic yards of industrial waste.

The Keewatin Landfill performs groundwater, leachate, and surface water quality sampling and analysis on a regular basis.

13.2.2 The Voyageur Disposal and Processing Landfill

The Voyageur Disposal & Processing Landfill located in Canyon (Canyon Management Facility) is owned and operated by Voyageur Disposal & Processing, Inc. The facility is located at 6830 Highway 53, Canyon, Minnesota 55717 in St. Louis County, on the west side of Highway 53. The facility encompasses approximately 210 acres.

The Canyon Management Facility consists of an unlined demolition debris landfill that is at capacity, two unlined industrial solid waste cells on top of the demolition debris cells, and three lined industrial solid waste cells to the north and east of the unlined area. The unlined demolition debris land disposal facility occupies approximately 18 acres, and the industrial solid waste land disposal facility occupies approximately 29 acres. The Canyon Landfill is permitted to accept the wastes outlined in its approved ISWMP. Per the Landfill's permit, the Canyon Landfill is not permitted to accept liquids, infectious waste, raw animal manure, septic tank pumpings, digested sewage sludges, lime sludges, grit chamber cleanings, bar screenings or other sludges. The Canyon Landfill is permitted for 344,540 total cubic yards of demolition debris and 5,393,199 total cubic yards of industrial waste.

The Canyon Management Facility performs groundwater and leachate quality sampling and analysis on a regular basis, has a gas monitoring program, and conduct quarterly methane monitoring.

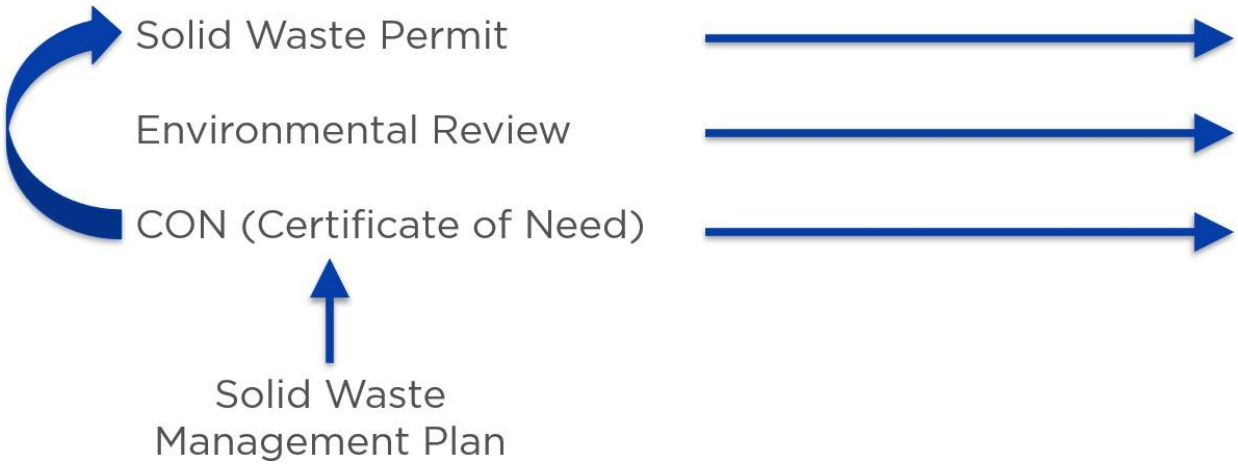
13.3 St. Louis County Proposed Comprehensive Solid Waste Management Campus

St. Louis County Environmental Services is proposing to site a new RCRA Subtitle D MSW landfill on 800 acres in the Canyon area to accept waste from the 7-county region and have capacity to cleanup and consolidate old dumps and closed landfills. As part of the construction, the campus would include a state-of-the-art Materials Recovery Facility. It will be designed as a zero carbon footprint facility by integrating renewable energy systems such as a solar farm, landfill geothermal systems, and landfill gas recovery systems. It would also include an advanced leachate treatment system to treat a wide array of contaminants of concern, including PFAS, before discharging onto a land application field. This new facility would include a robust monitoring network of groundwater wells, leak detection risers surrounding the subtitle D landfill liner, and a landfill gas monitoring network

13.4 Permitting Process

The MSW landfill permitting process is summarized in **Figure 13-1** and consists of three parallel tracks that apply to expanding an existing MSW landfill or converting an industrial landfill into an MSW landfill.

Figure 13-1: MSW Landfill Permitting Process



Minnesota Rule 7035.2815 provides the requirements for mixed municipal solid waste land disposal facilities including the following:

- Location
- Hydrogeologic evaluation
- Groundwater performance standards

- Design requirements
- Intermittent, intermediate, and final cover system
- Liner requirements
- Cover and liner evaluation
- Leachate detection, collection, and treatment system
- Water monitoring systems
- Gas monitoring, collection, and treatment system
- Construction requirements
- Operation and maintenance requirements
- Sampling and analysis
- Contingency action
- Closure and post closure care

Facilities applying for a permit to construct an MSW landfill must submit the MPCA's Mixed Municipal Solid Waste Landfill Application Checklist with their application. This checklist applies to both new MSW landfills and converting an industrial landfill into an MSW landfill.

By rule, potential MSW landfills are required to undergo an environmental review that analyzes such items as endangered species, archeologic impacts, surface water impacts, and groundwater impacts, as well as specifying the design technologies being presented to mitigate those potential impacts. Landfills that take in less than 100,000 cubic yards per year of MSW require an Environmental Assessment Worksheet (EAW), and landfills that take in more than 100,000 cubic yards per year of MSW require an Environmental Impact Statement (EIS). An EIS requires a more comprehensive evaluation of potential environmental impacts than an EAW.

The CON will be determined via evaluation of various integrated solid waste management issues, including available landfill capacity within the region.

14.0 PUBLIC PARTICIPATION

14.1 Regional Stakeholder Engagement

To gather regional input to develop a roadmap for the future of solid waste management in the region, each SWONER representative selected five to seven individuals from their respective County/WLSSD to participate in a regional stakeholder group. A total of 51 representatives were selected representing a range of stakeholder interests including, but not limited to the following:

- Solid waste and recycling industry
- Key business leader/large employer
- Elected local governmental official
- Historically underrepresented communities
- Civic and/or environmental group
- SWONER
- Other

To assist with identifying potential tribal representatives, the MPCA Tribal Contacts List at https://www.pca.state.mn.us/sites/default/files/p-gen5-25.pdf was used as a resource. With this background information, tribal representatives from the Grand Portage, Fond du Lac and Bois Forte Bands were invited to participate in both the regional stakeholder and SWONER update meetings. In addition to active participation in stakeholder meetings, officials from both the Grand Portage and Fold du Lac Bands assisted in drafting language for the plan and have indicated desires to collaborate and participate in accomplishing regional goals as it relates to organics collection, film plastic recycling and more. In identifying and recruiting representatives, each SWONER was encouraged to convey participating in the stakeholder engagement process provided an opportunity for the following:

- Learn more about state-of-the-art solid waste management and materials recovery programs and
- Collaborate with others to begin developing the roadmap for the future of solid waste and sustainable materials management for their respective community and the NE region.

The overall objectives of the regional stakeholder engagement process were the following:

- Gain a better understanding of regional stakeholder goals and perspectives;
- Identify potential regional solid waste system management alternatives, including both materials recovery and disposal options;
- Assist with identifying criteria (e.g., technical, environmental, economic) for evaluating the alternatives; and
- Identify potential preferred alternatives for additional consideration.

Table 14-1 summarizes the stakeholder engagement meetings held to gather input on proposed solid waste alternatives for the regional plan.

Table 14-1: Summary of Regional Stakeholder Planning Meetings

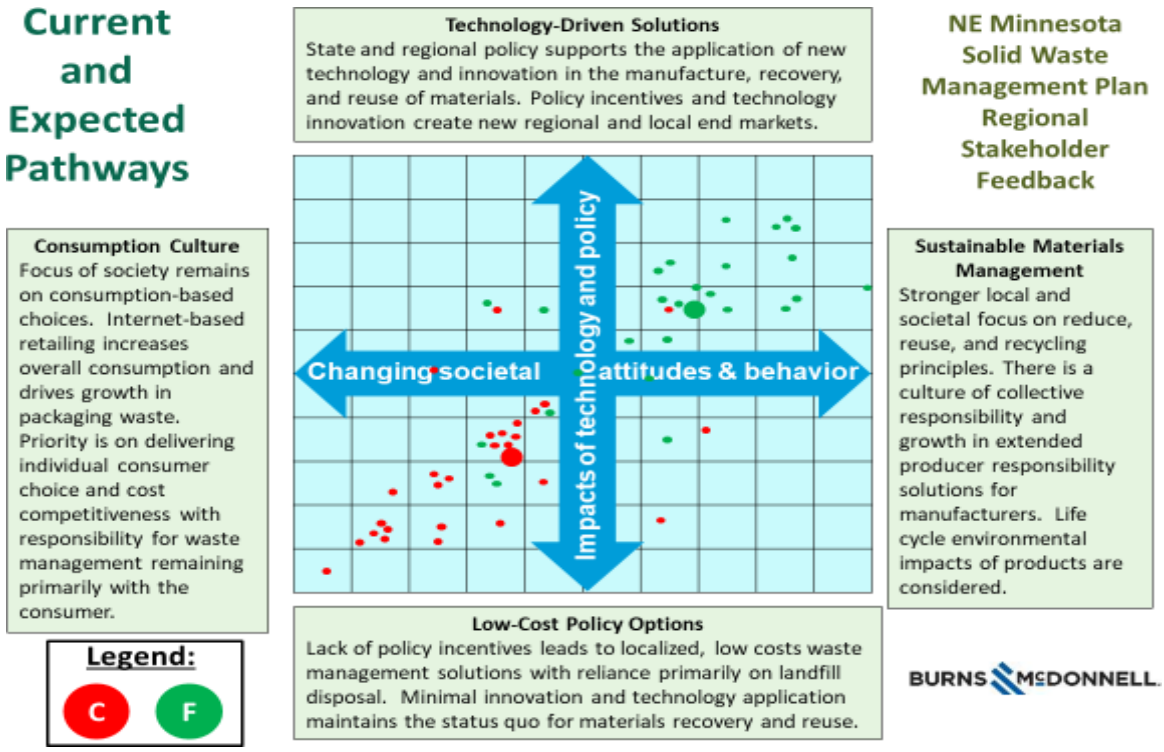
Date/Location	Meeting Description
August 18, 2021 (In-Person) August 20, 2021 (Virtual)	Regional Stakeholder Engagement Meeting #1
September 27, 2021 (In-Person) September 28, 2021 (Virtual)	Regional Stakeholder Engagement Meeting #2
January 20, 2022 (Virtual)	SWONER – Regional Opportunities for Disposal and Materials Diversion – Meeting #1
February 2, 2022 (Virtual)	SWONER – Regional Opportunities for Disposal and Materials Diversion – Meeting #2
February 9, 10, and 14, 2022 (Virtual)	SWONER/NEWAC Interviews (staff and elected official)

The regional stakeholder engagement group meetings #1 and #2 offered in-person, virtual, and hybrid meeting options. The regional stakeholder engagement meetings addressed the following:

- Overview of the northeast Minnesota regional solid waste system
- Survey of stakeholder opinions concerning waste management
- Small group break-out sessions addressing potential current and future pathways challenges/barriers, planning criteria, and opportunities to collaborate on a regional basis
- Description of materials recovery and solid waste disposal options

To set the stage for regional stakeholder discussions, each of the stakeholders asked to review the diagram below and depict where their programs are “currently” and “expected in the future” to be located relative to changing societal attitudes and behavior and impacts of technology and policy. **Figure 14-1** below provides the results from the exercise with the stakeholders.

Figure 14-1: Current and Expected Pathways



Red dots represented where stakeholders currently view their solid waste programs and the green dots represented where stakeholders expect their solid waste programs to be in the future. The small red and green dots reflect the assessment by individual stakeholders and the large red and green dots represent the approximate quadrant locations when averaging all of the individual stakeholders' placement. As reflected, most of the stakeholders perceived their current programs to be located in the lower left quadrant reflecting a consumption culture and low-cost policy options. The majority of stakeholders perceived their expected future programs to be located in the upper right quadrant reflecting a sustainable materials management culture with more technology-driven solutions. This reflects optimism among the regional stakeholders that attitudes, behavior, policies, and technology will shift programs over the long term.

Table 14-2 on the following pages summarizes the outcomes from the small group breakout discussions in meetings #1 and #2. The objectives of the discussions were to identify the perceived greatest program challenges/barriers, discuss potential strategies to overcoming these barriers, and identify opportunities to collaborate regionally to develop solutions.

Table 14-2: Summary of Regional Stakeholder Meeting Breakout Discussions

Challenges/Barriers [Stakeholder Survey]	Potential Strategies/Solutions [Regional Stakeholder Meeting #1]	Regional Strategies/Solutions [Regional Stakeholder Meeting #2]
Lack of landfill disposal capacity in the region	• Utilize existing St. Louis County Regional Landfill after Superior Landfill closes • Enhanced Waste Diversion • Relax state regulations to allow more MSW landfills • Analyze existing industrial landfills for conversion to MSW landfills • Consider more processing options (energy from waste)	• Regional location (new or additional space) • Expand footprint of St. Louis County Regional Landfill for disposal of NE region's MSW for 20 years starting in 2027 • Landfill owns regional transfer stations network • Tip fees that help cover costs (low enough to avoid abandonment; may include balanced fees) • St. Louis County opens landfill • Support letters for certificate of need • Identify areas where there can be landfills or more transfer stations – hub and spoke • More regional landfill(s) (save on transportation costs) • No indoor transfer facility (big costs) • Enhanced waste diversion – regional composting? (keep materials from landfills that don't need to be landfilled) • Flow control on where the waste can go
Adequate program funding	• Regional solid waste assessment supported with educational campaign • Use more state solid waste fee revenues for County program costs • Product stewardship for problematic materials • Sales tax on solid waste generates ~$80 million and should be more equitably shared with Counties • Capture more state solid waste tax revenue	• State assistance to help balance fees around region (sales tax money) • Balanced fees to help with public buy-in • Recycling and MSW will likely need 2 distinct approaches • Shared educational messaging • Public buy-in to recycling etc. can help reduce waste – lower volumes that need to be transported • On "Product stewardship for problematic materials" bullet: hopeful for progress in these areas • Funding is a big impact for counties • Many counties operate on shoestring budget, would be better if enough funding • Differentiate between capital funding and operational funding (capital funding through bonding bill, operational through user fees) • Make sure money from general fund goes back to counties that raised those funds (referring to last 2 bullet points)

Challenges/Barriers [Stakeholder Survey]	Potential Strategies/Solutions [Regional Stakeholder Meeting #1]	Regional Strategies/Solutions [Regional Stakeholder Meeting #2]
		• Recycling – dependent on markets (why do we not still collect it even when markets are bad?) (something more positive) • Subsidize markets for recycling (state subsidized) • Need to continue to make it a priority with legislation • In addition to solid waste tax funding it and funding in general • Leverage NEWAC, Solid Waste Administrators Assoc. (SWAA) • Need the SWMP to indicate regional requirement to recycle both commercially and residentially
Long hauling distances for disposal	• Develop hub/spoke approach • Develop regional strategy with regional facilities and hub/spoke approach • Consider subsidizing rural counties to use out-of-County transfer stations	• Will likely vary between MSW and recycling • Concentrate on developing end markets locally. Incentivize use of products by pursuing new technologies available • New reuse goals for various materials • Subsidize transportation costs and not disposal costs • "East Central" funding/financing model • Regional landfills considered • Unused landfill in Taconite Harbor- construction waste? (regional) • Cook County: no solid waste transfer station – small trucks hauling • Importing/exporting waste to Canada
Adequate access to recycling processing centers	• Rural areas need better access • Need to ensure access to collection and processing centers • Need legislative funding to support processing facility and end market development • Example: Provide financial incentives for recycled paper mill to locate in Duluth	• Make recycling more consistent between counties • Hold on to materials until markets improve • Transportation, everything sent to metro • More regional recycling, transfer stations • Regional materials processing • Yes, depending on the regions (regarding "rural areas need better access" comment) • Need to work with state SWAA, MPCA, work with NEWAC to reflect our needs
PFAS and future regulatory impacts	• No requirements at this time, but need to monitor	• State funding for any regulatory requirements • More of a burden on local governments • Closely monitor at this time

Challenges/Barriers [Stakeholder Survey]	Potential Strategies/Solutions [Regional Stakeholder Meeting #1]	Regional Strategies/Solutions [Regional Stakeholder Meeting #2]
	• Hold upstream generators accountable • Be engaged in applicable rulemaking process • Closely monitor going forward	
Permitting and regulatory constraints	• SWMP requirements • Approve regional landfills • Public involvement	• No new landfills permitted since 1993 • Need major modification from MPCA to expand Regional Landfill footprint and ultimate capacity • Need continued discussion of citing modern landfill • We should be able to build if we have modern technology • High priority. Doing a regional plan
Lack of strong end markets for recoverable materials in the region	• End markets ➔ regulation • Material technologies • Markets need to be improved to increase recycling rates • Severe constraint on recycling. Focus on improving end markets for high value materials • State funding to help establish businesses in the region that use recycled materials • Legislative funding needed to support market development	• Product Stewardship • Legislation at beginning vs. end of deciding what is recycling/how to recycle (i.e. – what can recycling be used for?) • Clarify what you want to recycle – focus on what there is a market for? (focus on education as part of this) • Curbside vs. drop off recycling? • Partnerships with NRRI and others • Legislative lobbying for support – have to be squeaky wheel • Need a regional solution too

As reflected in **Table 14-2**, the greatest challenges/barriers identified by the regional stakeholders were the following:

- Lack of landfill disposal capacity in the region
- Adequate program funding
- Long hauling distances for disposal
- Adequate access to recycling processing centers
- PFAS and future regulatory impacts
- Permitting and regulatory constraints
- Lack of strong end markets for recoverable materials in the region

These challenges/barriers exist, in part, because of the geographic size of the region, lack of population density in most areas of the region, and the current policy and regulatory framework. A number of potential regional strategies were identified for consideration.

Subsequent to these regional stakeholder meetings, two additional virtual meetings with the SWONER were scheduled to review the regional stakeholder meeting outcomes and begin to formulate a consensus around specific regional strategies. To supplement these group discussions, a series of meetings were scheduled with each SWONER and their respective lead elected official to better understand individual County/WLSSD program issues and prioritize the opportunities to collaborate as a region. This series of meetings was very beneficial because they presented an opportunity to address in greater detail how to align local and regional program needs.

The outcomes of the regional stakeholder engagement process described was used to formulate the proposed system.

14.1 Public Comment

Upon the MPCA's preliminary decision to approve the Regional Plan, the MPCA shall provide public notice for public comment. The Plan will be placed on public notice by the MPCA and will be available for review and comment for 30 calendar days. Each County/WLSSD will put the plan on display based on its own policies. After the 30-day public comment period, the MPCA and the NEWAC, upon consultation with the SWONER, will review the public input and provide direction on revisions (if necessary). The Plan will then be finalized, approved by the respective Counties/WLSSD, and made available to the public at designated locations. This process was repeated for the Plan Amendment in 2026.

