

Comprehensive Solid Waste Management Plan

Steele County, Minnesota

2014-2024

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Steele County, Minnesota

Prepared for:
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Owatonna, Minnesota

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Executive Summary

This Comprehensive Solid Waste Management Plan (SWMP) reviews the past and present solid waste management system, solid waste abatement programs and policies, and anticipated solid waste management activities. The plan considers various alternatives which can result in the most feasible and prudent reduction of the need for the practice of land disposal of mixed municipal solid waste (MSW) for the County. However, this plan update proposes continuation of the County's current solid waste programs with emphasis on continued improvement in waste abatement programs as well as the necessary waste assurance for the Steele County Landfill.

BACKGROUND INFORMATION

Steele County, located in southeastern Minnesota, is approximately 60 miles south of the City of St. Paul (Figure 1) and covers an area of 429.55 square miles. Based on the 2012 U.S. Census, the population of Steele County was 36,299, a decrease of 277 people since the 2010 census. According to the Minnesota State Demographic Center, 2015 population estimates for Steele County is 36,299 with 14,335 households with 2.55 persons per household. The majority of rural Steele County is sparsely populated with the City of Owatonna comprising over 70 percent of the County's population. As of March 2014, the county-specific population projections from the Minnesota State Demographic Center describe the projected populations for Steele County to increase for 2015 and 2020 to be 38,672 and 40,375, respectively. The 2020 projection is an increase of just over 4,000 persons from the 2012 annual estimate; Household projections for 2015 and 2020 include 15,165 and 18,611, respectively.

The County retains a rural character except along the I-35 corridor. Land use in Owatonna, Blooming Prairie, Medford and Ellendale is a mix of single and multiple family residential dwellings, commercial, industrial and public uses. In the smaller communities, land use consists primarily of single family homes and commercial establishments located along a main street. The Steele County Planning & Zoning Director has determined that 94.5 percent of the property in Steele County is zoned for agricultural purposes. Recent modifications to the zoning ordinance included setback requirements from water resources, density standards in the agricultural district, and aggregate resource protection, which, altogether, restrict development in rural areas. Therefore, future land use patterns are anticipated to remain similar to current conditions.

Employment outlook for southeast Minnesota from 2010 to 2020 are anticipated to increase by 14.3 percent with a total hiring of 97,350 people. Steele County and Minnesota generally have a greater median household income than the rest of the United States at \$52,762. Furthermore, the 2007-2011 poverty levels within Steele County at 6.2 percent are lower than the state average indicating the economy in Steele County is stronger than much of the nation and the state and the trend is projected to continue.

Historically, the waste generation has been directly related to population and industry with the greatest influences on managing waste being recycling and disposal options. Options for waste management such as processing facilities and composting are not available in close proximity to Steele County. The cost of hauling to the nearest facilities located in other counties and the environmental impacts of that hauling present regional constraints other than landfilling. However, it is still important to maintain adequate waste flows for the County-owned landfill for economic and environmental purposes; adequate tipping fees must be sustained in order to fund all landfill operations and financial assurance mechanisms and retain the landfill as self-sustaining. Therefore, Steele County has opened its landfill gates to out-of-county waste, which is anticipated to continue in the short-term to be the only viable way to keep the Steele County Landfill economically sound while promoting waste abatement programs.

Approximately 95 percent of County residents contract with haulers or have access to collection service; however, not all of these residents pay a contracted hauler and may self-haul to collection and disposal facilities or conduct on-site disposal. There are generally between 10 and 15 licensed haulers in the County.

Executive Summary (Continued)

Some individuals self-haul directly to the landfill and a small percentage of individuals manage their waste on their own property. It is estimated that less 2400 residents do not have collection service, or less than 3 tons per day of MSW is disposed of in this manner. Open dumping is not a major problem according to County officials.

In 2013, Steele County generated approximately 59,818 tons of MSW. Of the MSW generated in 2013, approximately 27,163 tons or 45.4 percent was landfilled, 31,626 tons or 52.9 percent was recycled, and 1,007 tons or 1.7 percent managed on site. Residential and commercial entities generated approximately 164 tons per day of solid waste. Based on the estimated 2013 population of 37,090, the 2013 per-capita solid waste generation rate for Steele County was approximately 8.8 pounds per person per day, including commercial waste. The estimated residential solid waste generation rate was about 3 pounds per person per day.

Of the 27,163 tons of MSW landfilled in 2013, a total of 18,063 tons or 66.5 percent of the waste was disposed at the Steele County Landfill. The remaining 9,100 tons of MSW landfilled was hauled out-of-state for disposal. With the projected increase in population over the next 10 years, the generation of MSW is also expected to increase from 59,818 tons/year in 2013 to 66,619 tons/year. The greatest constraint to waste collection is when haulers choose to send waste out-of-county as well as out-of-state. Waste that is removed from the County program is not only difficult to control for recycling or disposal options, but it also is difficult to track for quantities since there are no requirements for reporting waste quantity data to the County. Options for waste management such as processing facilities and composting are not available in close proximity to Steele County. The cost of hauling to the nearest facilities located in other counties and the environmental impacts of that hauling present a regional constraints and opportunities other than landfilling.

The largest waste generators in Steele County are commercial and industrial based services with the second largest waste generator being residential. Details on waste generation rates for the largest employers as well as their site-specific waste abatement activities and actual land disposal quantities are not known except as indicated in Section 2.3.3.4. However, as presented in the GVT (Appendix A), approximately 66 percent of MSW generated in Steele County is estimated to be commercial or industrial. The remaining 34 percent is considered residential.

Minnesota completed its most recent statewide MSW composition study in 2013 (Burns & McDonnell, December 2013). In general, the characterization study identified the MSW composition into the following primary categories and distribution:

- Organic (31%)
- Paper (24.5%)
- Plastic (17.9%)
- Metal (4.5%)
- Glass (2.2%)
- Electronics (1.2%)
- Other Waste (18.3 %)

Steele County has participated and continues to participate in a number of local and regional solid waste planning activities. Solid waste planning activities over the past five years include:

- Household Hazardous Waste: Since 1992 Steele and Rice Counties entered into a contract for management of household hazardous waste (HHW).

- Southeast Minnesota Recycler's Exchange (SEMREX): This association provides cooperative market development for recyclable materials, cooperative marketing of recyclables, and a materials exchange program.
- Multi-County Solid Waste Committee: Since 1994, Steele County has been participating in a multi-county (Mower, Freeborn, Steele, Rice, and Waseca Counties) solid waste working committee. Blue Earth County and Tri-County (LeSueur, Sibley, Nicollet) have been added to the group since 2001.
- Extension of Landfill Life: A feasibility study concluded that leachate re-circulation could improve waste densities by as much as 500 lbs/cy which would give the landfill an additional 5 years of capacity at the current waste flows.

Future planning efforts include joint efforts with Freeborn County to improve programs including HHW, waste education, and recycling. As of April 1, 2014, Steele County and Freeborn County entered into an agreement to share staff for waste abatement programs.

EXISTING INTEGRATED SOLID WASTE MANAGEMENT SYSTEM

The goal of Steele County is to make waste education, source reduction, and recycling programs available to all residents, businesses, schools, and all levels of government throughout Steele County. The Steele County Ordinance No. 27 stipulates that Steele County Environmental Services will administer the County solid waste program to include waste education, recycling and other waste abatement programs, HHW management, and landfill management. Programs include:

- Waste Reduction (packaging reduction, office paper reduction, backyard composting, and volume-based garbage collection fees)
- Waste Education (operating the Recycling Hotline and web-based "A to Z Disposal Guide", speaking at schools and other groups, distribution of news releases, conduct print and/or electronic ad campaigns, brochures, and newsletter information).
- Recycling (through recycling education, residential recycling program, and commercial/industrial recycling programs including household hazardous waste and problem materials)
- Yard Waste Compost Program (supporting county-wide municipal yard waste compost facilities)
- County-Owned Land Disposal Facilities (Steele County Landfill, owned and operated by Steele County in compliance with an MPCA permit, includes MSW disposal areas, demolition debris disposal areas, solid waste transfer area, and recycling, special waste, and household hazardous waste areas)
- Other Land Disposal Facilities (Central Disposal Facility, Lake Mills, Iowa, accepts non-hazardous waste including: MSW, construction and demolition debris, industrial and special waste, asbestos (friable and non-friable), and CERCLA waste)
- Special Waste Management (Steele County Landfill, the Steele County Recycling Center, and several private businesses accept and recycle banned materials from landfills including, but may not be limited to, processed or collected recycling materials, yard waste, lead acid, nickel-cadmium, and vehicle batteries, tires, major appliances, fluorescent lamps, used motor oil and motor oil filters, electronics, and HHW).
- Household Hazardous Waste Management (Steele and Rice Counties operate a joint program for the management of HHW)

Executive Summary (Continued)

Costs associated with the existing integrated solid waste management systems falls primarily into four categories:

- Administrative costs primarily include staffing and facilities.
- Recycling costs are established through a services agreement with a private contractor (Waste Management) for five year intervals, except costs associated with recycling activities housed at the landfill are included with the landfill operating costs.
- HHW costs are associated with staffing, facility maintenance, waste management, and education.
- The county-owned landfill represents the greatest expense for the integrated solid waste management program, but also represents the greatest source of revenue.

The 2004 Comprehensive SWMP established an ambitious recycling goal calling for the recycling of more than 50 percent by weight per year of the County's total MSW through the year 2012. As summarized in the GVT (Appendix A), the 2013 base year numbers are as follows indicate that goal was exceeded at 52.9 percent. Steele County's greatest achievement is the successful roll-out of the single or no-sort recycling program in late 2012.

Challenges identified with the existing program include:

- The management of source-separated organic materials. There are no nearby facilities and private haulers have not developed hauling programs to the nearest facility located in Good Thunder.
- Obtaining waste generation and recycling records for commercial and industrial facilities.
- Managing records and administering recycling goals on waste bound for out of county.

PROPOSED INTEGRATED SOLID WASTE MANAGEMENT SYSTEM

The goal of Steele County's Solid Waste Management System is to provide a comprehensive and accessible solid waste program that is protective of the environment and has economic sustainability. The primary objective of Steele County's Integrated Solid Waste Management System is to establish accessible, environmentally sound, and cost-effective programs that encourage use of the best solid waste management practices. For the next 10-years, the County has established a new solid waste abatement goal of 60 percent by weight as presented in the GVT in Appendix A. This goal will be accomplished by:

- Continued education to residents and businesses on waste reduction and recycling opportunities and to public entities in accordance with Minnesota Statute § 115A.151, 115A.46, subd. 5, and 115A.471.
- Potential expansion of single-sort recycling collection programs to more residents and businesses.
- Identifying potential waste reduction and recycling opportunities and providing incentives for non-county public entities, commercial, industrial, and institutional facilities.
- Identifying opportunities to reduce or eliminate source separated organic materials (SSOMs) from the landfill waste stream and divert the organic material to compost facilities.
- Develop programs to provide incentives for waste abatement itself as well as better tracking and reporting of waste abatement volumes.

In addition to the above waste abatement programs, Steele County will reduce the volume of capacity utilized on an annual basis at the Steele County Landfill through the implementation of leachate recirculation.