APPENDIX A – HISTORY OF COUNTY SOLID WASTE SYSTEM DEVELOPMENT

A.1 History of System Development – Aitkin County

Minnesota's statewide recycling efforts began in earnest in 1989, when the Legislature adopted comprehensive legislation based on the recommendation of the Governor's Select Committee on Recycling and the Environment (SCORE). This set of laws, commonly referred to as SCORE, initiated a "stable" source of State funding for programs related to recycling, waste reduction, and the improved management of household hazardous wastes and problem materials. SCORE related programs are a key element of Aitkin County's integrated solid waste management program which are administered by the Environmental Services Department.

The County's efforts on developing a solid waste management program began in 1974 with the permitting of the Aitkin Area Sanitary Landfill (SW-145). This landfill was in operation for approximately 16 years; ceasing operation in 1990. Prior to this, many of the communities within the County had their own local dump. In 1990, Aitkin County entered into an agreement with Garrison Disposal for providing recycling services within Aitkin County. In 1992, Aitkin County received a Capitol Assistance Program Grant from the Office of Environmental Assistance for the construction of the Aitkin County Recycling Center. The recycling center became the focal point for recycling, hazardous waste and problem material collection. In 1995, the Oak Ridge Demolition Landfill was permitted by the MPCA (SW-541). In 2010, Aitkin County expanded its recycling agreement to include J&H Transfer for recycling services. Currently, all mixed municipal solid waste is being collected by private haulers which operate their own transfer stations or direct haul to the Elk River Landfill or East Central Landfill.

Past solid waste planning activities have focused on the closure of two landfills in the County and ensuring that opportunities exist for citizens and businesses to dispose of waste. Some of these activities include:

- Solid waste management plans completed in 1987, 1992, 1996, and 2003.
- Contractual arrangements with Garrison Disposal for recycling services since 1992.
- Contractual arrangements with J&H Transfer for operation of the McGregor Transfer Station since 2007. Contractual arrangements with J&H Transfer for recycling services since 2011.
- Providing household hazardous waste and very small quantity generator services in conjunction with WLSSD.

A.2 History of System Development – Carlton County

The northeastern portion of Carlton County is within the jurisdiction of the WLSSD, including the cities of Carlton, Cloquet, Scanlon, and Wrenshall; and Thomson, Twin Lakes and Silver Brook Townships. Private haulers provide waste disposal and recycling services within these communities in Carlton County. The county recycling sheds, North Carlton County Transfer Station, and household hazardous waste services are also available within these communities. The WLSSD provides some educational services and certain specialized programs to county residents.

The Carlton County Planning and Zoning office administers the County's solid waste and recycling program that serves the entire County, including the portion within WLSSD. Additionally, the County cooperates and participates with the WLSSD to provide certain services, education and programs. The County and WLSSD have operated under a Joint Powers Agreement since 1985, with amendments as required. Since its inception, the Carlton County waste management program has expanded to meet state recycling goals and other solid waste management initiatives. The first Solid Waste Management Plan for Carlton County was approved by the State in 1985. Subsequently, this plan was updated in 1991 and 2000. Over the last thirty years, the County has broadened solid waste services to provide:

- Expanded recycling services,
- Education to residents and businesses for waste reduction and reuse, conservation, and household hazardous waste management,
- Additional staff to manage the solid waste and recycling programs and services,
- Administration of the Solid Waste Ordinance, as amended, to require and regulate the disposal of solid waste and implement recycling programs,
- Participation with the Minnesota Pollution Control Agency (MPCA), the WLSSD, the Duluth Centroid in demonstration projects (for example, mattress recycling) and solid waste and recycling planning efforts.

A.3 History of System Development – Cook County

Cook County has successfully managed its solid waste since 1988. Cook County provides a solid waste management programs and services to be utilized by its citizens and cooperates with nearby counties to provide additional resources and services when possible. Through careful cooperative planning, Cook County hopes to continue successfully managing solid waste.

Cook County adopted a Solid Waste Ordinance as part of its Public Health Code on February 27, 1979. Chapter 2 of the Public Health Code deals with solid waste, including its storage, transportation, and disposal; licensing collectors and haulers; and regulations for sanitary landfill sites.

A.4 History of System Development – Itasca County

Prior to closing of the landfills, an examination of waste disposal options was investigated by the County seeking alternatives that would allow processing portions of our waste stream through composting, incineration, or other mixed waste processing techniques. The process involved our County, the surrounding NEWAC counties and WLSSD to combine efforts for sufficient volume to make siting of a landfill, processing plant, or incinerator a viable option. Coordination of these efforts found restraints due to in-place management systems and contracts as well as available capital investment funds.

In 1994, the County constructed a transfer station, which was operated by the County Engineer's Department. During this time, Itasca County delivered a portion of their waste under Contract to the Quadrant Co. Incinerator in Perham, Minnesota and the remaining waste was delivered to the McLeod Landfill. Prior to the termination of the Quadrant Co. Contract in 1996, a decision was made by the Itasca County Board of Commissioners not to renew the Contract and to seek proposals for a Comprehensive Solid Waste Management Contract to include MSW disposal, transportation, recycling, and operation of the County Transfer Station and Demolition Land Disposal Facility (LDF).

After an extensive selection process, a decision was made by the County Board to enter into a contract with SWIS Corp. effective November 5, 1996 – January 1, 2000 to provide an integrated solid waste service for the County. The Board's decision was based on the primary positive environmental impact of the SWIS Corp. proposal to reduce landfill dependency by removing recyclables and composting of MSW. After 16 months into the Contract, it was evident that SWIS's RFP claim of 85% waste reduction and processing could not be met and in fact nearly all MSW waste was being landfilled. As this was contrary to the Board's reasoning for entering into the Contract, a decision was made on 10/28/97 to prepare a letter of intent to terminate the contract effective 4/30/98. Simultaneously the Board gave approval to begin negotiations with Waste Management (aka Zenith/Kremer) based on their proposal submitted during the initial RFP process for solid waste management services that would provide continuation of a source separated recycling program with more up-to-date equipment, a state-of-the-art landfill facility in Elk River and the advantage of a lower financial cost.

- **1973** – Itasca County receives permit #SW-135 for the Grand Rapids Area Landfill
- **1985-87** – 28 non-conforming modified landfills close
- **1987** – All non-conforming modified landfills re-vegetated and erosions control measures installed
- **1986-94** – Itasca County receives 5-year permits for the continued operation of the Grand Rapids Area Landfill

- **1988** – The Waste Management Board approved the Itasca County Solid Waste Management Plan
- **1989** – Itasca County Board of Commissioners voted to accept a recommendation of the Itasca County Solid Waste Advisory Committee to discontinue any future expansion at the Grand Rapids Area Landfill and began the siting process for a new landfill
- **1990** – Itasca County signed a contract with Quadrant Co. to dispose of a portion of MSW at the Perham Incinerator allowing the remaining capacity at the Grand Rapids Area Landfill to extend until a new landfill could be opened
- **1990** – Itasca County staff met with townships regarding four (4) potential landfill sites
- **1991** – The Office of Waste Management approves the SCORE amendment
- **1992** – The Itasca County Board of Commissioners voted to discontinue sears for a landfill in the County and build the Transfer Station
- **1993** – Construction began on the Itasca County Transfer Station and Household Hazardous Waste (HHW) building
- **1993** – Itasca County receives permit for construction and operation of the Itasca County Transfer Station, Permit #SW-436
- **1994** – Itasca County receives permit for construction and operation of Demolition Land Disposal Facility Permit #SW-436
- **1994** – Itasca County Transfer Station opens. Grand Rapids Area Landfill closes and receives final cover.
- **1994** – HHW Facility opened for use
- **1994** – Itasca County signs contract with Quadrant Co. & Sanifill, Inc. to provide for disposal of all MSW generated in the County
- **1995-current –** Itasca County receives continuous 5-year permits for 14 outlying transfer station - #SW-482
- **1995-2011 –** Itasca County receives Spring Lake (#SW-494) and Bray Lake (#SW-495) Demolition Land Disposal Facility 5-year permits
- **1997** – Itasca County signs contract with SWIS Corp. Inc. for solid waste management and recycling services.
- **1998-2013** – Itasca County terminates contract with SWIS Corp. Inc. Itasca County signs contract with Zenith Kremer Waste System Inc. (Waste Management) for solid waste management and recycling services.
- **2005** – Spring Lake Demolition and Land Facility Expansion Permit and construction
- **2006** – Begin Electronics Recycling Program
- **2007** – Initiate free electronics recycling for residents
- **2007** – Construction of new demolition land disposal facility in Cohasset
- **2008** – Three-year permit renewal for Spring and Bray Lake Demo LDF on condition of closure by 2011 in lieu of installing monitor wells
- **2010 –** Conduct energy audit by ESG at Transfer Station
- **2010** – Close Cohasset Demo LDF and begin using new demo facility

- **2011** – Itasca County Board adopts resolution prohibiting on-site burning of garbage
- **2011** – Install energy saving lighting and enter into contract with the City of Cohasset for gas heat to the Transfer Station buildings
- **1995-2011** – Itasca County receives Spring Lake #SW-494 and Bray Lake #SW-495 – 5-year continuous Demolition Land Disposal Facility Permits
- **2011** – Bray and Spring Lake Facilities close
- **2011-12 –** Final cover completed on Bray and Spring Lake demo sites

A.5 History of System Development – Koochiching County

Koochiching County adopted a solid waste ordinance in 1996 that covers fees, licensing, assessments, and regulations for the disposal of waste within the County. The County has received notices of compliance for the landfills in International Falls and Northome. Both landfills stopped accepting waste in 1992 and were entered into the MPCA Closed Landfill Program.

A.6 History of System Development – Lake County

Lake County began meeting with other counties in the region in 1991 and became part of the group Solid Waste Officers of North Eastern Region (SWONER). In 1992, this group expanded into the NEWAC group to include County Commissioners; both groups are still active today.

The County submitted its first Solid Waste Management Plan in 1986. A committee was formed in 1989 to revise the plan to incorporate the Castle Danger Landfill. However, by the time the plan was completed in 1991, the landfill had reached permitted capacity and ceased accepting waste. The County began hauling waste to the WLSSD refuse-derived fuel (RDF) facility. In the late 1990s, the RDF facility was closed and replaced with a transfer station. The majority of Lake County MSW is currently managed at the WLSSD Solid Waste Transfer Station. Lake County originally adopted the Lake County Solid Waste Ordinance in 1974. The Ordinance was revised and adopted in 1992.

A.7 History of System Development – St. Louis County

Historic solid waste management system development activities include:

- Closure of 16 landfills within the solid waste management area (SWMA). All of these have undergone closure and 14 were transferred to the Minnesota Pollution Control Agency in 1996 for post-closure monitoring and maintenance;
- 1988 waste-to-energy facility studies (Technical and Financial Assessment of Solid Waste Management Alternatives for St. Louis County Appendix O of the 1996 St. Louis County Solid Waste Management Plan for document);
- 1990 mixed MSW composting studies (Solid Waste Management Alternatives for St. Louis County (see Appendix P of the 1996 St. Louis County Solid Waste Management Plan);

- 1991 study – St. Louis County/WLSSD Solid Waste Management Options (Appendix Q of the 1996 St. Louis County Solid Waste Management Plan);
- Ongoing consideration of increased usage of the WLSSD RDF facility until the closure of that facility in 1999;
- Participation in the Northeast Waste Advisory Commission (NEWAC) and other regional efforts;
- Various cooperative public/private ventures including 1992 request for proposal for operation of MSW composting facility for SWMA waste;
- Development of a "Cooperative Solid Waste Processing and Disposal Options Report" in December of 1993 (Appendix R of the 1996 St. Louis County Solid Waste Management Plan);
- Test burns of WLSSD-prepared pellets during 1994 to determine the potential for pelletizing a portion of the County waste stream and selling it to existing markets;
- Review of expansion of WLSSD waste incineration capacity during the NEWAC process; and
- Joint discussions between the County and WLSSD with Synertec during 1995 aimed at identifying potential options for cooperative action.
- Development of SWMA-wide recycling collection program;
- 1992 to present: participation in regional solid waste discussion groups, Northeast Waste Advisory Council (NEWAC) and Solid Waste Officers of the Northeast Region (SWONERS)
- 1995 Department Strategic Planning;
- 1995 – 1998 MSW processing facility analyses;
- The Northeast Minnesota Compost Market Feasibility Study;
- 1995 the Arrowhead Regional Development Commission (the staffing entity for NEWAC at that time) presented background materials for discussion with County Boards that contained analysis of six basic regional solid waste management options (see Appendix S of the 1996 St. Louis County Solid Waste Management Plan);
- 1995, the Minnesota Department of Natural Resources contracted for a report titled "The Potential to Supply MSW Compost for Mineland Reclamation in Northeastern Minnesota." (See Appendix T of the 1996 St. Louis County Solid Waste Management Plan).
- 1995 "Report on Transitional Planning for the Solid Waste Department" (Appendix U of the 1996 St. Louis County Solid Waste Management Plan);
- 1998 Northeast Minnesota Compost Markets Study (R.W. Beck);
- 1999 Processing Evaluation Team, members included Department, WLSSD and MPCA staff;
- 1999 participation in the MSW Composition Study for the Solid Waste Management Coordinating Board (R.W. Beck, January 2000)
- 1999 Department study of low-tech source separated options including small scale localized composting projects.
- 2001 electronics recycling program;
- 2002 evaluation of source separated organics composting alternatives;
- 2002 evaluation of source separated demolition waste recovery alternatives; and

- 2002 MSW and demolition materials WTE discussions with Laurentian Energy Authority and Minnesota Power.
- 2004 to present evaluation of demolition material processing;
- 2006 regional mattress processing program;
- 2007 evaluation of efficiencies at the Regional Landfill;
- 2009 participation in State MEI "Centroid" planning;
- 2011 landfill gas recovery evaluation;
- 2012 review of MSW processing feasibility; and 2012 evaluation of additional plastics recycling collection.
- 2014 expanded leachate spray field by acquiring 48 acres of land to the north of the existing field.
- 2014 leachate spray operations moved away from fixed head sprayer system to mobile spray gun system.
- 2015 opened new canister site in the Cedar Valley area to service remote community.
- 2017 implemented a landfill gas capture system that compresses the gas to use in heating the Materials Recovery Facility located next to the landfill.
- 2017 began feasibility study on siting new MSW landfill at or near the existing Voyageur's Disposal Landfill in Canyon, MN.
- 2018 construction event placed final closure cover on 9.5 acres of the Regional Landfill.
- 2019 began tests on feasibility of constructed wetlands in advanced leachate treatment.
- 2022 secured funding through the Legislative-Citizen Commission on Minnesota Resources (LCCMR) to fund demonstration scale wetland project through 2026.
- 2022 construction of demonstration scale constructed wetlands to treat PFAS and other contaminants of concern.

A.8 History of System Development – WLSSD

The WLSSD's first Solid Waste Management Plan was developed in 1975. This marked the beginning of a role the WLSSD would continue to play in solid waste management throughout WLSSD's legislative area. Since then, solid waste management has undergone significant changes at the national, state and local levels. Throughout, the WLSSD has maintained a solid waste management plan and programs which effectively manage solid waste and meet the obligations of the State of Minnesota. More details on the WLSSD's history are summarized below.

- **1971** – The Western Lake Superior Sanitary District is created by Minnesota State Legislature
- **1974** – State of Minnesota amends WLSSD enabling legislation (Minnesota Statute Chapter 458D) to expand responsibilities to include solid waste management
- **1975** – WLSSD adopts first Solid Waste Management Plan
- **1979** – WLSSD acquires the Rice Lake MSW Landfill from the Duluth Disposal Company

- **1981** – WLSSD Solid Waste Processing Facility (SWPF) and Refuse Derived Fuel (RDF) incineration system begins operation
- **1984** – WLSSD partners with the MPCA to hold one of the first household hazardous waste collection days in Minnesota
- **1989** – MN Legislature grants WLSSD additional responsibility and authority to implement the mandates of the Select Committee on Recycling and the Environment (SCORE). SCORE legislation gives WLSSD the authority to license and regulate fees for the collection of solid waste in order to implement District-wide recycling programs.
- **1990** – WLSSD Enacts "Ordinance Relating to Mixed Municipal Solid Waste Management and Recycling" on August 14, 1990.
- **1990** – WLSSD enters into an agreement with the MPCA to establish a regional Household Hazardous Waste (HHW) collection program
- **1991** – WLSSD bans yard waste effective January 1, 1991 from MSW delivered to the District's SWPF
- **1992** – Permit #SW-232 reissued for the WLSSD Rice Lake MSW Landfill
- **1992** – Recyclable materials are prohibited from District SWPF effective January 1, 1992
- **1993** – WLSSD enacts an Industrial Solid Waste Management Plan
- **1993** – District granted permit (SW-437) for new Industrial Solid Waste Land Disposal Facility opened in November
- **1994** – District enacts "Solid Waste Disposal Regulations" which governs solid waste collectors and controls the types of wastes that can be disposed of at District facilities – amended in February 1997
- **1994** – WLSSD Regional HHW building opened in January funded from a grant from the Office of Waste Management
- **1994** – WLSSD yard waste compost facility opens in September to provide a disposal solution after State passed ban of yard waste in landfills
- **1995** – WLSSD Clean Shop Program initiated for business hazardous waste disposal
- **1996** – WLSSD "Ordinance – Solid Waste Management Fee for the Western Lake Superior Sanitary District" effective March 1, 1996
- **1998** – WLSSD "Ordinance Governing Solid Waste Management and Recycling" (Solid Waste Ordinance) effective April 14, 1998
- **1999** – WLSSD "Ordinance Regulating Solid Waste Operations" adopted April 19, 1999 authorizes WLSSD to regulate and permit solid waste facilities
- **1999** – WLSSD's Solid Waste Transfer Station begins operation on July 1, 1999
- **1999** – Agreement entered into with BFI Waste Systems of North America, Inc. for Transfer Station operations and transport of waste to the BFI Lake Area Landfill in Sarona, Wisconsin, through June 30, 2006
- **2001** – WLSSD Rice Lake Industrial Solid Waste Disposal Facility closes
- **2002** – WLSSD Materials Recovery Center opens in January at site of former Rice Lake Landfill to recover resources from the solid waste stream

- **2004** – Mattress recycling program begins at Goodwill Industries in partnership with WLSSD, MPCA, and St. Louis and Carlton Counties to serve as a regional hub for mattress collection and recycling
- **2006** – WLSSD signs contract with City of Superior for delivery of waste to the Superior Landfill
- **2007** – WLSSD begins "Medicine Cabinet Clean-out" pharmaceutical collections
- **2006** – All previous ordinances relating to solid waste codified into one "Solid Waste Ordinance" effective October 1, 2006.
- **2010 –** Electronics building constructed at the Materials Recovery Center to more efficiently collect waste electronics
- **2013** – Product Reuse Center is expanded at the HHW Facility
- **2015** – Reuse Area is opened at the Materials Recovery Center
- **2020** – WLSSD completes first Disaster Debris Management Plan