Through this 10 year plan, the County plans to continue to manage its solid waste through source reduction, recycling, and problem material removal programs as well as land disposal. The following programs are not available within Steele County and, as a result, are generally not cost-effective or may even present another form of environmental impact due to hauling distances to the nearest facilities:

- Solid waste processing facilities.
- SSOM composting facilities for food waste (limited availability of collection services).
- Resource recovery through MSW composting or incineration.
- Land disposal with no measurable methane emissions (landfill gas to energy).

As a result, the only options readily available to Steele County are the programs already in-place. In reference to the Steele County Landfill, land disposal of the MSW generated is proposed to decrease from the current 2013 rate of 45.4 percent of the waste generated to 38.3 percent in 2023. Although waste flows are important to maintain an economically viable landfill operating system, any diverted waste may be replaced by other waste streams as necessary to maintain viability. Therefore, the viability of the Steele County Landfill is not solely dependent on solid waste generated within the County and becomes a regional disposal option. Steele County's GVT (Appendix A) estimate that the County will need approximately 383,200 cubic yards of landfill disposal capacity for the 10-year planning period (2014 to 2023 including daily/ intermediate covers).

Public Entities must ensure that their waste is managed in a manner consistent with the County's preferred methods for waste management, according to the state Public Entities Statutes (Minnesota Statute § 115A.151, 115A.46, subd. 5, and 115A.471). Consistent with these policies and statutes, Steele County hereby establishes that the County plans to continue to manage its solid waste through source reduction, recycling, and problem material removal programs as well as land disposal as described in the SWMP.

SOLID WASTE SYSTEM EVALUATION AND TEN-YEAR IMPLEMENTATION PLAN

Steele County's Solid Waste Management System provides a comprehensive and accessible solid waste program that is protective of the environment and has economic sustainability. This system establishes accessible, environmentally sound, and cost-effective programs that encourage use of the best solid waste management practices. The current solid waste system will be in-place for a 10-year period. The following sections describe the solid waste system and its implementation over the next 10-years.

Waste Reduction

Steele County regards source reduction as its first priority in solid waste management. All existing programs will be maintained including implementation of the 2011 Waste/Environmental Education Plan and internal County programs. Some ideas to be evaluated and implemented (as appropriate) during the 10-year include but may not be limited to:

- Volunteer fix-it clinics;
- Reuse promotions through access to and/or development of directories for thrift stores, the Reuse Alliance (Reuse MN), the Materials Exchange-Minnesota Technical Assistance Program (MnTAP), etc; and
- Establish reuse areas for public access at the landfill and/or other public facilities.

Steele County also proposes to work with area businesses to determine or develop the following:

- Current waste generation materials and rates.
- Current waste abatement programs and rates.
- Potential improvements to current waste abatement programs.
- Effective incentives to recycle and provide data to the County.

Executive Summary (Continued)

Waste Education

Steele County considers public education the most important component in its strategy to achieve waste abatement goals. The waste education goals are as follows:

- To maintain and possibly expand recycling participation by Steele County residents who receive single-sort curbside collection services and homeowner usage of HHW facility and product exchange.
- To increase participation in recycling and other waste abatement programs by apartment tenants, small businesses, bars, restaurants as well as non-county public entities, commercial, industrial, and institutional entities.
- To increase business and citizen awareness of waste reduction concepts, alternatives to using hazardous products (as described under Section 4.1), and proper solid waste management and disposal practices (including illegal disposal or environmental risks associated with legal on-site disposal).
- To increase business, farmer, citizen, and youth awareness of what constitutes a sustainable community and increase actions to promote sustainability.

All existing education programs will be maintained including internal County programs. Steps to maintain and update the current waste education programs will include:

- Annual and periodic review of regulatory changes, necessary program changes, or public input to current program to identify target areas for updating educational materials and website; update education materials and website for targeted areas.
- Continue to participate in outreach through promotion at community events and to organizations, such as county fairs, trade shows, local home and farm shows, community festivals, and organization activities for clubs, groups, and schools.
- Continue to publish notices and promotions quarterly in accordance with Minn. Stat. § 115A.552.

Steps to expand the current waste education programs will include:

- Collaborate with Freeborn County on new waste education opportunities and materials.
- Develop materials and website to promote availability of reuse programs such as Reuse Alliance (Reuse MN), Materials Exchange-MnTAP, and Source Separated Organic Materials (Full Circle Organics).
- Create a directory of thrift stores or reuse opportunities.
- Obtain information on waste streams generated at non-county public entities, industrial, institutional, and commercial facilities in order to identify target materials and opportunities for new education efforts. Research waste abatement options of targeted materials. Prepare educational materials and present waste abatement options to facilities. Facilitate business opportunities for waste abatement programs.

Recycling

Recycling in the form of source separation has become the backbone for waste management programs. The County has established a new recycling goal increasing recycling from the current 52.9 percent by weight to over 60 percent by weight over the next 10 years. This goal will be accomplished by:

- Continued education to residents and businesses on waste reduction and recycling opportunities.
- Potential expansion of single-sort recycling programs through self drop-off or contracted hauler programs to include additional apartment buildings as well as rural residents and businesses.
- Identifying potential waste reduction and recycling opportunities and providing incentives for non-county public entities, commercial, industrial, and institutional facilities.

All existing recycling programs will be maintained including internal County programs. Steps to maintain and update the current recycling programs will include:

- Continue waste education and publication programs described in Section 2.3.2 including the Recycling Hotline and the web-based A to Z Disposal Guide.
- Continue work with the Employees' Waste Reduction and Recycling Committee,
- Continue to promote the use of event recycling containers at community events and private parties as well as targeted programs such as "Message in a Bottle" and "It's in the Bag".
- Maintain the current Agreement with a private contractor for operating Steele County's recycling program including the single-sort collection program. Steele County will continue to monitor the marketing of recyclables for re-use or reclamation as part of the agreement with the recycling contractor (currently Waste Management, Inc.). Although the services are provided to Steele County for a fee, the private contractor and Steele County split proceeds from the sale of recyclable items.
- Continue participation in local and regional waste abatement organizations.

Steps to expand the current recycling programs will include:

- Offer the recycling carts to residents outside of the major urban areas has not been implemented at this time. As the current program matures and the system evaluated, Steele County will continue to evaluate and potentially identify opportunities to expand the single-sort recycling program.
- Promote and organize special days for collection and handling hazardous waste and other special waste. Incorporate joint mobile collection programs currently in use within Freeborn County.
- Because waste generation and recycling information is not readily available from non-county public entities, commercial, industrial, and institutional facilities, incentive programs will be developed to obtain that information and encourage recycling programs at County businesses.
 - Identify, develop initiatives, and provide technical assistance on Best Management Practices (BMP), to increase recycling. This may be at Schools, businesses, multi-unit dwellings, industries, or other identified generators.
 - Measurement and tracking effectiveness may and will consist of using waste audits, costs, container sizes, pickup frequencies and other metrics to measure progress.
- Annually review and compare data to measure incremental progress of various initiatives, for example SCORE data with projections from the GVT, waste audits, costs, collection frequencies, container sizes:
 - If recycling rate falls below the goal, the county will determine additional recycling opportunities for residents and businesses. Those opportunities could include increased educational efforts, mandatory recycling, etc.
 - Use the 2013 Solid Waste Composition Study to identify what recyclables are being missed. Determine who the generators of those materials are why those materials are not being recycled, and develop a specific work plan to address recycling barriers.
 - Implement specific initiatives that are targeted at correcting the barriers.
- Evaluate existing recycling programs annually.
 - Identify missed opportunities for increased recycling such as curbside collection, rural opportunities, contracts, mandates, ordinances, organized collection.
 - Identify materials currently not being collected such as mattresses, source separated organics, Styrofoam, furniture, and carpeting and research potential recycling programs; initiate and/or support programs for their collection and recycling.
- Support and promote local markets for recyclable materials such as Reuse Alliance (Reuse MN), Materials Exchange-MnTAP, and SSOMs (Full Circle Organics).

Executive Summary (Continued)

Yard Waste Management

Steele County has enacted an education program on backyard composting and supported the development of community yard waste compost sites. Steele County primarily provides public education for the yard waste compost programs established in Owatonna, Medford, Blooming Prairie, and Ellendale. The current community-based yard waste compost facilities are effective at eliminating yard waste in the MSW received at the Steele County Landfill. Steps to maintain and update the current yard waste programs will include:

- Encourage/educate organized and backyard composting as described in Section 4.2.
- Develop an incentive program to obtain composting and product data from yard waste compost sites.

Source-Separated Organic Materials Composting

There are no existing source-separated organic materials compost programs in Steele County. The closest facility is located in Good Thunder, near Mankato, Minnesota, approximately 60 miles southwest of Owatonna. The primary barriers to using the Full Circle Organics facility is hauler driven and cost. Currently, few haulers offer collection services for SSOM and the distance to the facility increases transportation cost when compared to the distance of a landfill.

Steele County plans to work with local haulers to license them for the transfer of organic waste generated in Steele County to the Good Thunder facility or other source-separated organic material facilities. In addition, as part of the non-county public entities, commercial, industrial and institutional facilities efforts, steps to expand and implement SSOM composting will include:

- Identify high organics generating businesses (restaurants, cafeterias, hospitals, etc).
- Work with selected high organics generating businesses to establish organics diversion programs

Mixed Municipal Solid Waste Composting

Therefore no policy or goals are established for a MSW compost program in Steele County. In 1994, Steele County completed an evaluation for the diversion of solid waste to the nearest facility, Prairieland Compost Facility, located approximately 90 miles southwest of Owatonna near Truman, Minnesota. The option was rejected due to capital expenditures and high service fees. Since then, the Prairieland Compost Facility has changed its operation into an RDF facility. Currently, there are no other MSW compost facilities operating in southern Minnesota.

Solid Waste Incineration and Energy Recovery

In 1994, Steele County completed an evaluation to dispose of waste at the Olmsted County Waste-to-Energy Facility. The option was rejected because major expansions would be necessary at the facilities, the overall estimated costs to implement, and the high service or tipping fees at the receiving facilities. Since 1994, Olmsted County has expanded their waste-to-energy facility to manage their own waste generation needs. Although they occasionally have capacity for additional waste, they cannot provide long-term guarantees for managing Steele County waste since their own county waste is the priority. As a result, Steele County does not see them as a long-term viable alternative to divert Steele County waste from land disposal.

Land Disposal of Mixed Municipal Solid Waste

Steele County owns and operates the Steele County Landfill which receives most MSW generated in Steele County. Some MSW generated within Steele County is also diverted out-of-state to Central Disposal Facility located near Lake Mills, Iowa, owned and operated by Waste Management Inc.

Steele County Landfill: The Steele County Landfill serves communities and residents throughout the county. The facility operates the following waste management programs:

- Land disposal of MSW

- Land disposal of demolition debris
- Solid waste transfer area (for residential and small load customers)
- Recycling, special waste, and HHW facilities

In reference to recycling, special waste, and HHW, the Steele County Landfill provides public drop off for tires, major appliances, vehicle batteries, motor oil, oil filters and electronic devices containing a screen or video display such as TV sets and computer monitors. The landfill also provides collection of other recyclables and includes the HHW facility.

Central Disposal Facility: Central Disposal Facility located near Lake Mills, Iowa, is owned and operated by Waste Management Inc. The land disposal facility is regulated by the Iowa Department of Natural Resources. No additional information regarding compliance or safety operations are available. Central Disposal Facility also operates a landfill gas-to-energy generating facility at the landfill site.