APPENDIX B – DETAILED TRANSPORTATION ANALYSIS SUMMARY

AITKIN, ITASCA, AND KOOCHICHING - KEEWATIN TOTALS					
One-Way Hauling Distance					
County	**Transfer Station**	**Current Landfill**	**Current Mileage**	**Proposed Mileage (To Keewatin)**	**Mileage Reduction (One-Way)**
Aitkin	Garrison	East Central	60	78	-19
	McGregor	Sarona	146	60	86
	Countryside	Sarona	129	71	58
Itasca	Itasca County	Elk River	149	30	119
Koochiching	Koochiching County	Mar-Kit	179	110	69
Total			**663**	**350**	**313**
Cost per Ton					
County	**Transfer Station**	**Current Landfill**	**Current Cost Per Ton**	**Proposed Cost Per Ton (To Keewatin)**	**Cost per Ton Reduction**
Aitkin	Garrison	East Central	$ 39.01	$ 43.13	$ (4.12)
	McGregor	Sarona	$ 67.64	$ 39.08	$ 28.56
	Countryside	Sarona	$ 63.89	$ 41.56	$ 22.33
Itasca	Itasca County	Elk River	$ 62.28	$ 20.05	$ 42.24
Koochiching	Koochiching County	Mar-Kit	$ 85.03	$ 57.30	$ 27.73
Total			**$ 63.31**	**$ 30.67**	**$ 32.63**
Gallons Used/Year					
County	**Transfer Station**	**Current Landfill**	**Current Gallons Used/Year**	**Proposed Gallons Used/Year (To Keewatin)**	**Gallons Used/Year Reduction**
Aitkin	Garrison	East Central	11,654	15,311	(3,657)
	McGregor	Sarona	28,549	11,713	16,836
	Countryside	Sarona	25,225	13,922	11,302
Itasca	Itasca County	Elk River	86,998	17,633	69,365
Koochiching	Koochiching County	Mar-Kit	26,825	16,485	10,340
Total			**179,251**	**75,064**	**104,187**
Metric Tons of CO2					
County	**Transfer Station**	**Current Landfill**	**Current Metric Tons of CO2**	**Proposed Metric Tons of CO2 (To Keewatin)**	**Metric Tons of CO2 Reduction**
Aitkin	Garrison	East Central	119	156	-37
	McGregor	Sarona	291	119	171
	Countryside	Sarona	257	142	115
Itasca	Itasca County	Elk River	886	180	706
Koochiching	Koochiching County	Mar-Kit	273	168	105
Total (Weighted Average)			**1,825**	**764**	**1,061**
Annual Fuel Cost					
County	**Transfer Station**	**Current Landfill**	**Current Annual Fuel Cost**	**Proposed Annual Fuel Cost (To Keewatin)**	**Annual Fuel Cost Reduction**
Aitkin	Garrison	East Central	$ 58,271	$ 76,554	$ (18,283)
	McGregor	Sarona	$ 142,744	$ 58,564	$ 84,180
	Countryside	Sarona	$ 126,123	$ 69,612	$ 56,511
Itasca	Itasca County	Elk River	$ 434,991	$ 88,166	$ 346,825
Koochiching	Koochiching County	Mar-Kit	$ 134,125	$ 82,423	$ 51,702
Total			**$ 896,254**	**$ 75,319**	**$ 520,934**

CARLTON, COOK, LAKE, AND WLSSD - CANYON TOTALS					
One-Way Hauling Distance					
County	**Transfer Station**	**Current Landfill**	**Current Mileage**	**Proposed Mileage (To Canyon)**	**Mileage Reduction (One-Way)**
Carlton	North Carlton	Superior	30	27	3
Cook	Tofte	Superior	100	114	-14
	North Shore	Superior	127	141	-14
Lake	City of Two Harbors	Superior	43	57	-14
WLSSD	WLSSD	Superior	13	27	-14
Total			**314**	**367**	**-53**
Cost per Ton					
County	**Transfer Station**	**Current Landfill**	**Current Cost Per Ton**	**Proposed Cost Per Ton (To Canyon)**	**Cost per Ton Reduction**
Carlton	North Carlton	Superior	$ 21.69	$ 21.03	$ 0.66
Cook	Tofte	Superior	$ 68.98	$ 72.06	$ (3.08)
	North Shore	Superior	$ 74.92	$ 78.00	$ (3.08)
Lake	City of Two Harbors	Superior	$ 35.61	$ 38.69	$ (3.08)
WLSSD	WLSSD	Superior	$ 12.03	$ 17.08	$ (5.05)
Total (Weighted Average)			**$ 18.32**	**$ 22.21**	**$ (3.89)**
Gallons Used/Year					
County	**Transfer Station**	**Current Landfill**	**Current Gallons Used/Year**	**Proposed Gallons Used/Year (To Canyon)**	**Gallons Used/Year Reduction**
Carlton	North Carlton	Superior	6,381	5,740	640
Cook	Tofte	Superior	6,130	6,988	(858)
	North Shore	Superior	7,785	8,643	(858)
Lake	City of Two Harbors	Superior	4,998	6,611	(1,612)
WLSSD	WLSSD	Superior	12,781	26,134	(13,353)
Total			**38,075**	**54,116**	**(16,042)**
Metric Tons of CO2					
County	**Transfer Station**	**Current Landfill**	**Current Metric Tons of CO2**	**Proposed Metric Tons of CO2 (To Canyon)**	**Metric Tons of CO2 Reduction**
Carlton	North Carlton	Superior	65	58	7
Cook	Tofte	Superior	62	71	-9
	North Shore	Superior	79	88	-9
Lake	City of Two Harbors	Superior	51	67	-16
WLSSD	WLSSD	Superior	130	266	-136
Total			**388**	**551**	**-163**
Annual Fuel Cost					
County	**Transfer Station**	**Current Landfill**	**Current Annual Fuel Cost**	**Proposed Annual Fuel Cost (To Canyon)**	**Annual Fuel Cost Reduction**
Carlton	North Carlton	Superior	$ 31,903	$ 28,702	$ 3,201
Cook	Tofte	Superior	$ 30,650	$ 34,941	$ (4,291)
	North Shore	Superior	$ 38,926	$ 43,217	$ (4,291)
Lake	City of Two Harbors	Superior	$ 24,992	$ 33,054	$ (8,062)
WLSSD	WLSSD	Superior	$ 63,903	$ 130,668	$ (66,765)
Total			**$ 190,374**	**$ 270,582**	**$ (80,208)**

CARLTON, COOK, LAKE, AND WLSSD – SARONA TOTALS					
One-Way Hauling Distance					
County	**Transfer Station**	**Current Landfill**	**Current Mileage**	**Proposed Mileage (To Sarona)**	**Mileage Reduction (One-Way)**
Carlton	North Carlton	Superior	30	102	-72
Cook	Tofte	Superior	100	172	-72
	North Shore	Superior	127	200	-73
Lake	City of Two Harbors	Superior	43	116	-73
WLSSD	WLSSD	Superior	13	86	-72
Total			**314**	**676**	**-362**
Cost per Ton					
County	**Transfer Station**	**Current Landfill**	**Current Cost Per Ton**	**Proposed Cost Per Ton (To Sarona)**	**Cost per Ton Reduction**
Carlton	North Carlton	Superior	$ 21.69	$ 46.36	$ (24.67)
Cook	Tofte	Superior	$ 68.98	$ 84.82	$ (15.85)
	North Shore	Superior	$ 74.92	$ 121.64	$ (46.72)
Lake	City of Two Harbors	Superior	$ 35.61	$ 67.91	$ (32.29)
WLSSD	WLSSD	Superior	$ 12.03	$ 37.82	$ (25.79)
Total (Weighted Average)			**$ 18.32**	**$ 44.74**	**$ (26.42)**
Gallons Used/Year					
County	**Transfer Station**	**Current Landfill**	**Current Gallons Used/Year**	**Proposed Gallons Used/Year (To Sarona)**	**Gallons Used/Year Reduction**
Carlton	North Carlton	Superior	6,381	21,767	(15,386)
Cook	Tofte	Superior	6,130	10,544	(4,414)
	North Shore	Superior	7,785	12,260	(4,475)
Lake	City of Two Harbors	Superior	4,998	13,360	(8,361)
WLSSD	WLSSD	Superior	12,781	81,834	(69,054)
Total			**38,075**	**139,765**	**(101,690)**
Metric Tons of CO2					
County	**Transfer Station**	**Current Landfill**	**Current Metric Tons of CO2**	**Proposed Metric Tons of CO2 (To Sarona)**	**Metric Tons of CO2 Reduction**
Carlton	North Carlton	Superior	65	222	-157
Cook	Tofte	Superior	62	107	-45
	North Shore	Superior	79	125	-46
Lake	City of Two Harbors	Superior	51	136	-85
WLSSD	WLSSD	Superior	130	833	-703
Total			**388**	**1,423**	**-1035**
Annual Fuel Cost					
County	**Transfer Station**	**Current Landfill**	**Current Annual Fuel Cost**	**Proposed Annual Fuel Cost (To Sarona)**	**Annual Fuel Cost Reduction**
Carlton	North Carlton	Superior	$ 31,903	$ 108,834	$ (76,931)
Cook	Tofte	Superior	$ 30,650	$ 52,718	$ (22,068)
	North Shore	Superior	$ 38,926	$ 61,300	$ (22,375)
Lake	(City of Two Harbors)	Superior	$ 24,992	$ 66,799	$ (41,807)
WLSSD	WLSSD Transfer Station	Superior	$ 63,903	$ 409,172	$ (345,268)
Total			**$ 190,374**	**$ 698,823**	**$ (508,449)**

CARLTON, COOK, LAKE, AND WLSSD – VIRGINIA TOTALS					
One-Way Hauling Distance					
County	**Transfer Station**	**Current Landfill**	**Current Mileage**	**Proposed Mileage (To Virginia)**	**Mileage Reduction (One-Way)**
Carlton	North Carlton	Superior	30	64	-34
Cook	Tofte	Superior	100	152	-52
	North Shore	Superior	127	179	-52
Lake	City of Two Harbors	Superior	43	95	-52
WLSSD	WLSSD	Superior	13	52	-39
Total			**314**	**542**	**-52**
Cost per Ton					
County	**Transfer Station**	**Current Landfill**	**Current Cost Per Ton**	**Proposed Cost Per Ton (To Virginia)**	**Cost per Ton Reduction**
Carlton	North Carlton	Superior	$ 21.69	$ 21.03	$ 0.66
Cook	Tofte	Superior	$ 68.98	$ 72.06	$ (3.08)
	North Shore	Superior	$ 74.92	$ 78.00	$ (3.08)
Lake	City of Two Harbors	Superior	$ 35.61	$ 38.69	$ (3.08)
WLSSD	WLSSD	Superior	$ 12.03	$ 17.08	$ (5.05)
Total (Weighted Average)			**$ 18.32**	**$ 22.21**	**$ (3.89)**
Gallons Used/Year					
County	**Transfer Station**	**Current Landfill**	**Current Gallons Used/Year**	**Proposed Gallons Used/Year (To Virginia)**	**Gallons Used/Year Reduction**
Carlton	North Carlton	Superior	6,381	13,613	7,232
Cook	Tofte	Superior	6,130	9,318	3,188
	North Shore	Superior	7,785	10,973	3,188
Lake	City of Two Harbors	Superior	4,998	11,042	6,044
WLSSD	WLSSD	Superior	12,781	51,124	38,343
Total			**38,075**	**96,070**	**54,995**
Metric Tons of CO2					
County	**Transfer Station**	**Current Landfill**	**Current Metric Tons of CO2**	**Proposed Metric Tons of CO2 (To Virginia)**	**Metric Tons of CO2 Reduction**
Carlton	North Carlton	Superior	65	139	74
Cook	Tofte	Superior	62	94	32
	North Shore	Superior	79	111	32
Lake	City of Two Harbors	Superior	51	113	62
WLSSD	WLSSD	Superior	130	520	390
Total			**388**	**977**	**590**
Annual Fuel Cost					
County	**Transfer Station**	**Current Landfill**	**Current Annual Fuel Cost**	**Proposed Annual Fuel Cost (To Virginia)**	**Annual Fuel Cost Reduction**
Carlton	North Carlton	Superior	$ 31,903	$ 68,065	$ 36,162
Cook	Tofte	Superior	$ 30,650	$ 46,950	$ 16,300
	North Shore	Superior	$ 38,926	$ 54,865	$ 15,939
Lake	City of Two Harbors	Superior	$ 24,992	$ 55,210	$ 30,218
WLSSD	WLSSD	Superior	$ 63,903	$ 255,620	$ 191,717
Total			**$ 190,374**	**$ 480,710**	**$ 290,336**

APPENDIX C – GOAL VOLUME TABLES

Aitkin County

Previous 5 Years Data					
Management Method - Tons					
	2019	2020	2021	2022	2023
Landfill	8479	9777	11245	8846	10139
Onsite	294	294	294	294	294
Organics	325	10	28	5	9
Recycling	3739	2963	3042	3301	3092
WTE	0	0	0	0	0
Total MMSW	8773	10071	11539	9140	10433
Recycling+Organics	4064	2973	3070	3306	3100
Recycling Rate	**31.7%**	**22.8%**	**21.0%**	**26.6%**	**22.9%**
Total MSW	12837	13043	14609	12446	13534
Non-MSW	2019	2020	2021	2022	2023
Industrial	No data	7187	12258	11946	6701
Construction & Demo	No data	104	175	21	41
Tons Recycled By Material Category					
	2019	2020	2021	2022	2023
Glass	244	259	278	329	278
Hazardous	375	170	123	223	210
Metal	930	862	798	710	622
Organics	325	10	28	5	9
Other	602	421	766	644	566
Paper	1367	1135	917	1286	1295
Plastics	220	115	161	109	119
Total	4064	2973	3070	3306	3100
Problem Materials					
	2019	2020	2021	2022	2023
antifreeze	3.29	0.3	5.36	5.46	1.49
electronic devices	16.56	16.22	5.42	9.73	4.42
major appliances and white g	25.25	95.22	16.67	22.42	22.77
used oil	261.07	53.26	59.42	139.7	155.8
vehicle batteries	97.6	103.7	39.86	57.42	35.9
waste tires	136.07	111.2	143.51	287.32	293.71
Total	539.84	379.9	270.24	522.05	514.09

MSW Forecast

	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035
Recycling	3085.598805	3089.63	3092.894	3095.581	3097.501	3098.845	3099.421	3099.229	3098.461	3096.925
Organics	8.643329608	8.654622	8.663764	8.671293	8.67667	8.680435	8.682048	8.68151	8.679359	8.675057
WTE	0	0	0	0	0	0	0	0	0	0
Landfill	10119.97161	10133.19	10143.9	10152.71	10159.01	10163.42	10165.3	10164.68	10162.16	10157.12
Total Tons	13214.21374	13231.48	13245.45	13256.96	13265.19	13270.94	13273.41	13272.59	13269.3	13262.72
Total Populatic	16073	16094	16111	16125	16135	16142	16145	16144	16140	16132
Per Capita	0.822137357	0.822137	0.822137	0.822137	0.822137	0.822137	0.822137	0.822137	0.822137	0.822137

Enter the percent of MSW by Sector - this must add to 100%

Residential	40%
C/I/I	60%

Onsite Disposal - Estimate of people underserved by garbage collection/drop-sites for use in calculating on-site disposal

Year	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035
Number of People underserved	686	682	678	674	669	665	661	657	654	651

Non-MMSW/Industrial Waste Projections (in Tons)

Year	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035
Industrial	153	153	153	153	153	153	153	153	153	153
Construction & Demolition	2347	2347	2347	2347	2347	2347	2347	2347	2347	2347

Solid Waste	Year									
Mangement Method	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035
Recycling	3,995	4,082	4,245	4,264	4,515	4,661	4,676	4,801	4,914	5,051
Organics	69	70	70	70	71	72	73	73	74	75
Combined Recycling Rate	31%	31%	33%	33%	35%	36%	36%	37%	38%	39%
Waste-to-Energy (minus recyclables and nonprocessibles)	0	0	0	0	0	0	0	0	0	0
Landfill	8,862	8,793	8,646	8,640	8,398	8,259	8,247	8,123	8,007	7,863
East Central Solid Waste Commission - SW-17	2,925	2,902	2,853	2,851	2,771	2,725	2,721	2,681	2,642	2,595
BFI Lake Area Landfill	4,165	3,957	3,804	3,629	3,527	3,469	3,464	3,412	3,363	3,303
Elk River Landfill - SW-74	1,772	1,935	1,989	2,160	2,100	2,065	2,062	2,031	2,002	1,966
Capacity Used	9,329	9,256	9,101	9,095	8,840	8,693	8,681	8,550	8,428	8,277
On-site Disposal	288	286	285	283	281	279	277	276	275	273
Total MSW Generated	**13,214**	**13,231**	**13,245**	**13,257**	**13,265**	**13,271**	**13,273**	**13,273**	**13,269**	**13,263**

Recycling by sector (excluding WTE)	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035
Residential	1,497	1,523	1,585	1,595	1,735	1,780	1,789	1,802	1,899	1,994
C/I/I	2,498	2,559	2,660	2,669	2,780	2,881	2,887	2,999	3,015	3,057
Previously Undocumented Residential	0	0	0	0	0	0	0	0	0	0
Previously Undocumented C/I/I	0	0	0	0	0	0	0	0	0	0

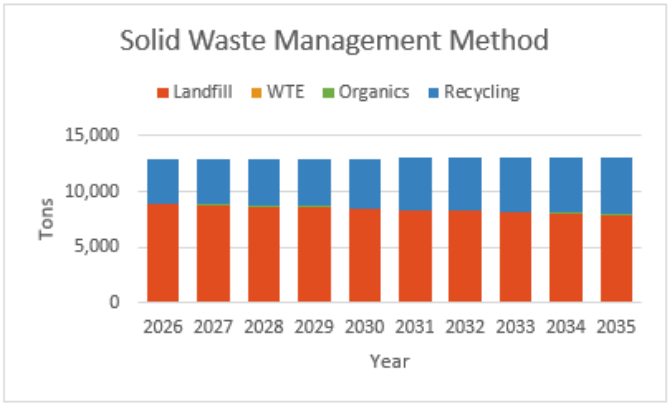
Organics by sector	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035
Residential	28	28	28	28	28	29	29	29	30	30
C/I/I	41	42	42	42	43	43	44	44	44	45
Previously Undocumented Residential	0	0	0	0	0	0	0	0	0	0
Previously Undocumented C/I/I	0	0	0	0	0	0	0	0	0	0