Steele County believes their publically owned and operated land disposal facility, for both MSW and demolition debris, is run very efficient, maximizing the permitted air space of the facility. Operations will be maintained and updated as necessary. Leachate recirculation will be implemented as part of landfill operations estimated to occur in 2018. Other on-site operations on the landfill property for recycling, special waste, and HHW facilities are maintained and expanded as described throughout this Comprehensive SWMP.

Waste Tire Disposal and Recovery

Waste tires were banned from land disposal in Minnesota after July 1, 1985 (MS 115A.904). Tires will continue to be accepted at the Steele County Landfill and the Steele County Recycling Center in Owatonna for recycling.

Steele County is aware of additional tire recycling being conducted by Steele County Recycling Center and local automotive businesses. Steele County will consider collecting information from these existing programs for incorporation in SCORE reports.

Electronic Products

It is the policy of Steele County to comply with Minnesota Statute § 115A.9565 which prohibits Cathode Ray Tubes (CRTs) from disposal in a landfill. To this end the County accepts drop off CRTs and other electronic equipment for recycling at the Steele County Landfill and the Steele County Recycling Center.

The County will continue to make referrals to licensed electronics recyclers within the state. The County will continue to review alternatives for land disposal of residential electronics wastes and to provide or support private collection opportunities for County residents. Steele County will consider collecting information from these existing programs for incorporation in SCORE reports.

Major Appliance and Scrap Metal Management

A person may not place major appliances in MSW or dispose of them in a solid waste processing or disposal facility after July 1, 1990 (MS 115A.9561). Steele will continue to comply with Minnesota Statute § 115A.552 which ensures that residents will have an opportunity to recycle. Major appliances are accepted for recycling at the Steele County Recycling Center and the Steele County Landfill; scrap metal is accepted and stored separate at the Steele County Landfill in order to eliminate scrap metal from the landfill. In addition, several private businesses within Steele County provide recycling opportunities for appliances and have maintained compliance.

Steele County will continue to comply with Minn. Statutes § 115A.9561 which requires appliances not be placed in MSW. Steele County will continue with its program for removal of capacitors and ballasts containing PCBs, the removal of fluorocarbon refrigerant gases, and the recycling or reuse of metal including mercury.

Executive Summary (Continued)

Steele County will continue to fund the above major appliance at adequate levels to ensure that appliances and scrap metal received at Steele County facilities will be properly managed. The County will continue to evaluate and monitor the program for possible enhancements to better serve the public. Steele County will consider collecting information from these existing programs for incorporation in SCORE reports. There are no plans for modification of the program at this time.

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

Minnesota Statute § 115A.916 states a person may not place used oil in MSW or place used oil in or on land, unless approved by the agency. Also, a person may not place a lead acid battery in MSW or dispose of a lead acid battery in accordance with Minn. Stat. § 115A.915. Steele County will continue to promote and encourage proper disposal of used oil and batteries to residents.

Steele County has two locations that may be used by the public free to dispose of used oil and oil filters of charge: one at the Steele County Landfill and another at the Steele County Recycling Center in Owatonna. Full service auto centers often accept used oil as well. Many places that sell oil filters accept them for recycling. Residents wishing to dispose of dry cell batteries are instructed to bring the batteries to the HHW facility or remote collections. Businesses are able to dispose of dry cell batteries through the VSQG and MQG programs. In addition, the County maintains a list of commercial establishments which accept rechargeable batteries and recycle them through the Rechargeable Battery Recycling Program. Steele County allows alkaline or zinc carbon batteries to be discarded with MSW. Automotive mercury switches are allowed along with other mercury containing products in the HHW program. Residents and Minimal Quantity Generators may bring them to one of the HHW facilities or remote collections.

Household Hazardous Waste and Very Small Quantity Generator (VSQG) Hazardous Waste Management

In accordance with Minn. Stat. § 116.07, Steele County has developed a HHW management plan for the separation of HHW from MSW prior to disposal or processing and for the proper disposal of the waste. Steele County will continue to participate in the Joint Powers Agreement with Rice County for management of HHW. Steele County also proposes to continue to operate the HHW Facility located at the Steele County Landfill. Usable products are placed on shelves, product exchange, to be taken free for use by others. The Rice County HHW Facility is open year around and can be used by Steele County Residents without a fee.

One of the goals of the waste education program is to maintain homeowner usage of the HHW facility and product exchange. The strategy identified to achieve these goals include operating the Recycling Hotline, speaking at schools and other groups, distribution of news releases, conduct print and/or electronic ad campaigns, brochures and newsletter information. The County also provides information on safer substitutes for commercial cleaners to reduce the amount of HHW generated and information on how to correctly dispose of hazardous wastes such as old paint, disposable batteries, cosmetics, etc.

Construction and Demolition Debris

Steele County will continue to operate the existing demolition debris disposal facility at the Steele County Landfill to provide a disposal option to County residents and businesses. Based on current waste flows, the Phase III Area has sufficient capacity through 2044. No major changes are anticipated in waste flows construction and demolition debris over the next 10 years. Currently, only concrete material is segregated from the demolition debris waste stream and re-used for road construction projects. Steele County may consider a recovery program in the future for certain demolition debris based on specific quantities generated and the potential for re-use.

Salvaging and Reuse

Solid Waste Ordinance No. 27 indicates that junk/salvage yards are regulated by the Steele County Zoning Ordinance and/or the appropriate City Zoning Ordinance, as well as applicable MPCA regulations. Steele County does not allow scavenging or salvaging of material received for disposal at the Steele County Landfill. Any salvaging activities must be conducted in accordance with zoning ordinances.