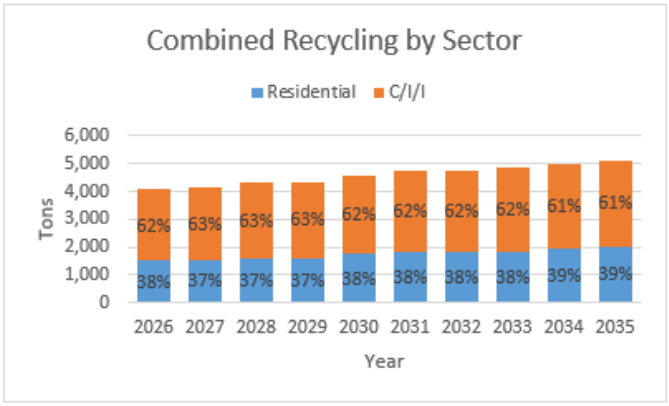
Combined Recycling by sector		2026	2027	2028	2029	2030	2031	2032	2033	2034	2035
Tons	Residential	1,525	1,551	1,613	1,623	1,763	1,809	1,818	1,831	1,929	2,024
	C/I/I	2,539	2,601	2,702	2,711	2,823	2,924	2,931	3,043	3,059	3,102
Pecentage	Residential	38%	37%	37%	37%	38%	38%	38%	38%	39%	39%
	C/I/I	62%	63%	63%	63%	62%	62%	62%	62%	61%	61%

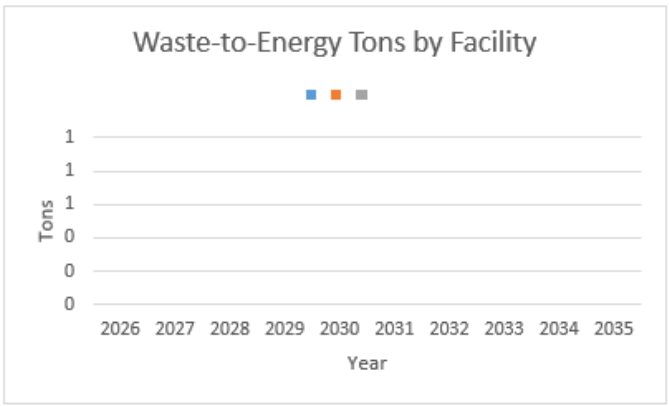
Landfilling

Select facility and enter percentage of landfilled material sent to the facility for each year

		2026	2027	2028	2029	2030	2031	2032	2033	2034	2035
East Central Solid Waste Commission - SW-	% of MMSW managed at facility	33%	33%	33%	33%	33%	33%	33%	33%	33%	33%
	Compaction Rate	1,900	1,900	1,900	1,900	1,900	1,900	1,900	1,900	1,900	1,900
BFI Lake Area Landfill	% of MMSW managed at facility	47%	45%	44%	42%	42%	42%	42%	42%	42%	42%
	Compaction Rate	1,900	1,900	1,900	1,900	1,900	1,900	1,900	1,900	1,900	1,900
Elk River Landfill - SW-74	% of MMSW managed at facility	20%	22%	23%	25%	25%	25%	25%	25%	25%	25%
	Compaction Rate	1,900	1,900	1,900	1,900	1,900	1,900	1,900	1,900	1,900	1,900







Total land disposal capacity needed for waste generated in county

Waste Type	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	**Total**
MSW	9,329	9,256	9,101	9,095	8,840	8,693	8,681	8,550	8,428	8,277	**88,251**
Industrial	161	161	161	161	161	161	161	161	161	161	**1,611**
Construction & Demolition	3,129	3,129	3,129	3,129	3,129	3,129	3,129	3,129	3,129	3,129	**31,293**
Total Capacity	**12,619**	**12,546**	**12,391**	**12,385**	**12,131**	**11,984**	**11,971**	**11,841**	**11,719**	**11,568**	**121,155**

The total land disposal capacity needed from the period of 2026 to 2035 is 121,155 cubic yards

Carlton County

Previous 5 Years Data					
Management Method - Tons					
	2019	2020	2021	2022	2023
Landfill	12514	10670	17530	16109	16262
Onsite	685	685	685	685	685
Organics	347	384	539	337	424
Recycling	6127	6327	6446	7191	6030
WTE	0	0	0	0	0
Total MMSW	13198	11355	18215	16794	16947
Recycling+Organics	6474	6711	6985	7528	6454
Recycling Rate	**32.9%**	**37.1%**	**27.7%**	**31.0%**	**27.6%**
Total MSW	19673	18066	25200	24322	23400
Non-MSW	2019	2020	2021	2022	2023
Industrial	No data	23484	11756	16024	9316
Construction & Demo	No data	19082	23703	37178	12213
Tons Recycled By Material Category					
	2019	2020	2021	2022	2023
Glass	780	919	877	1063	1194
Hazardous	317	313	329	339	357
Metal	732	793	769	691	675
Organics	347	384	539	337	424
Other	890	590	800	676	618
Paper	3087	3350	3352	3769	2660
Plastics	323	362	317	652	526
Total	6474	6711	6983	7528	6454
Problem Materials					
	2019	2020	2021	2022	2023
antifreeze	4.31	3.99	1.9	3.92	2.99
electronic devices	81.83	81.72	63.61	62.44	50.65
major appliances and white g	524.78	309.23	299.25	239.34	269.63
used oil	164.39	175.72	113.37	133.26	195.36
vehicle batteries	117.69	101	123.7	95.46	82.76
waste tires	119.33	114.18	133.5	134.83	51.63
Total	1012.33	785.84	735.33	669.25	653.02

MSW Forecast

	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035
Recycling	7038.466202	7055.967	7072.122	7087.123	7100.585	7112.701	7123.279	7132.51	7140.203	7146.357
Organics	330.0564235	330.8771	331.6346	332.3381	332.9694	333.5375	334.0336	334.4664	334.8272	335.1158
WTE	0	0	0	0	0	0	0	0	0	0
Landfill	15768.43364	15807.64	15843.83	15877.44	15907.6	15934.74	15958.44	15979.12	15996.36	16010.14
Total Tons	23136.95627	23194.49	23247.59	23296.9	23341.15	23380.98	23415.75	23446.1	23471.39	23491.62
Total Populatic	36598	36689	36773	36851	36921	36984	37039	37087	37127	37159
Per Capita	0.632191821	0.632192	0.632192	0.632192	0.632192	0.632192	0.632192	0.632192	0.632192	0.632192

Enter the percent of MSW by Sector - this must add to 100%

Residential	55%
C/I/I	45%

Onsite Disposal - Estimate of people underserved by garbage collection/drop-sites for use in calculating on-site disposal

Year	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035
Number of People underserved	609	610	611	611	612	613	613	614	614	615

Non-MMSW/Industrial Waste Projections (in Tons)

Year	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035
Industrial	32096	32096	32096	32096	32096	32096	32096	32096	32096	32096
Construction & Demolition	6538	6538	6538	6538	6538	6538	6538	6538	6538	6538

Solid Waste	Year									
Mangement Method	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035
Recycling	7,038	7,056	7,250	7,400	7,600	7,700	7,800	7,900	8,000	8,100
Organics	430	442	454	467	480	490	497	502	507	510
Combined Recycling Rate	32%	32%	33%	34%	35%	35%	35%	36%	36%	37%
Waste-to-Energy (minus recyclables and nonprocessibles)	0	0	0	0	0	0	0	0	0	0
Landfill	15,413	15,440	15,287	15,173	15,004	14,934	14,861	14,786	14,707	14,623
Other facility	7,706									
St Louis County Regional Landfill - SW-	7,706	15,440	15,287	15,173	15,004	14,934	14,861	14,786	14,707	14,623
Capacity Used	16,224									
On-site Disposal	256	256	256	256	257	257	257	258	258	258
Total MSW Generated	23,137	23,194	23,248	23,297	23,341	23,381	23,416	23,446	23,471	23,492

Recycling by sector (excluding WTE)	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035
Residential	3,871	3,881	4,000	4,100	4,250	4,300	4,350	4,400	4,450	4,500
C/I/I	3,167	3,175	3,250	3,300	3,350	3,400	3,450	3,500	3,550	3,600
Previously Undocumented Residential	0	0	0	0	0	0	0	0	0	0
Previously Undocumented C/I/I	0	0	0	0	0	0	0	0	0	0

Organics by sector	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035
Residential	20	22	24	27	30	35	37	39	42	44
C/I/I	410	420	430	440	450	455	460	463	465	466
Previously Undocumented Residential	0	0	0	0	0	0	0	0	0	0
Previously Undocumented C/I/I	0	0	0	0	0	0	0	0	0	0

Combined Recycling by sector		2026	2027	2028	2029	2030	2031	2032	2033	2034	2035
Tons	Residential	3,891	3,903	4,024	4,127	4,280	4,335	4,387	4,439	4,492	4,544
	C/I/I	3,577	3,595	3,680	3,740	3,800	3,855	3,910	3,963	4,015	4,066
Pecentage	Residential	52%	52%	52%	52%	53%	53%	53%	53%	53%	53%
	C/I/I	48%	48%	48%	48%	47%	47%	47%	47%	47%	47%

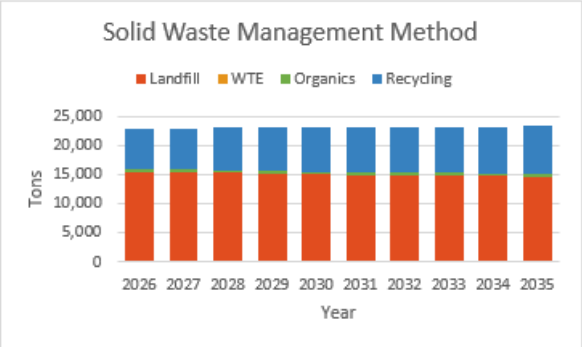
Landfilling

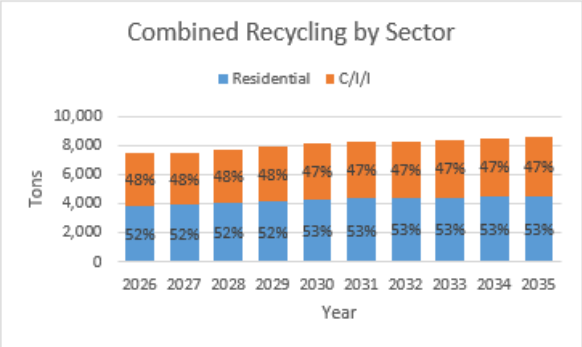
Select facility and enter percentage of landfilled material sent to the facility for each year

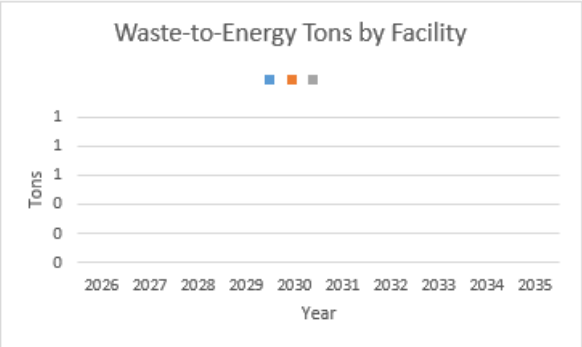
		2026	2027	2028	2029	2030	2031	2032	2033	2034	2035
Other facility	% of MMSW managed at facility	50%									
	Compaction Rate	1,900	1,900	1,900	1,900	1,900	1,900	1,900	1,900	1,900	1,900
St Louis County Regional Landfill - SW-405	% of MMSW managed at facility	50%	100%	100%	100%	100%	100%	100%	100%	100%	100%
	Compaction Rate	1,900	1,900	1,900	1,900	1,900	1,900	1,900	1,900	1,900	1,900

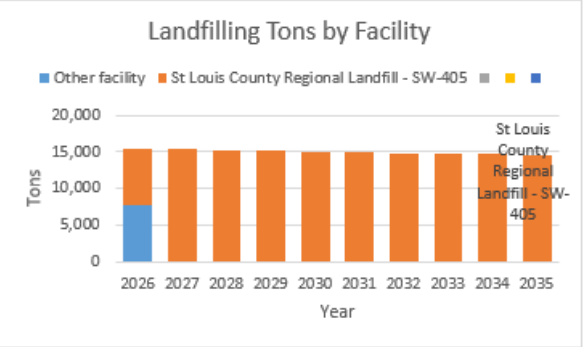
Summary of Goal Volume Table for Carlton County

Solid Waste Planner: Danielle Drussell









Total land disposal capacity needed for waste generated in county

Waste Type	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	**Total**
MSW	16,224										**16,224**
Industrial	33,785	33,785	33,785	33,785	33,785	33,785	33,785	33,785	33,785	33,785	**337,853**
Construction & Demolition	8,717	8,717	8,717	8,717	8,717	8,717	8,717	8,717	8,717	8,717	**87,173**
Total Capacity	**58,727**	**42,503**	**42,503**	**42,503**	**42,503**	**42,503**	**42,503**	**42,503**	**42,503**	**42,503**	**441,250**

The total land disposal capacity needed from the period of 2026 to 2035 is 441,250 cubic yards

Cook County

Previous 5 Years Data					
Management Method - Tons					
	2019	2020	2021	2022	2023
Landfill	3606	3065	3188	3180	4664
Onsite	26	26	25	61	26
Organics	27	20	22	0	21
Recycling	955	810	907	844	833
WTE	0	0	0	0	0
Total MMSW	3632	3091	3213	3241	4690
Recycling+Organics	982	830	929	844	853
Recycling Rate	**21.3%**	**21.2%**	**22.4%**	**20.7%**	**15.4%**
Total MSW	4614	3921	4142	4085	5543
Non-MSW	2019	2020	2021	2022	2023
Industrial	#N/A	3805	3579	4156	4352
Construction & Demo	#N/A	1391	194	0	98598
Tons Recycled By Material Category					
	2019	2020	2021	2022	2023
Glass	201	182	195	173	167
Hazardous	8	10	10	16	12
Metal	48	47	52	45	44
Organics	27	20	22	0	21
Other	47	11	0	5	0
Paper	605	518	592	562	567
Plastics	46	43	50	43	43
Total	982	830	920	844	853
Problem Materials					
	2019	2020	2021	2022	2023
antifreeze	0	0	0	0	0
electronic devices	7.8	6.5	0	4.83	0
major appliances and white g	0	0	0	0	0
used oil	4.3	6.09	0	0	0
vehicle batteries	4	3.9	0	0	0
waste tires	0	0	0	0	0
Total	16.1	16.49	0	4.83	0

County	Cook

MSW Forecast

	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035
Recycling	786.6431791	768.3971	750.6273	733.3337	732.2306	726.8418	723.3578	721.7785	722.5802	722.5802
Organics	17.45266054	17.03696	16.6321	16.23808	16.21273	16.0898	16.01024	15.97405	15.99208	15.99208
WTE	0	0	0	0	0	0	0	0	0	0
Landfill	3896.544936	3949.478	4001.107	4051.433	4057.439	4075.176	4087.7	4095.009	4095.8	4095.8
Total Tons	4700.640776	4734.912	4768.367	4801.005	4805.882	4818.108	4827.068	4832.761	4834.373	4834.373
Total Populatic	5811	5853	5894	5934	5940	5955	5966	5973	5975	5975
Per Capita	0.808921145	0.808972	0.80902	0.809067	0.809071	0.809086	0.809096	0.809101	0.8091	0.8091

Enter the percent of MSW by Sector - this must add to 100%

Residential	74%
C/I/I	26%

Onsite Disposal - Estimate of people underserved by garbage collection/drop-sites for use in calculating on-site disposal

Year	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035
Number of People underserved	56	54	52	50	48	47	46	45	44	43

Non-MMSW/Industrial Waste Projections (in Tons)

Year	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035
Industrial	0	0	0	0	0	0	0	0	0	0
Construction & Demolition	1850	1875	1900	1900	1925	1950	1950	1975	1975	2000

Solid Waste	Year									
Mangement Method	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035
Recycling	920	1,116	1,325	1,455	1,608	1,620	1,652	1,660	1,670	1,690
Organics	39	42	45	47	51	58	63	69	75	79
Combined Recycling Rate	20%	24%	29%	31%	35%	35%	36%	36%	36%	37%
Waste-to-Energy (minus recyclables and nonprocessibles)	0	0	0	0	0	0	0	0	0	0
Landfill	3,718	3,554	3,377	3,278	3,127	3,120	3,093	3,085	3,071	3,047
Other facility	1,859									
St Louis County Regional Landfill -	1,859	3,554	3,377	3,278	3,127	3,120	3,093	3,085	3,071	3,047
Capacity Used	3,914									
On-site Disposal	24	23	22	21	20	20	19	19	18	18
Total MSW Generated	**4,701**	**4,735**	**4,768**	**4,801**	**4,806**	**4,818**	**4,827**	**4,833**	**4,834**	**4,834**

Recycling by sector	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035
Residential	705	905	1,095	1,200	1,306	1,315	1,337	1,340	1,345	1,360
C/I/I	215	211	230	255	302	305	315	320	325	330
Previously Undocumented	0	0	0	0	0	0	0	0	0	0
Previously Undocumented C/I/I	0	0	0	0	0	0	0	0	0	0

Organics by sector	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035
Residential	29	31	33	35	38	43	47	51	55	59
C/I/I	10	11	12	12	13	15	16	18	20	20
Previously Undocumented	0	0	0	0	0	0	0	0	0	0
Previously Undocumented C/I/I	0	0	0	0	0	0	0	0	0	0

Combined Recycling by		2026	2027	2028	2029	2030	2031	2032	2033	2034	2035
Tons	Residential	734	936	1,128	1,235	1,344	1,358	1,384	1,391	1,400	1,419
	C/I/I	225	222	242	267	315	320	331	338	345	350
Pecentage	Residential	77%	81%	82%	82%	81%	81%	81%	80%	80%	80%
	C/I/I	23%	19%	18%	18%	19%	19%	19%	20%	20%	20%

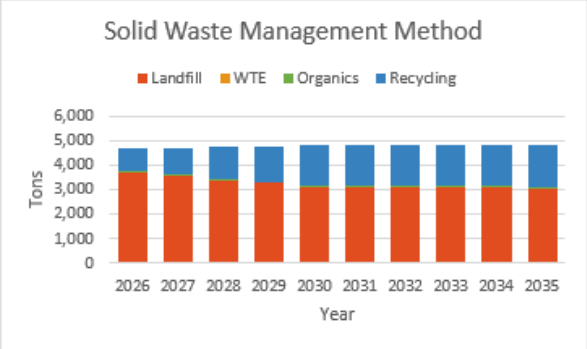
Landfilling

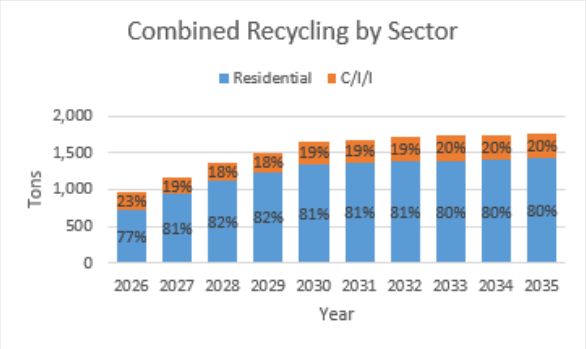
Select facility and enter **percentage** of landfilled material sent to the facility for each year