Solid Waste Ordinance

Steele County has a Solid Waste Ordinance governing solid waste practices in Steele County. This ordinance was updated in 1998 to provide more comprehensive management of the County's solid waste. In general, the ordinance outlines the following:

- Purpose
- Definitions
- Responsibilities
- Service fees
- Solid waste storage (referencing requirements by statute)
- Disposal requirements (reference requirements by statute)
- Hauling of solid waste (license requirements)
- Licensing of solid waste facilities
- Special wastes (referencing requirements by statute)
- Enforcement

There are currently no plans to modify the ordinance since it already requires volume-based fees and licensing of haulers and addresses demolition debris and on-site disposal issues. The principle areas for which the solid waste ordinance has been used to date are the areas of licensing, haulers requirements, surcharge and service fee implementation and enforcement of proper storage and disposal of waste materials. Voluntary compliance is the preferred method of enforcement. If, in some cases after ample time has been given for compliance of the violation and it has not been corrected, Environmental Staff may provide recommendations of other enforcement actions.

The ordinance will be evaluated on an ongoing basis to determine needed improvements and to make changes necessitated by State statute or rule revisions. There are no planned revisions to Ordinance No. 27 at this time.

Solid Waste Staff

Currently the County has authorization for 5.5 full time equivalent (FTE) positions for its solid waste programs. In 2013, approximately 4.5 full time equivalent employees managed the landfill and HHW operations and 1.0 equivalent full time staff worked on the County's solid waste abatement programs including: recycling, HHW, and public education. As of April 1, 2014, Steele County and Freeborn County entered into an agreement to share staff for waste abatement programs in the form of a Recycling Coordinator.

The County also contracts for many County solid waste program functions with private businesses, including:

- Contract for the residential recycling program consisting of curbside collection, drop-off sites, a recycling center, and processing and marketing of collected recyclables.
- Contracts for electronics, waste oil, oil filters, tires, and appliances;
- Contracts with engineering firms for technical assistance; and
- Agreement with Rice County for joint services regarding HHW.

Executive Summary (Continued)

Solid Waste Program Funding

Steele County employs different means for funding of the solid waste programs including residential service fees and levy, SCORE funds, miscellaneous reimbursements, and landfill tipping fees.

One of the most important issues associated with the implementation of a solid waste management project is the assurance of a steady supply of solid waste to support operations. Waste assurance is a fundamental element of the successful operation of not only the Steele County Landfill but also for the recycling programs managed by the County. The Steele County uses waste assurance for four key reasons:

- To cash-flow operations through user fees instead of taxes;
- To ensure that waste is managed in a way that protect the public health and welfare and benefits the environment;
- To ensure that waste is managed in a way that protects taxpayers from the liabilities associated with the management of waste; and
- To protect the public investment that was made to build waste management facilities.

Steele County has implemented the measures outlined below to assure flow into the Steele County Landfill and use of recycling or diversion programs available in the County:

- Working with a law firm to provide legal counsel on issues like waste assurance and contract development.
- Authorized the disposal of out-of-county waste at the Steele County Landfill.
- Establish tipping fees and user fees at disposal and recycling facilities to support operational costs.
- Negotiated contracts with haulers to bring waste to the county preferred waste management facility.
- Negotiated contracts with waste management for the collection and recycling of the single sort service.
- Established assessments to support solid waste management programs.
- Research for grants to support existing and proposed programs.

The 2013 funding amounts are as follows:

Landfill Tipping Fees = \$1.5 million

- The Steele County Landfill is a stand-alone enterprise fund where excess revenue (over expenses) in any given year stays in the fund to carry-over for future large capital expenses (i.e. cell construction, equipment purchases, etc.)
- Landfill funds are used solely for landfill expenses, not waste abatement programs

Waste Abatement Program Funding (SCORE, service fees, ad valorem taxes, HHW stipend) = \$605,808

- The waste abatement programs include recycling, HHW, and education

Plan Review and Ten-Year Plan

Annual review of the Solid Waste Management Plan is scheduled for the fourth quarter of each year throughout the 10-year time line. The Environmental Services Director reviews and presents information to the public works committee. Any modifications or amendments to this Plan will be submitted in writing to the MPCA for review and approval. A new plan is required every ten years. The next plan will be developed and submitted to the MPCA six months prior to the 2024 due date.

Goal-Volume Table

The Goal-Volume Table is included as Appendix A.

Itemized Solid Waste Budget

Detailed information on the current and projected budgets are included in Appendix E. Steele County develops its solid waste budget through the County's overall annual budgeting process. This process includes:

- Department's submittal of major initiatives and capital requests to Finance Department;
- Department's submittal of budget requests to Finance Department;
- Finance returns updated budget worksheets to departments;
- Administrator meets individually with Department Heads to review and discuss their specific budgets and the broader county budget conditions;
- Department Heads meet individually with Finance, Administrator to refine initial department budget;
- Finance, Administration, and Department Heads present initial budget proposal to Board of Commissioners at a Committee-of-the-Whole meeting;
- Board of Commissioners adopt preliminary levy;
- Policy Committees review and refine Department budgets;
- Board of Commissioners budget review;
- Board of Commissioners conduct a public hearing on the budget;
- Board of Commissioners adopt the final budget.

Factors taken into account in budget development include:

- Evaluation of key indicators, goals, and actions;
- Predicted revenues and expenditures;
- Existing contractual commitments; and
- Future program needs.

Alternatives to Proposed System

Landfilling is the primary method of disposal for Steele County's solid waste. Short and long-term alternatives are described below. Costs to divert to other disposal or processes could vary widely at \$60 to \$90 per ton. Additional costs would be incurred for hauling and for the potential to develop a centralized waste drop off center such as an MSW transfer station.

If the Steele County Landfill cannot accept waste, it would be delivered to landfills outside the service area during the short term. The short term option chosen would be based on the facility's ability to accept the waste, convenience, cost of tipping fees and transportation, and the potential long-term liability. The nearest or nearby landfills and the distance from the Steele County Landfill are as follows:

- Rice County Landfill 38 miles
- Ponderosa Landfill 64 miles

If the Steele County Landfill is closed for an extended period of time, other alternatives would be evaluated. Most alternatives would require a centralized waste drop off center and then transferring the waste out-of-county for processing and/or disposal.