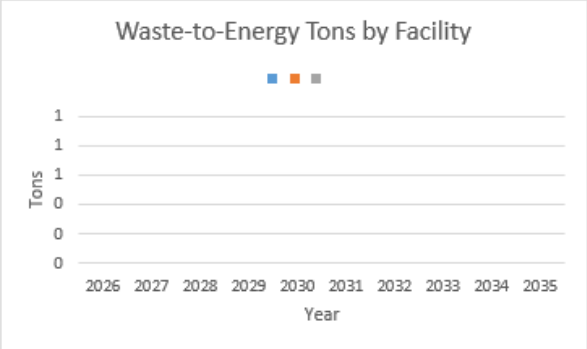
		2026	2027	2028	2029	2030	2031	2032	2033	2034	2035
Other facility	% of MMSW managed at	50%									
	Compaction Rate	1,900	1,900	1,900	1,900	1,900	1,900	1,900	1,900	1,900	1,900
St Louis County Regional	% of MMSW managed at	50%	100%	100%	100%	100%	100%	100%	100%	100%	100%
	Compaction Rate	1,900	1,900	1,900	1,900	1,900	1,900	1,900	1,900	1,900	1,900

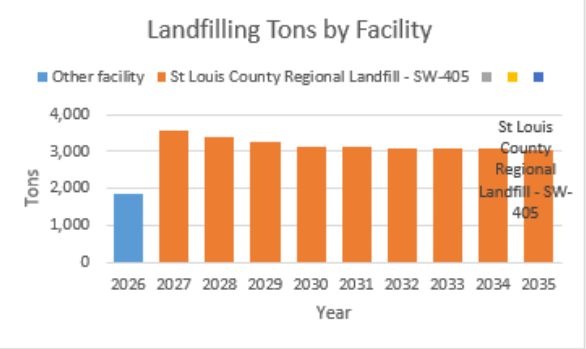
Summary of Goal Volume Table for Cook County

Solid Waste Planner: Danielle Drussell









Total land disposal capacity needed for waste generated in county

Waste Type	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	**Total**
MSW	1,957										**1,957**
Industrial	0	0	0	0	0	0	0	0	0	0	**0**
Construction & Demolition	2,467	2,500	2,533	2,533	2,567	2,600	2,600	2,633	2,633	2,667	**25,733**
Total Capacity	**4,424**	**2,500**	**2,533**	**2,533**	**2,567**	**2,600**	**2,600**	**2,633**	**2,633**	**2,667**	**27,690**

The total land disposal capacity needed from the period of 2026 to 2035 is 27,690 cubic yards

Itasca County

Previous 5 Years Data					
Management Method - Tons					
	2019	2020	2021	2022	2023
Landfill	26036	29194	30286	28422	27449
Onsite	371	1004	0	144	52
Organics	1093	1219	1089	996	1198
Recycling	7810	8428	10253	10768	9118
WTE	0	0	0	0	0
Total MMSW	26408	30198	30286	28566	27501
Recycling+Organics	8903	9647	11343	11764	10316
Recycling Rate	**25.2%**	**24.2%**	**27.2%**	**29.2%**	**27.3%**
Total MSW	35310	39846	41629	40330	37818
Non-MSW	2019	2020	2021	2022	2023
Industrial	0	8178	18756	7619	9363
Construction & Demo	0	19952	12495	16585	8947
Tons Recycled By Material Category					
	2019	2020	2021	2022	2023
Glass	512	592	611	571	549
Hazardous	341	589	792	571	662
Metal	2391	2456	3893	4670	2852
Organics	1093	1219	1089	996	1198
Other	891	950	960	935	1284
Paper	3403	3632	3454	3513	3256
Plastics	271	208	160	169	153
Total	8903	9647	10959	11426	9955
Problem Materials					
	2019	2020	2021	2022	2023
antifreeze	2.35	4.78	1.47	1.06	4.85
electronic devices	78.65	93.73	77.4	71.72	64.41
major appliances and white g	0	0	0	0	0
used oil	92.26	342.19	277.19	234.1	410.06
vehicle batteries	199.27	205.86	0.24	21.17	20.06
waste tires	557.37	608.08	667.26	664.14	1004.31
Total	929.9	1254.64	1023.56	992.19	1503.69

County: Itasca

MSW Forecast

	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035
Recycling	10682.40969	10679.34	10674.14	10667.05	10657.84	10646.5	10633.04	10617.45	10599.73	10579.89
Organics	987.9594088	987.6754	987.1948	986.5393	985.6873	984.6386	983.3933	981.9514	980.3128	978.4777
WTE	0	0	0	0	0	0	0	0	0	0
Landfill	28195.66651	28187.56	28173.84	28155.14	28130.82	28100.89	28065.35	28024.2	27977.44	27925.06
Total Tons	39866.03561	39854.58	39835.18	39808.73	39774.35	39732.04	39681.78	39623.6	39557.48	39483.43
Total Populatic	45221	45208	45186	45156	45117	45069	45012	44946	44871	44787
Per Capita	0.881582353	0.881582	0.881582	0.881582	0.881582	0.881582	0.881582	0.881582	0.881582	0.881582

Enter the percent of MSW by Sector - this must add to 100%

Residential	62%
C/I/I	38%

Onsite Disposal - Estimate of people underserved by garbage collection/drop-sites for use in calculating on-site disposal

Year	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035
Number of People underserved	901	902	903	904	905	907	908	909	910	912

Non-MMSW/Industrial Waste Projections (in Tons)

Year	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035
Industrial	21145.5	21145.5	21145.5	21145.5	21145.5	21145.5	21145.5	21145.5	21145.5	21145.5
Construction & Demolition	3856	3856	3856	3856	3856	3856	3856	3856	3856	3856

Itasca County

Previous 5 Years Data					
Management Method - Tons					
	2019	2020	2021	2022	2023
Landfill	26036	29194	30286	28422	27449
Onsite	371	1004	0	144	52
Organics	1093	1219	1089	996	1198
Recycling	7810	8428	10253	10768	9118
WTE	0	0	0	0	0
Total MMSW	26408	30198	30286	28566	27501
Recycling+Organics	8903	9647	11343	11764	10316
Recycling Rate	**25.2%**	**24.2%**	**27.2%**	**29.2%**	**27.3%**
Total MSW	35310	39846	41629	40330	37818
Non-MSW	2019	2020	2021	2022	2023
Industrial	0	8178	18756	7619	9363
Construction & Demo	0	19952	12495	16585	8947
Tons Recycled By Material Category					
	2019	2020	2021	2022	2023
Glass	512	592	611	571	549
Hazardous	341	589	792	571	662
Metal	2391	2456	3893	4670	2852
Organics	1093	1219	1089	996	1198
Other	891	950	960	935	1284
Paper	3403	3632	3454	3513	3256
Plastics	271	208	160	169	153
Total	8903	9647	10959	11426	9955
Problem Materials					
	2019	2020	2021	2022	2023
antifreeze	2.35	4.78	1.47	1.06	4.85
electronic devices	78.65	93.73	77.4	71.72	64.41
major appliances and white g	0	0	0	0	0
used oil	92.26	342.19	277.19	234.1	410.06
vehicle batteries	199.27	205.86	0.24	21.17	20.06
waste tires	557.37	608.08	667.26	664.14	1004.31
Total	929.9	1254.64	1023.56	992.19	1503.69

County: Itasca

MSW Forecast

	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035
Recycling	10682.40969	10679.34	10674.14	10667.05	10657.84	10646.5	10633.04	10617.45	10599.73	10579.89
Organics	987.9594088	987.6754	987.1948	986.5393	985.6873	984.6386	983.3933	981.9514	980.3128	978.4777
WTE	0	0	0	0	0	0	0	0	0	0
Landfill	28195.66651	28187.56	28173.84	28155.14	28130.82	28100.89	28065.35	28024.2	27977.44	27925.06
Total Tons	39866.03561	39854.58	39835.18	39808.73	39774.35	39732.04	39681.78	39623.6	39557.48	39483.43
Total Populatic	45221	45208	45186	45156	45117	45069	45012	44946	44871	44787
Per Capita	0.881582353	0.881582	0.881582	0.881582	0.881582	0.881582	0.881582	0.881582	0.881582	0.881582

Enter the percent of MSW by Sector - this must add to 100%

Residential	62%
C/I/I	38%

Onsite Disposal - Estimate of people underserved by garbage collection/drop-sites for use in calculating on-site disposal

Year	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035
Number of People underserved	901	902	903	904	905	907	908	909	910	912

Non-MMSW/Industrial Waste Projections (in Tons)

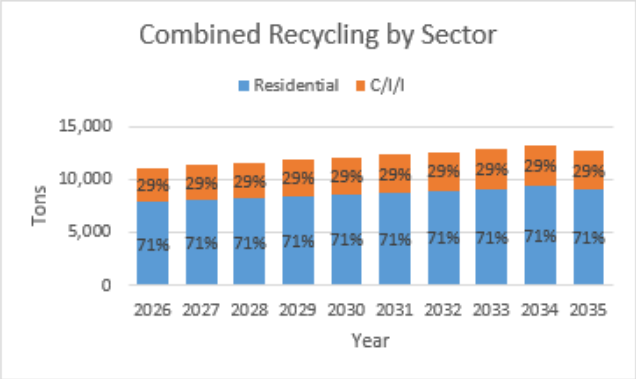
Year	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035
Industrial	21145.5	21145.5	21145.5	21145.5	21145.5	21145.5	21145.5	21145.5	21145.5	21145.5
Construction & Demolition	3856	3856	3856	3856	3856	3856	3856	3856	3856	3856

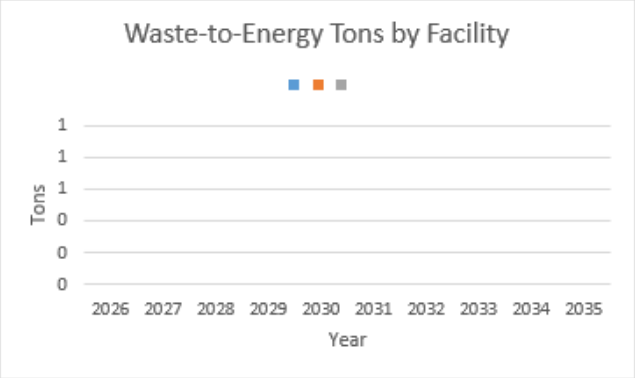
Solid Waste		Year									
Mangement Method		2026	2027	2028	2029	2030	2031	2032	2033	2034	2035
Recycling		9,789	10,005	10,225	10,450	10,680	10,914	11,155	11,400	11,651	11,097
Organics		1,270	1,298	1,327	1,356	1,386	1,416	1,448	1,479	1,512	1,545
Combined Recycling Rate		28%	28%	29%	30%	30%	31%	32%	33%	33%	32%
Waste-to-Energy (minus recyclables and nonprocessibles)		0	0	0	0	0	0	0	0	0	0
Landfill		28,428	28,173	27,904	27,624	27,328	27,021	26,698	26,363	26,013	26,458
Other facility		14,214	28,173	27,904	27,624	27,328	27,021	26,698	26,363	26,013	26,458
Other facility		14,214	0	0	0	0	0	0	0	0	0
Capacity Used		29,925	29,656	29,373	29,078	28,767	28,444	28,103	27,750	27,382	27,851
On-site Disposal		378	379	379	379	380	381	381	382	382	383
Total MSW Generated		**39,866**	**39,855**	**39,835**	**39,809**	**39,774**	**39,732**	**39,682**	**39,624**	**39,557**	**39,483**
Recycling by sector (excluding WTE)		2026	2027	2028	2029	2030	2031	2032	2033	2034	2035
Residential		6,559	6,703	6,851	7,001	7,156	7,312	7,474	7,638	7,806	7,435
C/I/I		3,230	3,302	3,374	3,449	3,524	3,602	3,681	3,762	3,845	3,662
Previously Undocumented		0	0	0	0	0	0	0	0	0	0
Previously Undocumented C/I/I		0	0	0	0	0	0	0	0	0	0
Organics by sector		2026	2027	2028	2029	2030	2031	2032	2033	2034	2035
Residential		1,270	1,298	1,327	1,356	1,386	1,416	1,448	1,479	1,512	1,545
C/I/I											
Previously Undocumented		0	0	0	0	0	0	0	0	0	0
Previously Undocumented C/I/I		0	0	0	0	0	0	0	0	0	0
Combined Recycling by sector		2026	2027	2028	2029	2030	2031	2032	2033	2034	2035
Tons	Residential	7,829	8,001	8,178	8,357	8,542	8,728	8,922	9,117	9,318	8,980
	C/I/I	3,230	3,302	3,374	3,449	3,524	3,602	3,681	3,762	3,845	3,662
Pecentage	Residential	71%	71%	71%	71%	71%	71%	71%	71%	71%	71%
	C/I/I	29%	29%	29%	29%	29%	29%	29%	29%	29%	29%
Landfilling											
Select facility and enter **percentage** of landfilled material sent to the facility for each year											
		2026	2027	2028	2029	2030	2031	2032	2033	2034	2035
Other facility	% of MMSW managed at	50%	100%	100%	100%	100%	100%	100%	100%	100%	100%
	Compaction Rate	1,900	1,900	1,900	1,900	1,900	1,900	1,900	1,900	1,900	1,900
Other facility	% of MMSW managed at	50%	0%	0%	0%	0%	0%	0%	0%	0%	0%
	Compaction Rate	1,900	1,900	1,900	1,900	1,900	1,900	1,900	1,900	1,900	1,900

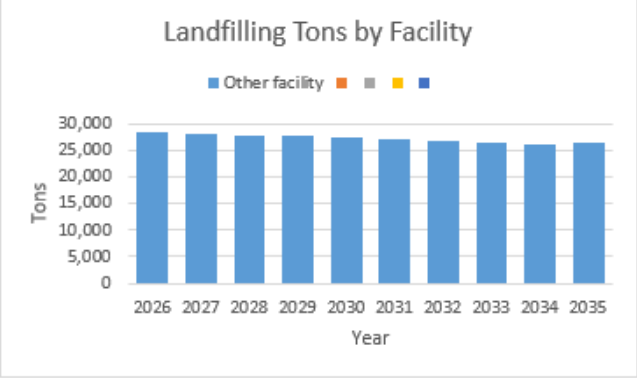
***Other Facility in 2026 = Sarona. Other Facility 2026 and beyond = General Waste**

Summary of Goal Volume Table for Itasca County

Solid Waste Planner: Danielle Drussell







Total land disposal capacity needed for waste generated in county

Waste Type	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	**Total**
MSW	29,925	29,656	29,373	29,078	28,767	28,444	28,103	27,750	27,382	27,851	**286,327**
Industrial	22,258	22,258	22,258	22,258	22,258	22,258	22,258	22,258	22,258	22,258	**222,584**
Construction & Demolition	5,141	5,141	5,141	5,141	5,141	5,141	5,141	5,141	5,141	5,141	**51,413**
Total Capacity	**57,324**	**57,056**	**56,772**	**56,477**	**56,166**	**55,843**	**55,503**	**55,150**	**54,782**	**55,251**	**560,325**

The total land disposal capacity needed from the period of 2026 to 2035 is 560,325 cubic yards

Koochiching County

Previous 5 Years Data					
Management Method - Tons					
	2019	2020	2021	2022	2023
Landfill	7429	7493	8657	8372	8188
Onsite	315	315	315	315	315
Organics	100	40	40	40	40
Recycling	3080	3832	4890	4381	5047
WTE	0	0	0	0	0
Total MMSW	7744	7808	8972	8687	8503
Recycling+Organics	3180	3872	4930	4421	5087
Recycling Rate	**29.1%**	**33.2%**	**35.5%**	**33.7%**	**37.4%**
Total MSW	10924	11680	13901	13108	13590
Non-MSW	2019	2020	2021	2022	2023
Industrial	0	1043	1545	5715	4590
Construction & Demo	0	18345	17715	17594	14244
Tons Recycled By Material Category					
	2019	2020	2021	2022	2023
Glass	125	98	98	98	104
Hazardous	21	17	50	153	176
Metal	860	1712	2787	2248	2760
Organics	100	40	40	40	40
Other	195	234	132	172	314
Paper	1786	1732	1755	1658	1667
Plastics	94	39	69	46	23
Total	3180	3872	4930	4415	5083
Problem Materials					
	2019	2020	2021	2022	2023
antifreeze	0	0	0	0	0
electronic devices	24.57	31.77	21.93	19.8	32.23
major appliances and white g	43.52	39.38	53.44	55.76	35.66
used oil	11.47	12.35	0	74	74.74
vehicle batteries	0	0	0	0	26.28
waste tires	123.26	162.73	56.28	95.98	245.97
Total	202.82	246.23	131.65	245.54	414.88

County: Koochiching

MSW Forecast

	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035
Recycling	4846.979815	4995.53	5145.826	5296.994	5449.907	5604.566	5760.969	5918.246	6077.267	6237.161
Organics	0	0	0	0	0	0	0	0	0	0
WTE	0	0	0	0	0	0	0	0	0	0
Landfill	8342.779248	8576.587	8646.489	8750.643	8848.424	8948.276	9048.458	9149.014	9250.185	9351.673
Total Tons	13141.5405	13506.71	13709.52	13947.35	14180.34	14416.95	14655.42	14895.04	15136.82	15379.68
Total Populatic	11144	10982	10818	10653	10486	10317	10146	9974	9800	9625
Per Capita	1.179248071	1.229895	1.267288	1.309241	1.352312	1.397397	1.444453	1.493387	1.544573	1.597889

Enter the percent of MSW by Sector - this must add to 100%

Residential	60%
C/I/I	40%

Onsite Disposal - Estimate of people underserved by garbage collection/drop-sites for use in calculating on-site disposal

Year	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035
Number of People underserved	705	697	688	680	671	663	654	646	639	632

Non-MMSW/Industrial Waste Projections (in Tons)

Year	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035
Industrial	15098	15098	15098	15098	15098	15098	15098	15098	15098	15098
Construction & Demolition	1281	1281	1281	1281	1281	1281	1281	1281	1281	1281

Solid Waste — Year

Mangement Method	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035
Recycling	4,847	4,996	5,146	5,297	5,450	5,605	5,761	5,918	6,077	6,237
Organics	0	0	0	0	0	0	0	0	0	0
Combined Recycling Rate	37%	37%	38%	38%	38%	39%	39%	40%	40%	41%
Waste-to-Energy (minus recyclables and nonprocessibles)	0	0	0	0	0	0	0	0	0	0
Landfill	7,999	8,219	8,275	8,365	8,449	8,534	8,620	8,706	8,791	8,877
St Louis County Regional Landfill - SW-405	7,999	8,219	8,275	8,365	8,449	8,534	8,620	8,706	8,791	8,877
Capacity Used	8,420	8,651	8,710	8,805	8,893	8,983	9,074	9,164	9,254	9,344
On-site Disposal	296	293	289	285	282	278	275	271	268	265
Total MSW Generated	**13,142**	**13,507**	**13,710**	**13,947**	**14,180**	**14,417**	**14,655**	**14,895**	**15,137**	**15,380**