The nearby landfills listed for short-term alternatives may be incorporated into a long-term alternative as well. The Steele County Landfill could possibly be used for a centralized drop off center or waste could be delivered directly to either an MSW transfer station at Clarks Grove or Austin, Minnesota (for out-of-state disposal) or to waste processing facilities such as the Olmsted Waste-to-Energy Facility (OWEF) in Rochester or the Prairieland Solid Waste Management Resource Recovery Facility in Truman. The final choice would be based on several criteria, including the cost of tipping fees, contract arrangements available, transportation, whether or not the facility would process or landfill the waste, and the potential long-term liability.

Executive Summary (Continued)

On-Site and Illegal Disposal (Environmental and Public Health Impacts)

The County promotes programs to prevent environmental impacts to land, air, surface and ground waters and to avoid nuisance conditions from the on-site disposal of MSWs. It is the goal of Steele County to eliminate the illegal disposal of waste materials by residents through a solid waste system that provides convenient, accessible, affordable, and environmentally-safe disposal options. Some residents use private or municipal sanitation services to transport their waste to the Steele County Landfill or other permitted solid waste disposal facility or they may choose to transport their waste to those facilities themselves. Recycling drop off facilities are provided at seven sites throughout the County to encourage recycling. Single or no-sort recycling programs were implemented in 2012 with individual recycling carts provided in Owatonna, Blooming Prairie, Ellendale (including Thompson Oaks), Medford and Lazy "U" Mobile Home Park. Steele County also provides a HHW storage and collection facility at the Steele County Landfill to further assist residents in properly disposing of waste materials. In addition, Steele County will promote the proper disposal of waste materials through its community education and outreach programs.

Despite the programs available to residents of Steele County, some residents or businesses may not take advantage of those programs. On-site disposal and illegal disposal issues are described below.

State regulations regarding on-site disposal and burning are summarized as follows:

- Open Burning Prohibitions (Minn. Stat. § 88.171) addresses prohibited materials that cannot be burned, including industrial waste, garbage, and hazardous wastes.
- Farm Disposal of Solid Waste (Minn. Stat. § 17.135) covers the specifics relating to farming operations and open burning or burying of MSW. This exemption does not apply to the prohibited materials listed in Minn. Stat. § 88.171 — materials found in most household garbage.

This requirement does not necessarily apply for disposal of waste characterized as MSW on farms, provided that:

- The solid waste is generated on the farm where the disposal takes place;
- The disposal practices are consistent with Minn. Stat. § 17.135;
- Disposal is done in a nuisance free, pollution free, and aesthetic manner on the land used for farming; and
- The farm does not have regularly scheduled collection service reasonably available as determined by the County Board.

Illegal disposal includes burial and burning of solid waste that is not consistent with the Minn. Stat. § 17.135. Illegal disposal of waste in Steele County is not considered a major issue. The County has been effective at discouraging illegal disposal of waste materials through community education programs and by providing convenient, accessible, affordable disposal services to its citizens with enforcement actions being taken only when necessary. The Environmental Services Department is responsible for enforcement of the Steele County Solid Waste Ordinance. The ordinance stipulates that staff will receive complaints from County residents regarding solid waste issues, will investigate these complaints, and perform necessary enforcement activities. Voluntary compliance is the preferred method of enforcement. If, in some cases, compliance of the violation has not been corrected, Environmental Staff may provide recommendations of other enforcement actions. In addition to actions taken by the County, illegal disposal issues may be discussed with appropriate regulatory authorities which may impose their own requirements and penalties.

Solid Waste Facility Siting Program

The Resource Conservation and Recovery Act of 1976 directs the U.S. Environmental Protection Agency (EPA) to publish guidelines that describe recommended considerations and practices for the location, design, construction, operation, and maintenance of solid waste landfill disposal facilities. In Minnesota, the Pollution Control Agency is responsible for enforcement of both State and Federal regulations.

Federal guidelines recommend avoiding environmentally sensitive areas in the location of landfill disposal facilities. According to Federal guidelines the following areas are environmentally sensitive:

- Wetlands;
- Flood plains (100-year flood);
- Critical habitats of endangered species;
- Recharge zones of sole source aquifers;
- Zones of active faults; and
- Areas of karst topography (limestone region with sinks, underground streams, and caverns).

Federal guidelines also recommend that landfill site selection be done in consideration of:

- Ground and surface water conditions;
- Geology, soils, and topographic features;
- Social, geographic, and economic factors; and
- Aesthetic and environmental impacts.

Minnesota Rules, Chapter 7035 prohibits sanitary landfills from being sited in areas which are unsuitable due to topography, hydrology, geology, or soils. MPCA is responsible for reviewing and approving the permit applications for sanitary landfill sites. Chapter 7035 prohibits MPCA from approving permit applications for landfills located in the following areas:

- 1,000 feet from the normal high water mark of a lake, pond, or flowage;
- 300 feet from a stream;
- A regional flood plain (100 year flood);
- Wetlands;
- 1,000 feet from the nearest edge of the right-of-way of any state, federal or interstate highway;
- 1,000 feet from the boundary of a public park;
- 1,000 feet from an occupied dwelling; and
- Location considered hazardous because of proximity to airports.

Steele County landfill siting criteria provided in its ordinance are based on applicable federal, state, and local regulations along with other discretionary criteria. These criteria can be revised by local officials reflecting local concerns. The following land areas may not be used as landfills:

- Areas where existing land use would be incompatible with a landfill, such as urbanized areas and areas of significant rural population. Also included are areas constrained by local land use plans or zoning.
- Water bodies, water courses, wetlands, and areas with groundwater tables at depths less than five feet from the surface.
- Areas of extremely steep slopes or hills.