Recycling by sector (excluding WTE)	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035
Residential	2,908	2,997	3,087	3,178	3,270	3,363	3,457	3,551	3,646	3,742
C/I/I	1,939	1,998	2,058	2,119	2,180	2,242	2,304	2,367	2,431	2,495
Previously Undocumented					0	0	0	0	0	0
Previously Undocumented C/I/I					0	0	0	0	0	0

Residential Recycling
Please enter the amount (in tons) of Recycling planned to come from the Residential sector

Organics by sector	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035
Residential					0	0	0	0	0	0
C/I/I					0	0	0	0	0	0
Previously Undocumented	0	0	0	0	0	0	0	0	0	0
Previously Undocumented C/I/I	0	0	0	0	0	0	0	0	0	0

Combined Recycling by sector		2026	2027	2028	2029	2030	2031	2032	2033	2034	2035
Tons	Residential	2,908	2,997	3,087	3,178	3,270	3,363	3,457	3,551	3,646	3,742
	C/I/I	1,939	1,998	2,058	2,119	2,180	2,242	2,304	2,367	2,431	2,495
Pecentage	Residential	60%	60%	60%	60%	60%	60%	60%	60%	60%	60%
	C/I/I	40%	40%	40%	40%	40%	40%	40%	40%	40%	40%

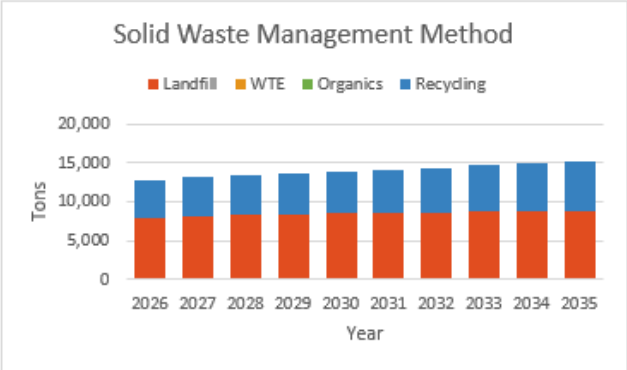
Landfilling

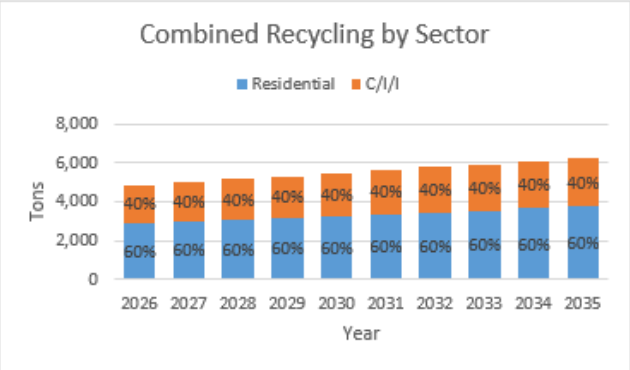
Select facility and enter **percentage** of landfilled material sent to the facility for each year

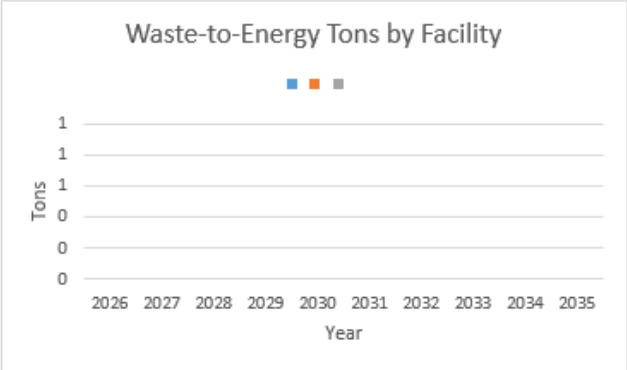
		2026	2027	2028	2029	2030	2031	2032	2033	2034	2035
St Louis County Regional Landfill - SW-	% of MMSW managed at	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
	Compaction Rate	1,900	1,900	1,900	1,900	1,900	1,900	1,900	1,900	1,900	1,900

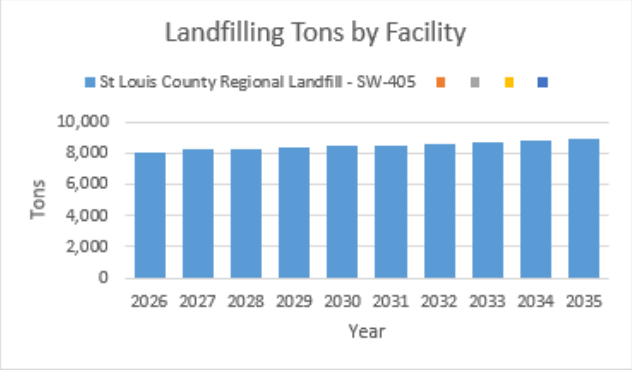
Summary of Goal Volume Table for Koochiching County

Solid Waste Planner: Danielle Drussell









Total land disposal capacity needed for waste generated in county

Waste Type	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	**Total**
MSW	8,420	8,651	8,710	8,805	8,893	8,983	9,074	9,164	9,254	9,344	**89,299**
Industrial	15,893	15,893	15,893	15,893	15,893	15,893	15,893	15,893	15,893	15,893	**158,926**
Construction & Demolition	1,708	1,708	1,708	1,708	1,708	1,708	1,708	1,708	1,708	1,708	**17,080**
Total Capacity	**26,020**	**26,252**	**26,311**	**26,406**	**26,494**	**26,584**	**26,674**	**26,764**	**26,855**	**26,945**	**265,305**

The total land disposal capacity needed from the period of 2026 to 2035 is 265,305 cubic yards

Lake County

Previous 5 Years Data					
Management Method - Tons					
	2019	2020	2021	2022	2023
Landfill	7822	5759	5943	5791	6466
Onsite	157	157	231	256	419
Organics	34	294	277	348	516
Recycling	1221	480	497	607	631
WTE	0	0	0	0	0
Total MMSW	7979	5915	6174	6047	6886
Recycling+Organics	1255	773	774	955	1146
Recycling Rate	**13.6%**	**11.6%**	**11.1%**	**13.6%**	**14.3%**
Total MSW	9234	6688	6947	7003	8032
Non-MSW	2019	2020	2021	2022	2023
Industrial	0	6316	6891	4533	3896
Construction & Demo	0	1033	3889	860	6543
Tons Recycled By Material Category					
	2019	2020	2021	2022	2023
Glass	211	130	151	156	158
Hazardous	38	26	37	27	48
Metal	110	24	18	24	40
Organics	34	294	277	348	516
Other	72	24	25	116	62
Paper	719	257	247	266	295
Plastics	71	20	19	19	27
Total	1255	773	774	955	1146
Problem Materials					
	2019	2020	2021	2022	2023
antifreeze	0.36	0.26	0	0	0
electronic devices	4.63	0	0	6.05	0
major appliances and white g	52.75	16.58	17.12	15.07	8.48
used oil	11.6	15.58	0	0	0
vehicle batteries	9.01	0.38	0	0	0
waste tires	12.34	3.29	4.51	2.49	24.56
Total	90.69	36.09	21.63	23.61	33.04

County: Lake

MSW Forecast

	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035
Recycling	1127.364168	1134.356	1144.332	1155.801	1171.745	1190.673	1214.077	1238.973	1268.346	1299.21
Organics	595.0279322	651.7793	708.5359	765.2951	822.0622	878.8346	935.6148	992.3976	1049.188	1105.982
WTE	0	0	0	0	0	0	0	0	0	0
Landfill	6586.309539	6598.367	6614.508	6632.69	6656.997	6685.388	6719.903	6756.46	6799.142	6843.866
Total Tons	8308.70164	8384.502	8467.376	8553.786	8650.804	8754.895	8869.595	8987.831	9116.676	9249.057
Total Populatic	10765	10766	10765	10763	10758	10751	10741	10730	10716	10701
Per Capita	0.771825512	0.778795	0.786565	0.79474	0.804128	0.814333	0.82577	0.837636	0.850754	0.864317

Enter the percent of MSW by Sector - this must add to 100%

Residential	57%
C/I/I	43%

Onsite Disposal - Estimate of people underserved by garbage collection/drop-sites for use in calculating on-site disposal

Year	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035
Number of People underserved	316	314	311	309	307	305	302	300	298	297

Non-MMSW/Industrial Waste Projections (in Tons)

Year	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035
Industrial	3601	3601	3601	3601	3601	3601	3601	3601	3601	3601
Construction & Demolition	635	635	635	635	635	635	635	635	635	635

Solid Waste	Year									
Mangement Method	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035
Recycling	1,321	1,500	1,740	1,880	2,000	2,025	2,050	2,075	2,100	2,125
Organics	756	825	875	935	1,000	1,055	1,110	1,165	1,220	1,275
Combined Recycling Rate	25%	28%	31%	33%	35%	35%	36%	36%	36%	37%
Waste-to-Energy (minus recyclables and nonprocessibles)	0	0	0	0	0	0	0	0	0	0
Landfill	6,099	5,928	5,722	5,609	5,522	5,547	5,583	5,622	5,672	5,724
Other facility	3,050									
St Louis County Regional Landfill -	3,050	5,928	5,722	5,609	5,522	5,547	5,583	5,622	5,672	5,724
Capacity Used	6,420									
On-site Disposal	133	132	131	130	129	128	127	126	125	125
Total MSW Generated	**8,309**	**8,385**	**8,467**	**8,554**	**8,651**	**8,755**	**8,870**	**8,988**	**9,117**	**9,249**

Recycling by sector	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035
Residential	753	850	980	1,080	1,140	1,160	1,180	1,200	1,220	1,240
C/I/I	568	650	760	800	860	865	870	875	880	885
Previously Undocumented	0	0	0	0	0	0	0	0	0	0
Previously Undocumented C/I/I	0	0	0	0	0	0	0	0	0	0

Organics by sector	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035
Residential	500	525	550	575	600	625	650	675	700	725
C/I/I	256	300	325	360	400	430	460	490	520	550
Previously Undocumented	0	0	0	0	0	0	0	0	0	0
Previously Undocumented C/I/I	0	0	0	0	0	0	0	0	0	0

Combined Recycling by		2026	2027	2028	2029	2030	2031	2032	2033	2034	2035
Tons	Residential	1,253	1,375	1,530	1,655	1,740	1,785	1,830	1,875	1,920	1,965
	C/I/I	824	950	1,085	1,160	1,260	1,295	1,330	1,365	1,400	1,435
Pecentage	Residential	60%	59%	59%	59%	58%	58%	58%	58%	58%	58%
	C/I/I	40%	41%	41%	41%	42%	42%	42%	42%	42%	42%

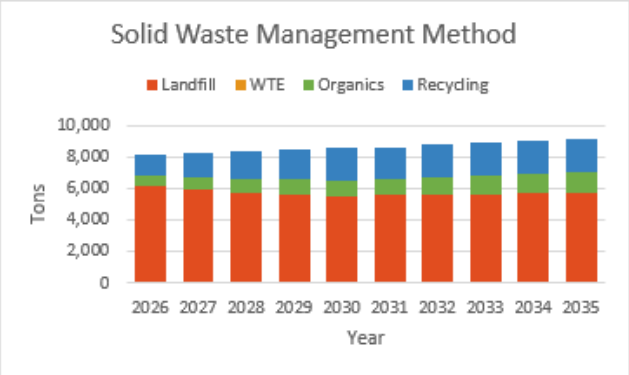
Landfilling

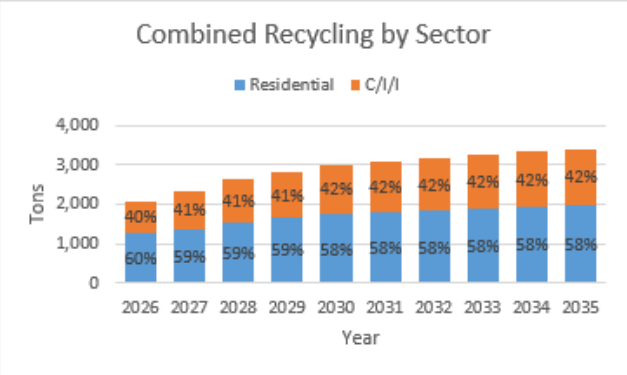
Select facility and enter **percentage** of landfilled material sent to the facility for each year

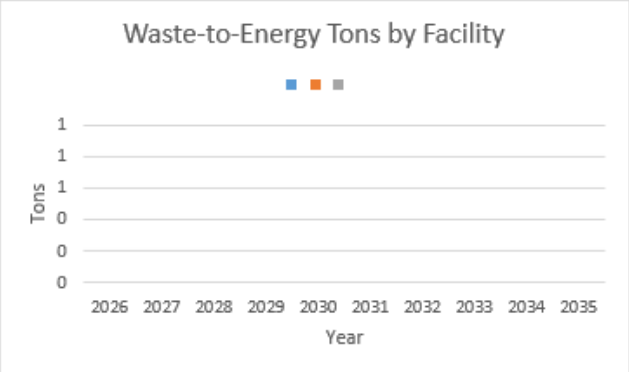
		2026	2027	2028	2029	2030	2031	2032	2033	2034	2035
Other facility	% of MMSW managed at	50%									
	Compaction Rate	1,900	1,900	1,900	1,900	1,900	1,900	1,900	1,900	1,900	1,900
St Louis County Regional	% of MMSW managed at	50%	100%	100%	100%	100%	100%	100%	100%	100%	100%
	Compaction Rate	1,900	1,900	1,900	1,900	1,900	1,900	1,900	1,900	1,900	1,900

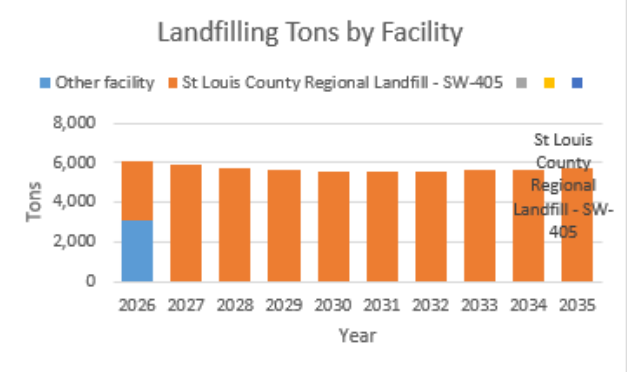
Summary of Goal Volume Table for Lake County

Solid Waste Planner: Danielle Drussell









Total land disposal capacity needed for waste generated in county

Waste Type	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	**Total**
MSW	6,420										**6,420**
Industrial	3,791	3,791	3,791	3,791	3,791	3,791	3,791	3,791	3,791	3,791	**37,905**
Construction & Demolition	847	847	847	847	847	847	847	847	847	847	**8,467**
Total Capacity	**11,057**	**4,637**	**4,637**	**4,637**	**4,637**	**4,637**	**4,637**	**4,637**	**4,637**	**4,637**	**52,792**

The total land disposal capacity needed from the period of 2026 to 2035 is 52,792 cubic yards

St. Louis County

Previous 5 Years Data					
Management Method - Tons					
	2019	2020	2021	2022	2023
Landfill	52605	53481	53952	53672	56793
Onsite	191	189	185	183	81
Organics	6611	5897	8256	6075	672
Recycling	56916	52197	50934	43159	72062
WTE	0	0	0	0	0
Total MMSW	52796	53670	54137	53855	56873
Recycling+Organics	63527	58094	59190	49234	72734
Recycling Rate	**54.6%**	**52.0%**	**52.2%**	**47.8%**	**56.1%**
Total MSW	116323	111764	113327	103089	129607
Non-MSW	2019	2020	2021	2022	2023
Industrial	#N/A	80483	90244	111296	70389
Construction & Demo	#N/A	185569	275325	182575	167128

Tons Recycled By Material Category					
	2019	2020	2021	2022	2023
Glass	1338	766	1432	1201	1249
Hazardous	2691	2865	2125	1900	1590
Metal	38440	34511	34220	26465	58406
Organics	6611	5897	8256	6075	672
Other	8575	7754	6262	6281	6454
Paper	5209	5718	6290	6007	4034
Plastics	663	583	606	1305	328
Total	63527	58094	59190	49234	72734

Problem Materials					
	2019	2020	2021	2022	2023
antifreeze	32.83	47.4	27.92	108.08	47.33
electronic devices	114.97	217.41	90.1	129.76	23.89
major appliances and white g	997.08	985.64	0	332.93	158.82
used oil	2240.19	1842.02	1660.03	1326.6	1290.19
vehicle batteries	261.63	864.31	271.7	165.78	61.25
waste tires	7038.67	6083.11	5780.53	4978.69	6199.97
Total	10685.4	10039.9	7830.28	7041.84	7781.45

County: St. Louis

MSW Forecast

	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035
Recycling	56983.88466	57330.29	57728.37	58184.02	58694.3	59266.58	59896.45	60585.36	61330.38	62132.97
Organics	5324.713056	5799.821	6351.636	6988.923	7707.3	8517.725	9413.623	10397.19	11464.03	12616.35
WTE	0	0	0	0	0	0	0	0	0	0
Landfill	54232.63871	54485.99	54776.12	55107.24	55477.25	55891.4	56346.54	56843.71	57380.83	57958.93
Total Tons	116541.2364	117616.1	118856.1	120280.2	121878.8	123675.7	125656.6	127826.3	130175.2	132708.3
Total Populatic	83183.40238	83134.68	83071.37	82991.83	82896.87	82784.42	82655.73	82510.39	82349.21	82171.79
Per Capita	1.401015504	1.414766	1.430771	1.449302	1.470247	1.493949	1.520241	1.549214	1.580771	1.61501

Enter the percent of MSW by Sector - this must add to 100%

Residential	73%
C/I/I	27%

Onsite Disposal - Estimate of people underserved by garbage collection/drop-sites for use in calculating on-site disposal

Year	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035
Number of People underserved	197	197	197	197	197	197	197	197	196	196

Non-MMSW/Industrial Waste Projections (in Tons)

Year	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035
Industrial	1724	1724	1724	1724	1724	1724	1724	1724	1724	1724
Construction & Demolition	7636	7636	7636	7636	7636	7636	7636	7636	7636	7636

Mangement Method	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035
Recycling	56,984	57,330	57,728	58,184	58,694	59,267	59,896	60,585	61,330	62,133
Organics	5,325	5,800	6,352	6,989	7,707	8,518	9,414	10,397	11,464	12,616
Combined Recycling Rate	53%	54%	54%	54%	54%	55%	55%	56%	56%	56%
Waste-to-Energy (minus recyclables and nonprocessibles)	0	0	0	0	0	0	0	0	0	0
Landfill	54,150	54,403	54,693	55,025	55,395	55,809	56,264	56,761	57,299	57,877
St Louis County Regional Landfill - SW-405	54,150	54,403	54,693	55,025	55,395	55,809	56,264	56,761	57,299	57,877
Capacity Used	57,000	57,267	57,572	57,921	58,310	58,746	59,225	59,748	60,314	60,923
On-site Disposal	83	83	83	83	83	83	83	83	82	82
Total MSW Generated	**116,541**	**117,616**	**118,856**	**120,280**	**121,879**	**123,676**	**125,657**	**127,826**	**130,175**	**132,708**

Recycling by sector (excluding WTE)	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035
Residential	41,598	41,851	42,142	42,474	42,847	43,265	43,724	44,227	44,771	45,357
C/I/I	15,386	15,479	15,587	15,710	15,847	16,002	16,172	16,358	16,559	16,776
Previously Undocumented	0	0	0	0	0	0	0	0	0	0
Previously Undocumented C/I/I	0	0	0	0	0	0	0	0	0	0

Organics by sector	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035
Residential	3,887	4,234	4,637	5,102	5,626	6,218	6,872	7,590	8,369	9,210
C/I/I	1,438	1,566	1,715	1,887	2,081	2,300	2,542	2,807	3,095	3,406
Previously Undocumented	0	0	0	0	0	0	0	0	0	0
Previously Undocumented C/I/I	0	0	0	0	0	0	0	0	0	0

Combined Recycling by sector		2026	2027	2028	2029	2030	2031	2032	2033	2034	2035
Tons	Residential	45,485	46,085	46,778	47,576	48,473	49,483	50,596	51,817	53,140	54,567
	C/I/I	16,823	17,045	17,302	17,597	17,928	18,302	18,714	19,165	19,654	20,182
Pecentage	Residential	73%	73%	73%	73%	73%	73%	73%	73%	73%	73%
	C/I/I	27%	27%	27%	27%	27%	27%	27%	27%	27%	27%

Landfilling

Select facility and enter **percentage** of landfilled material sent to the facility for each year

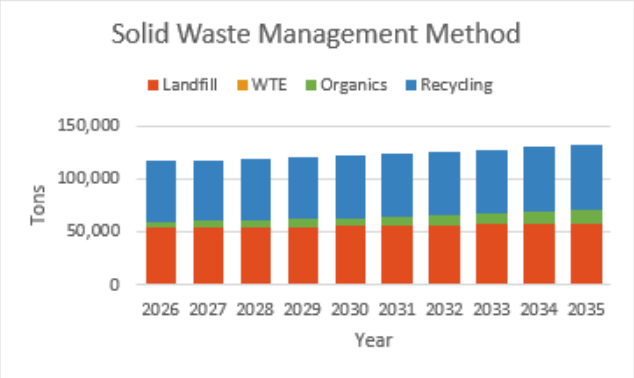
		2026	2027	2028	2029	2030	2031	2032	2033	2034	2035
St Louis County Regional	% of MMSW managed at	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
	Compaction Rate	1,900	1,900	1,900	1,900	1,900	1,900	1,900	1,900	1,900	1,900

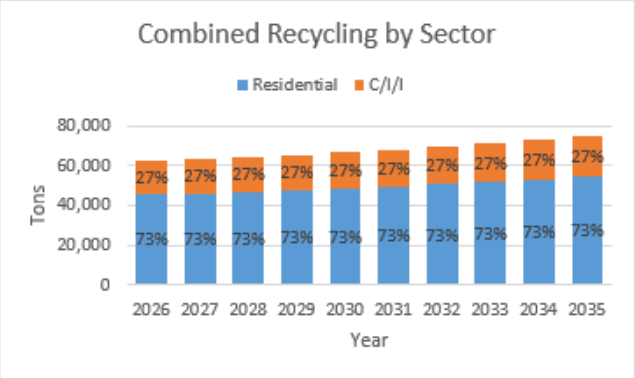
MSW Land Disposal Facilities in County (in Tons)

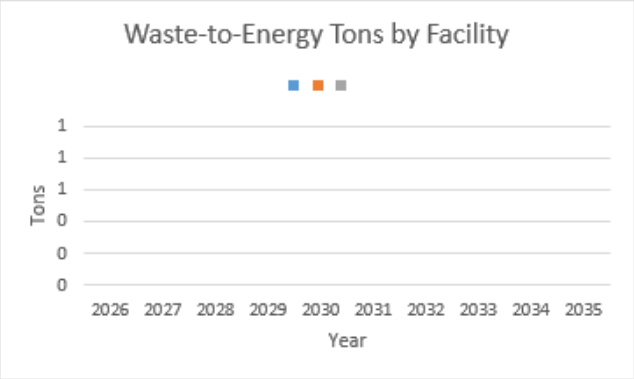
Facility	County of Origin	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035
St Louis County Regional Landfill - SW-405	St. Louis	54150	54403	54693	55025	55395	55809	56264	56761	57299	57877
	Carlton	7706	15440	15287	15173	15004	14934	14861	14786	14707	14623
	Cook	1859	3554	3377	3278	3127	3120	3093	3085	3071	3047
	Koochiching	7999	8219	8275	8365	8449	8534	8620	8706	8791	8877
	Lake	6681.447	6609.489	6486.227	6362.965	6239.702	6116.44	5993.177	5869.915	5746.652	5623.39
	WLSSD	30058	59814	59630	59428	59210	58966	58698	58408	58104	57790

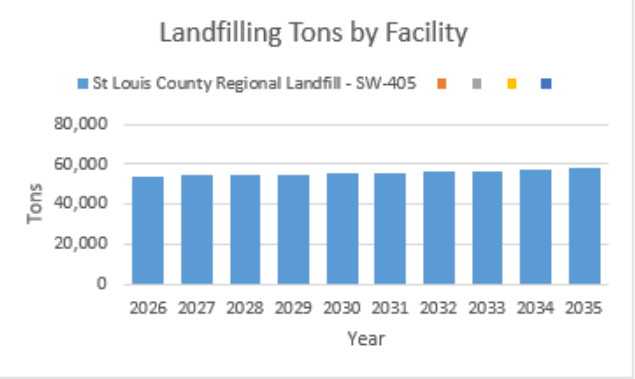
Summary of Goal Volume Table for St. Louis County

Solid Waste Planner: Danielle Drussell









Total land disposal capacity needed for waste generated in county

Waste Type	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	**Total**
MSW	57,000	57,267	57,572	57,921	58,310	58,746	59,225	59,748	60,314	60,923	**587,026**
Industrial	1,815	1,815	1,815	1,815	1,815	1,815	1,815	1,815	1,815	1,815	**18,147**
Construction & Demolition	10,181	10,181	10,181	10,181	10,181	10,181	10,181	10,181	10,181	10,181	**101,813**
Total Capacity	**68,996**	**69,263**	**69,568**	**69,917**	**70,306**	**70,742**	**71,221**	**71,745**	**72,310**	**72,919**	**706,987**

The total land disposal capacity needed from the period of 2026 to 2035 is 706,987 cubic yards

WLSSD

Previous 5 Years Data					
Management Method - Tons					
	2019	2020	2021	2022	2023
Landfill	48295	47689	51177	56314	57717
Onsite	1016	1016	1030	1030	1030
Organics	4990	3393	4084	4305	4174
Recycling	40800	40152	40880	45526	39883
WTE	0	0	0	0	0
Total MMSW	49311	48705	52207	57344	58747
Recycling+Organics	45790	43545	44963	49831	44057
Recycling Rate	**48.1%**	**47.2%**	**46.3%**	**46.5%**	**42.9%**
Total MSW	95101	92250	97170	107176	102804
Non-MSW	2019	2020	2021	2022	2023
Industrial	0	12282	11771	10944	48093
Construction & Demo	0	286	0	0	190873
Tons Recycled By Material Category					
	2019	2020	2021	2022	2023
Glass	4766	4735	4244	3710	3010
Hazardous	857	980	1010	996	981
Metal	9451	9524	8719	8595	8630
Organics	4990	3393	4084	4305	4174
Other	4951	4060	3554	3985	4071
Paper	19277	19287	21380	26236	21569
Plastics	1498	1566	1503	1419	1053
Total	45790	43545	44493	49246	43488
Problem Materials					
	2019	2020	2021	2022	2023
antifreeze	48.41	66.46	50.5	55.08	58.53
electronic devices	428.49	315.48	370.81	353.99	342.7
major appliances and white g	882.71	806.18	733.11	1176.56	1221.29
used oil	310.85	365.11	447.88	480.27	470.94
vehicle batteries	226.36	270.43	272.11	265.08	247.95
waste tires	331.12	345.08	413.69	351.89	414.03
Total	2227.94	2168.74	2288.1	2682.87	2755.44

County: WLSSD

MSW Forecast

	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035
Recycling	39326.52366	39251.54	39168.99	39079.09	38980.44	38873.63	38757.87	38633.95	38502.68	38363.25
Organics	4116.072641	4108.224	4099.585	4090.175	4079.85	4068.671	4056.555	4043.585	4029.845	4015.252
WTE	0	0	0	0	0	0	0	0	0	0
Landfill	57539.03333	57429.32	57308.55	57177.01	57032.67	56876.39	56707.02	56525.72	56333.65	56129.65
Total Tons	100981.6296	100789.1	100577.1	100346.3	100093	99818.69	99521.44	99203.26	98866.17	98508.15
Total Populatic	115374.7865	115154.8	114912.6	114648.9	114359.4	114046.1	113706.5	113342.9	112957.8	112548.8
Per Capita	0.87524868	0.875249	0.875249	0.875249	0.875249	0.875249	0.875249	0.875249	0.875249	0.875249

Enter the percent of MSW by Sector - this must add to 100%

Residential	40%
C/I/I	60%

Onsite Disposal - Estimate of people underserved by garbage collection/drop-sites for use in calculating on-site disposal

Year	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035
Number of People underserved	2454	2454	2454	2454	2454	2454	2454	2454	2454	2454

Non-MMSW/Industrial Waste Projections (in Tons)

Year	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035
Industrial	342	342	342	342	342	342	342	342	342	342
Construction & Demolition	17300	17750	18200	18650	19100	19550	20000	20450	20900	21350

Solid Waste	Year									
Mangement Method	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035
Recycling	36,900	36,870	36,845	36,820	36,790	36,765	36,741	36,720	36,695	36,660
Organics	3,965	4,105	4,102	4,098	4,093	4,088	4,082	4,075	4,067	4,058
Combined Recycling Rate	40%	40%	40%	40%	40%	41%	41%	41%	41%	41%
Waste-to-Energy (minus recyclables and nonprocessibles)	0	0	0	0	0	0	0	0	0	0
Landfill	60,117	59,814	59,630	59,428	59,210	58,966	58,698	58,408	58,104	57,790
Other facility	30,058									
St Louis County Regional Landfill -	30,058	59,814	59,630	59,428	59,210	58,966	58,698	58,408	58,104	57,790
Capacity Used	63,281									
On-site Disposal	1,030	1,030	1,030	1,030	1,030	1,030	1,030	1,030	1,030	1,030
Total MSW Generated	**102,012**	**101,819**	**101,607**	**101,376**	**101,123**	**100,849**	**100,552**	**100,233**	**99,896**	**99,538**

Recycling by sector (excluding WTE)	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035
Residential	14,400	14,390	14,380	14,370	14,360	14,350	14,340	14,330	14,320	14,310
C/I/I	22,500	22,480	22,465	22,450	22,430	22,415	22,401	22,390	22,375	22,350
Previously Undocumented	0	0	0	0	0	0	0	0	0	0
Previously Undocumented C/I/I	0	0	0	0	0	0	0	0	0	0

Organics by sector	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035
Residential	1,500	1,642	1,641	1,639	1,637	1,635	1,633	1,630	1,627	1,623
C/I/I	2,465	2,463	2,461	2,459	2,456	2,453	2,449	2,445	2,440	2,435
Previously Undocumented	0	0	0	0	0	0	0	0	0	0
Previously Undocumented C/I/I	0	0	0	0	0	0	0	0	0	0

Combined Recycling by sector		2026	2027	2028	2029	2030	2031	2032	2033	2034	2035
Tons	Residential	15,900	16,032	16,021	16,009	15,997	15,985	15,973	15,960	15,947	15,933
	C/I/I	24,965	24,943	24,926	24,909	24,886	24,868	24,850	24,835	24,815	24,785
Pecentage	Residential	39%	39%	39%	39%	39%	39%	39%	39%	39%	39%
	C/I/I	61%	61%	61%	61%	61%	61%	61%	61%	61%	61%

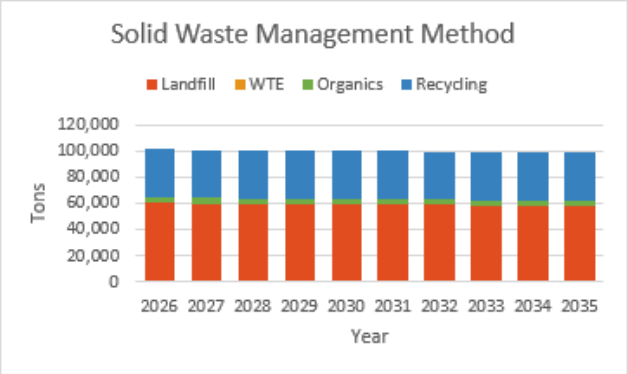
Landfilling

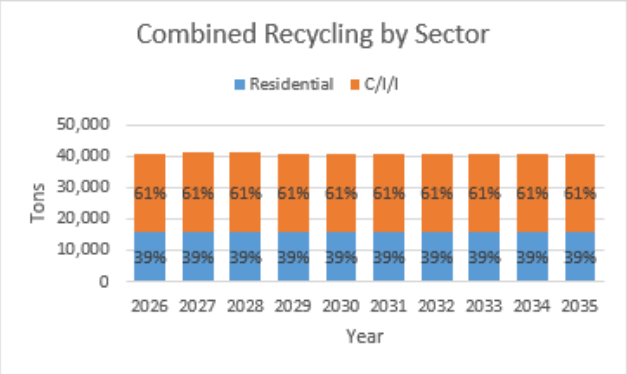
Select facility and enter **percentage** of landfilled material sent to the facility for each year

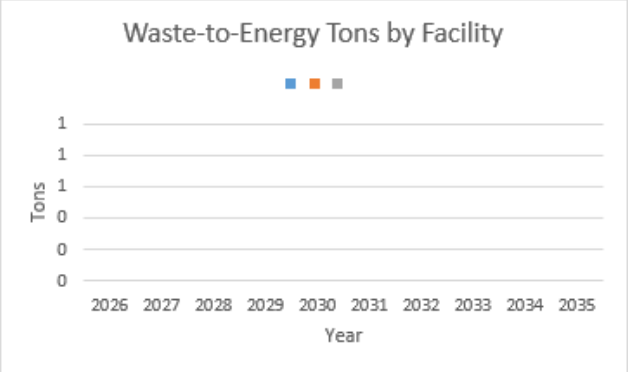
		2026	2027	2028	2029	2030	2031	2032	2033	2034	2035
Other facility	% of MMSW managed at	50%									
	Compaction Rate	1,900	1,900	1,900	1,900	1,900	1,900	1,900	1,900	1,900	1,900
St Louis County Regional	% of MMSW managed at	50%	100%	100%	100%	100%	100%	100%	100%	100%	100%
	Compaction Rate	1,900	1,900	1,900	1,900	1,900	1,900	1,900	1,900	1,900	1,900

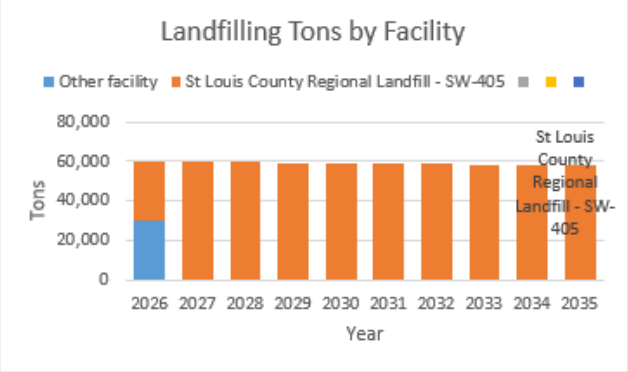
Summary of Goal Volume Table for WLSSD County

Solid Waste Planner: #N/A









Total land disposal capacity needed for waste generated in county

Waste Type	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	**Total**
MSW	63,281										**63,281**
Industrial	360	360	360	360	360	360	360	360	360	360	**3,600**
Construction & Demolition	23,067	23,667	24,267	24,867	25,467	26,067	26,667	27,267	27,867	28,467	**257,667**
Total Capacity	**86,707**	**24,027**	**24,627**	**25,227**	**25,827**	**26,427**	**27,027**	**27,627**	**28,227**	**28,827**	**324,547**

The total land disposal capacity needed from the period of 2026 to 2035 is 324,547 cubic yards

APPENDIX D – 10-Year County Budgets

Aitkin County

AITKIN COUNTY 10-YEAR PROJECTED BUDGET

ITEMS	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035
Solid Waste Reduction	1,250	1,500	1,750	2,000	2,250	2,500	2,750	3,000	3,250	3,500	3,750	4000
Solid Waste Education	1,500	1,600	1,700	1,800	1,900	2,000	2,100	2,200	2,300	2,400	2,500	2,600
Recycling Programs	199,346	204,736	214,973	223,571	232,514	239,489	249,069	257,061	264,773	272,715	280,897	289,324
Yard Waste Management	1,500	2,000	2,500	3,000	3,500	4,000	4,500	5,000	5,500	6,000	6,500	7,000
SSOM Composting	N/A											
MSW Land Disposal Facilities	N/A											
Tire Management Programs	N/A											
Electronic Products	3,697	3,937	4134	4298	4471	4604	4788	4940	5090	5245	5401	5564
Major Appliance Management	N/A											
Auto. Mercury, etc.	N/A											
HHW Management	10,331	10,827	11,368	11,823	12,296	12,665	13,172	13,594	14,002	14,442	14,855	15,255
Demo Debris	N/A											
Cost Per Household	50	54	56	58	60	62	65	67	69	71	73	75
Cost Per Ton	30	31	33	34	35	36	38	39	40	41	42	44
Total Solid Waste Budget	378,581	393,724	413,410	429,946	447,143	460,557	478,979	494,348	509,178	524,453	540,186	556,392

Carlton County

Items	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035
TS Operations	$95,557.10	$83,250.29	$84,742.04	$88,100.92	$91,611.63	$95,281.20	$99,116.94	$103,410.52	$107,598.92	$111,977.62
HHW	$123,851.20	$123,603.39	$127,607.74	$131,782.64	$136,096.85	$140,555.11	$145,162.33	$149,928.23	$154,848.78	$159,934.06
Recycling	$230,125.28	$197,407.63	$191,886.31	$197,764.20	$203,836.55	$210,110.17	$216,592.08	$223,598.92	$230,517.69	$237,667.52
MSW & MMSW Hauling	$668,276.66	$882,221.42	$1,100,741.10	$1,155,778.16	$1,213,567.07	$1,274,245.42	$1,337,957.69	$1,404,855.58	$1,475,098.36	$1,548,853.27
C&D Hauling	$15,542.21	$17,258.23	$17,697.99	$18,582.89	$19,512.03	$20,487.64	$21,512.02	$22,587.62	$23,717.00	$24,902.85
MSW Disposal	$520,956.91	$522,897.92	$533,420.15	$549,684.26	$566,174.78	$583,160.03	$600,654.83	$618,674.47	$637,234.71	$656,351.75
MMSW Disposal	$204,901.43	$210,331.06	$206,973.94	$213,284.63	$219,683.17	$226,273.66	$233,061.87	$240,053.73	$247,255.34	$254,673.00
C&D Disposal	$15,024.14	$15,059.70	$15,095.34	$15,185.23	$15,640.79	$16,110.01	$16,593.31	$17,091.11	$17,603.85	$18,131.96
MSW Ops	$342,940.76	$289,011.11	$290,607.30	$300,775.79	$311,354.21	$322,361.23	$333,816.45	$346,387.55	$358,806.89	$371,739.44
MMSW Ops	$141,941.39	$115,065.47	$114,827.41	$118,748.27	$122,828.35	$127,074.89	$131,495.52	$136,486.61	$141,280.20	$146,273.12
C&D Ops	$17,589.23	$13,542.18	$13,371.28	$13,811.87	$14,270.54	$14,748.12	$15,245.47	$15,830.60	$16,370.07	$16,932.18
TOTAL	**$2,392,887.42**	**$2,372,488.51**	**$2,431,713.74**	**$2,509,373.77**	**$2,589,931.71**	**$2,673,503.46**	**$2,760,209.95**	**$2,851,877.81**	**$2,996,689.02**	**$3,093,578.50**
Households	14,194	14,205	14,217	14,228	14,239	14,251	14,262	14,274	14,285	14,297
Tons	23,194	23,248	23,297	23,341	23,381	23,416	23,446	23,471	23,492	23,546
Cost per Household	$168.58	$167.01	$171.05	$176.37	$181.88	$187.60	$193.53	$199.80	$209.78	$216.39
Cost per Ton	$103.17	$102.05	$104.38	$107.51	$110.77	$114.18	$117.73	$121.50	$127.56	$131.38

Cook County

	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035
Solid Waste Reduction	$ 1,854.00	$ 1,891.00	$ 1,957.00	$ 2,006.00	$ 2,006.00	$ 2,139.00	$ 2,203.00	$ 2,269.00	$ 2,337.00	$ 2,407.00
Solid Waste Education	$ 2,158.00	$ 2,201.00	$ 2,278.00	$ 2,335.00	$ 2,417.00	$ 2,489.00	$ 2,564.00	$ 2,641.00	$ 2,720.00	$ 2,802.00
Recycling Programs	$ 139,050.00	$ 141,831.00	$ 146,795.00	$ 150,465.00	$ 155,731.00	$ 160,403.00	$ 165,215.00	$ 170,172.00	$ 175,277.00	$ 180,535.00
Yard Waste Management	$ 819.00	$ 835.00	$ 865.00	$ 886.00	$ 917.00	$ 945.00	$ 973.00	$ 1,002.00	$ 1,032.00	$ 1,068.00
SSOM Composting	N/A	$ 2,500.00	$ 2,588.00	$ 2,652.00	$ 2,745.00	$ 2,827.00	$ 2,912.00	$ 3,000.00	$ 3,090.00	$ 3,182.00
MSW Landfill Facilities	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Tire Management Program	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Electronics Products	$ 4,326.00	$ 4,413.00	$ 4,567.00	$ 4,681.00	$ 4,845.00	$ 4,990.00	$ 5,140.00	$ 5,294.00	$ 5,453.00	$ 5,617.00
Major Appliance Management	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Auto Mercury Switches, Motor vehicle fluids, Lead Acid Batteries	$ 2,287.00	$ 2,333.00	$ 2,414.00	$ 2,475.00	$ 2,561.00	$ 2,638.00	$ 2,717.00	$ 2,799.00	$ 2,883.00	$ 2,969.00
HHW Management	$ 8,439.00	$ 8,608.00	$ 8,909.00	$ 9,132.00	$ 9,451.00	$ 9,735.00	$ 10,027.00	$ 10,328.00	$ 10,638.00	$ 10,957.00
Demolition Debris Management	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total	$ 158,933.00	$ 164,612.00	$ 170,373.00	$ 174,632.00	$ 180,673.00	$ 186,166.00	$ 191,751.00	$ 197,505.00	$ 203,430.00	$ 209,537.00
Cost per household	$ 58.86	$ 60.96	$ 63.10	$ 64.68	$ 66.91	$ 68.95	$ 71.02	$ 73.15	$ 75.34	$ 77.60
Cost per ton	$ 42.75	$ 46.32	$ 50.45	$ 53.27	$ 55.78	$ 59.67	$ 61.99	$ 64.02	$ 66.24	$ 68.77

*N/A means managed by a private company or hauler
Households = ~2700
Tonnage taken from GVT

Itasca

	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035
SALARIES/WAGES	$264,950.00	$272,899.00	$281,085.00	$289,518.00	$298,204.00	$307,150.00	$316,364.00	$325,855.00	$335,631.00	$345,699.00
INSURANCE BENEFITS	$62,766.00	$65,837.32	$69,062.85	$72,448.16	$76,001.20	$79,730.30	$83,644.25	$87,752.22	$92,063.85	$96,859.32
PERA	$19,871.00	$20,467.43	$21,081.38	$21,713.85	$22,365.30	$23,036.25	$23,727.30	$24,439.13	$25,172.33	$25,927.43
FICA/PAID LEAVE TAX	$20,269.00	$22,077.53	$22,739.78	$23,422.01	$24,124.70	$24,848.44	$25,593.85	$26,361.67	$27,152.55	$27,967.05
STAFF TOTAL	**$367,856.00**	**$381,281.28**	**$393,969.01**	**$407,102.02**	**$420,695.20**	**$434,764.99**	**$449,329.40**	**$464,408.02**	**$480,019.73**	**$496,452.80**
CONTRACTED SERVICES	$2,807,000.00	$2,354,829.48	$2,391,428.96	$2,466,373.85	$2,593,751.20	$2,673,725.45	$2,755,121.33	$2,838,944.28	$2,925,897.76	$3,033,760.93
SOLID WASTE SITE LEASES	$1,750.00	$1,750.00	$1,750.00	$1,750.00	$1,750.00	$1,750.00	$1,750.00	$1,750.00	$1,750.00	$1,750.00
SITE HEATING EXPENSE	$8,000.00	$4,000.00	$4,000.00	$4,000.00	$4,000.00	$4,000.00	$4,000.00	$4,000.00	$4,000.00	$4,000.00
OPERATIONS & DISPOSAL	**$2,816,750.00**	**$2,360,579.48**	**$2,397,178.96**	**$2,472,123.85**	**$2,599,501.20**	**$2,679,475.45**	**$2,760,871.33**	**$2,844,694.28**	**$2,931,647.76**	**$3,039,510.93**
RECYCLING PROGRAMS	**$60,000.00**	**$70,000.00**	**$73,500.00**	**$77,175.00**	**$81,033.75**	**$85,085.44**	**$89,339.71**	**$93,806.69**	**$98,497.03**	**$103,421.88**
GARBAGE USE TAX	**$80,000.00**	**$75,000.00**	**$74,850.00**	**$74,700.00**	**$74,550.00**	**$74,400.00**	**$74,250.00**	**$74,100.00**	**$73,950.00**	**$73,800.00**
PROFESSIONAL SERVICES	$30,000.00	$30,000.00	$20,000.00	$20,000.00	$20,000.00	$20,000.00	$20,000.00	$20,000.00	$20,000.00	$20,000.00
OTHER SERVICES	$90,000.00	$92,115.00	$94,279.70	$96,495.28	$98,762.91	$101,083.84	$103,459.31	$105,890.61	$108,379.04	$110,925.94
MAINTENANCE CONTRACTS	$15,000.00	$15,352.50	$15,713.28	$16,082.55	$16,460.49	$16,847.31	$17,243.22	$17,648.43	$18,063.17	$18,487.66
INSURANCES	$13,500.00	$18,919.00	$20,337.58	$21,864.08	$23,507.53	$25,277.78	$27,185.47	$29,242.16	$31,460.41	$33,853.84
VEHICLE LEASES	$10,670.00	$10,320.00	$10,320.00	$10,320.00	$10,320.00	$0.00	$0.00	$0.00	$0.00	$0.00
VEHICLE MAINTENANCE & PARTS	$3,150.00	$3,742.00	$3,771.19	$3,801.06	$33,831.63	$5,531.40	$5,817.39	$6,104.22	$6,391.92	$6,680.50
OTHER EXPENSES	$46,575.00	$47,036.25	$47,515.72	$48,011.89	$48,500.81	$49,068.62	$49,631.46	$50,215.64	$50,827.47	$51,463.41
MISCELLANEOUS TOTAL	**$208,895.00**	**$217,484.75**	**$211,937.47**	**$216,574.86**	**$251,383.37**	**$217,808.95**	**$223,336.85**	**$229,101.06**	**$235,122.01**	**$241,411.35**
COST PER HOUSEHOLD	$191.00	$168.00	$171.00	$177.00	$187.00	$191.00	$197.00	$203.00	$210.00	$218.00
COST PER TON	$88.63	$77.89	$79.11	$81.58	$86.17	$87.88	$90.65	$93.53	$96.30	$100.16
TOTAL	**$3,533,501.00**	**$3,104,345.51**	**$3,151,435.44**	**$3,247,675.73**	**$3,427,163.52**	**$3,491,534.83**	**$3,597,127.29**	**$3,706,110.05**	**$3,819,236.53**	**$3,954,596.96**

Koochiching County

Items	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035
HHW	$28,403.04	$29,169.92	$29,957.51	$30,766.36	$31,597.05	$32,450.18	$33,326.33	$34,226.14	$35,150.25	$36,099.30
Recycling/Special	$514,008.00	$527,886.22	$542,139.14	$556,776.90	$571,809.88	$587,248.74	$603,104.46	$619,388.28	$636,111.76	$653,286.78
MSW/MMSW Hauling	$235,000.00	$241,345.00	$247,861.32	$254,553.57	$261,426.52	$268,485.03	$275,734.13	$283,178.95	$290,824.78	$298,677.05
MSW/MMSW Disposal	$350,000.00	$359,450.00	$369,155.15	$379,122.34	$389,358.64	$399,871.33	$410,667.85	$421,755.88	$433,143.29	$444,838.16
MSW/MMSW/TS Ops	$598,823.00	$614,991.22	$631,595.98	$648,649.08	$666,162.60	$684,148.99	$702,621.01	$721,591.78	$741,074.76	$761,083.78
C&D/Ops	$77,947.00	$80,051.57	$82,212.96	$84,432.71	$86,712.39	$89,053.63	$91,458.08	$93,927.45	$96,463.49	$99,068.00
TOTAL	**$1,804,181.04**	**$1,852,893.93**	**$1,902,922.06**	**$1,954,300.96**	**$2,007,067.09**	**$2,061,257.90**	**$2,116,911.86**	**$2,174,068.48**	**$2,232,768.33**	**$2,293,053.07**
Households	5,629	5,556	5,484	5,412	5,342	5,273	5,204	5,136	5,070	5,004
Tons	10,187	10,055	9,924	9,795	9,668	9,542	9,418	9,295	9,175	9,055
Cost per Household	$320.52	$333.50	$347.02	$361.08	$375.72	$390.94	$406.79	$423.27	$440.43	$458.28
Cost per Ton	$177.11	$184.28	$191.75	$199.52	$207.61	$216.02	$224.78	$233.89	$243.37	$253.23

Lake County

	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035
Solid Waste Reduction	2500	2567.5	2636.823	2708.017	2781.133	2856.224	2933.342	3012.542	3093.881	3177.415
Solid Waste Education	2500	2567.5	2636.823	2708.017	2781.133	2856.224	2933.342	3012.542	3093.881	3177.415
Recycling Programs	130175	133689.7	137299.3	141006.4	144813.6	148723.6	152739.1	156863.1	161098.4	165448
Yard Waste Management	17000	17459	17930.39	18414.51	18911.71	19422.32	19946.72	20485.29	21038.39	21606.42
SSOM Composting	5000	5135	5273.645	5416.033	5562.266	5712.448	5866.684	6025.084	6187.761	6354.831
Tire Management Programs	13850	14223.95	14608	15002.41	15407.48	15823.48	16250.71	16689.48	17140.1	17602.88
Electronic Products	12550	12888.85	13236.85	13594.24	13961.29	14338.24	14725.38	15122.96	15531.28	15950.63
Mattress Management	12000	12324	12656.75	12998.48	13349.44	13709.87	14080.04	14460.2	14850.63	15251.59
Major Appliance Management	10500	10783.5	11074.65	11373.67	11680.76	11996.14	12320.04	12652.68	12994.3	13345.14
HHW Management	76118	78173.19	80283.86	82451.53	84677.72	86964.02	89312.04	91723.47	94200	96743.4
Demolition Debris Management	127000	130429	133950.6	137567.2	141281.6	145096.2	149013.8	153037.1	157169.1	161412.7
Total operating costs	411219	422268.2	433615.7	445269.6	457238.1	469529.7	482153.2	495117.4	508431.7	522105.5
Capital outlay	32464	40000	40000	40000	40000	50000	50000	50000	50000	50000
Total Budget	443683	462268.2	473615.7	485269.6	497238.1	519529.7	532153.2	545117.4	558431.7	572105.5
forecasted tons	8308.70164	8384.502	8467.376	8553.786	8650.804	8754.895	8869.595	8987.831	9116.676	9249.057
Cost per ton	$53.40	$55.13	$55.93	$56.73	$57.48	$59.34	$60.00	$60.65	$61.25	$61.86
Population	10765	10766	10765	10763	10758	10751	10741	10730	10716	10701
Households	5007.0	5007.4	5007.0	5006.0	5003.7	5000.5	4995.8	4990.7	4984.2	4977.2
Cost per Household	$88.61	$92.32	$94.59	$96.94	$99.37	$103.90	$106.52	$109.23	$112.04	$114.95

St. Louis County

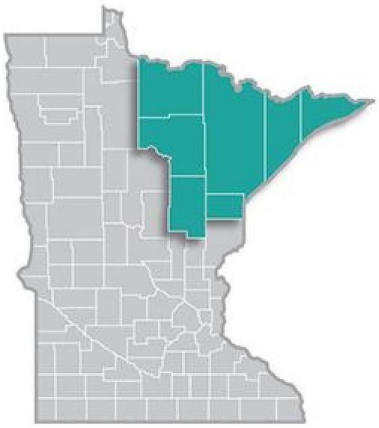
Program	St. Louis County ANNUAL BUDGET estimates 2026-2036										
	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036
Solid Waste Education and Reduction	$ 50,000	$ 50,000	$ 50,000	$ 48,000	$ 48,000	$ 48,000	$ 47,000	$ 47,000	$ 47,000	$ 47,000	$ 47,000
Recycling Programs	$ 2,000,960	$ 2,101,008	$ 2,206,058	$ 2,316,361	$ 2,432,179	$ 2,553,788	$ 2,681,478	$ 2,815,552	$ 2,956,329	$ 3,104,146	$ 3,259,353
Yard Waste Management	$ 5,000	$ 5,000	$ 5,000	$ 5,000	$ 5,000	$ 5,000	$ 5,000	$ 5,000	$ 5,000	$ 5,000	$ 5,000
SSOM Composting	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
MSW Land Disposal Facilities	$ 1,766,941	$ 1,855,288	$ 1,948,052	$ 2,045,455	$ 2,147,728	$ 2,255,114	$ 2,367,870	$ 2,486,263	$ 2,610,577	$ 2,741,105	$ 2,878,161
Tire Management Programs	$ 244,200	$ 256,410	$ 269,231	$ 282,692	$ 296,827	$ 311,668	$ 327,251	$ 343,614	$ 360,795	$ 378,834	$ 397,776
Electronic Products	$ 82,500	$ 86,625	$ 82,502	$ 82,503	$ 82,504	$ 82,505	$ 82,506	$ 82,507	$ 82,508	$ 82,509	$ 82,510
Major Appliance Management	$ 200,866	$ 210,909	$ 200,866	$ 200,866	$ 200,866	$ 200,866	$ 200,866	$ 200,866	$ 200,866	$ 200,866	$ 200,866
Auto. mercury switches, motor vehicle fluids, lead-acid & dry cell batteries	$ 5,000	$ 5,000	$ 5,000	$ 5,000	$ 5,000	$ 5,000	$ 5,000	$ 5,000	$ 5,000	$ 5,000	$ 5,000
HHW Management	$ 332,685	$ 349,319	$ 366,785	$ 385,124	$ 404,381	$ 424,600	$ 445,830	$ 468,121	$ 491,527	$ 516,104	$ 541,909
Demolition Debris Management	$ 261,500	$ 274,575	$ 288,304	$ 302,719	$ 317,855	$ 333,748	$ 350,435	$ 367,957	$ 386,355	$ 405,672	$ 425,956
Budget per Ton	$ 91.27	$ 95.33	$ 98.98	$ 102.96	$ 107.08	$ 111.29	$ 115.59	$ 120.01	$ 124.54	$ 129.16	$ 133.99
Cost per Household	$ 108.78	$ 113.93	$ 118.69	$ 123.95	$ 129.52	$ 135.35	$ 141.44	$ 147.85	$ 154.56	$ 161.60	$ 168.98

WLSSD

Program	WLSSD Solid Waste Program Operating Budgets									
	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035
Solid Waste Reduction Solid Waste Education Recycling Programs	$1,090,340	$1,123,050	$1,156,742	$1,191,444	$1,227,187	$1,264,003	$1,301,923	$1,340,981	$1,381,210	$1,422,647
Yard Waste Management SSOM Composting	$472,741	$486,923	$501,531	$516,577	$532,074	$548,036	$564,477	$581,411	$598,854	$616,819
MSW Land Disposal Facilities Demolition Debris Management	$7,906,631	$8,802,109	$8,981,534	$9,164,648	$9,351,529	$9,542,256	$9,828,524	$10,123,379	$10,427,081	$10,739,893
Tire Management Programs Electronic Products Major Appliance Management	$1,660,366	$1,710,177	$1,761,482	$1,814,326	$1,868,756	$1,924,819	$1,982,564	$2,042,040	$2,103,302	$2,166,401
Auto. mercury switches, motor vehicle fluids, lead-acid & dry cell batteries HHW Management	$1,136,372	$1,170,463	$1,205,577	$1,241,744	$1,278,996	$1,317,366	$1,356,887	$1,397,594	$1,439,521	$1,482,707
Total	$12,266,450	$13,292,722	$13,606,866	$13,928,739	$14,258,542	$14,596,480	$15,034,375	$15,485,405	$15,949,968	$16,428,467
Cost per Household (52,580 HH)	$233	$253	$259	$265	$271	$278	$286	$295	$303	$312
Cost per Ton	$151	$163	$166	$169	$171	$175	$179	$183	$188	$192

Northeast Minnesota Regional Solid Waste Management Plan

Aitkin, Carlton, Cook, Itasca, Koochiching, Lake, St. Louis, WLSSD



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