Specific sites should then be subjected to detailed hydrogeological studies with the following factors considered: Topography, soils, geology, surface water, ground water, surface drainage, climatology, environmentally unique areas, present and future land use, utilities, and transportation.

Executive Summary (Continued)

Public Participation

Steele County incorporates public participation as part of its solid waste management planning and implementation activities as follows:

- The County Board of Commissioners discusses solid waste management issues on a regular basis and makes all overriding solid waste program decisions.
- Department staff attends local government meetings, citizen meetings, and other events to receive input and explain the County's programs.
- Meeting documentation is contained in County Board minutes, local units of government minutes, and staff records and on the page of the County's web site.

The County will continue to strengthen its public participation programs. Steps that will be taken in order to do this include:

- The County is broadening its educational outreach activities to keep the public informed of current issues and decisions and solicit input. In addition, County brochures and other publications regarding solid waste management programs will continue to be updated and distributed as part of the County's public education efforts.
- The County will maintain contacts with state enforcement and planning advisors.

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Comprehensive Solid Waste Management Plan

Steele County, Minnesota

Prepared for Steele County Environmental Services

1.0 Background Information

This 2014 Steele County Comprehensive Solid Waste Management Plan (SWMP) has been developed and completed by Scott Golberg, Steele County Solid Waste Administrator, and Short Elliott Hendrickson Inc. with the assistance of the Minnesota Pollution Control Agency (MPCA). This Plan updates the most recent completed Plan in accordance with the revised Minn. Rules governing the development, adoption and implementation of solid waste management plans in outstate Minnesota. The MPCA adopted the revised rules (Chapters 9215.0500 - 9215.0880) in 2009 to:

- Reflect current solid waste management practices;
- Eliminate rule requirements that were redundant or no longer needed;
- Encourage regional planning where viable and beneficial to those counties involved; and
- Provide counties more flexibility in choosing waste abatement strategies and integrated solid waste management systems that reflect demographic, geographic, regional and solid waste system differences that exist in greater Minnesota.

This SWMP describes the existing integrated waste management system for Steele County and presents policies and strategies to guide the County's solid waste planning programs over the next ten years. It also includes Steele County's description of the solid waste abatement programs commonly referred to as SCORE (Select Committee on Recycling and the Environment) programs.

The following sections describe regional information, solid waste generation and collection, and the planning history that apply to Steele County.

1.1 Demographic, Geographic and Regional Information

Steele County, located in southeastern Minnesota, is approximately 60 miles south of the City of St. Paul (Figure 1). The County is bounded on the north by Rice County, on the west by Waseca County, on the south by Freeborn County, and on the east by Dodge County. The County covers an area of 429.55 square miles. Steele County is comprised of four incorporated cities and 13 townships. There are a number of unincorporated areas in the County as well. Townships and cities are illustrated in Figure 1. The following sections describe the county population, land use patterns, and employment and economic data.

1.1.1 Current and Projected Population Data

Based on the 2012 U.S. Census, the population of Steele County was 36,299, a decrease of 277 people since the 2010 census. The distribution of townships and cities within the County are illustrated on Figure 1; population distribution for the 2012 census by city and township is presented in Table 1. According to the Minnesota State Demographic Center, 2015 population estimates for Steele County is 36,299 with 14,335 households with 2.55 persons per household.

The majority of rural Steele County is sparsely populated. The 2012 population density is estimated to be approximately 84.5 persons per square mile. The City of Owatonna with a population of 25,469 has just over 70 percent of the County's population.

Projections for the planning period (2015-2025) are included in Table 2. As of March 2014, the county-specific population projections from the Minnesota State Demographic Center describe the projected populations for Steele County for 2015 and 2020 to be 38,672 and 40,375, respectively. The 2020 projection is an increase of just over 4,000 persons from the 2012 annual estimate. Household projections for 2015 and 2020 include 15,165 and 18,611, respectively.

1.1.2 Current and Projected Land Use Patterns

The County retains a rural character except along the I-35 corridor. Land use in Owatonna, Blooming Prairie, Medford and Ellendale is a mix of single and multiple family residential dwellings, commercial, industrial and public uses. In the smaller communities, land use consists primarily of single family homes and commercial establishments located along a main street. Agriculture is the primary activity in the outlying rural areas with industrial development occurring primarily in the cities of Owatonna and Blooming Prairie. The Steele County Planning & Zoning Director has determined that 94.5 percent of the property in Steele County is zoned for agricultural purposes.

According to the feedlot inventory provided by the Steele County Feedlot Officer, 619 feedlots are located in Steele County. The inventory was last completed in October 2002, and new registrations are included through March 2014.

Other than agricultural and cities, land uses general consist of 10 Wildlife Management Areas (WMAs), one state park (Rice Lake State Park), three lakes (Beaver, Rice, and Oak Glen), and one main river (Straight River). Steele County Land Use is shown in Figure 3. The Steele County Zoning Ordinance, which provides for county-wide land use zoning, was last amended on July 8, 2008.

The current Steele County Comprehensive Land Use Management Plan was completed in 2007. The plan defined goals and put those goals into action with modifications to the Steele County Zoning Ordinance. Some of the County goals and policies defined included environmental protection and agricultural protection. Modifications to the zoning ordinance included setback requirements from water resources, density standards in the agricultural district, and aggregate resource protection, which, altogether, restrict development in rural areas. These efforts will minimize any significant changes in future land use patterns for rural area and focus development in the existing populated areas. Due to the modifications of U.S. Hwy 14, transportation studies have particularly projected growth on the perimeter of the City of Owatonna that could possibly include:

- Single Family Residential – Detached
- Multi-Family Residential – Townhome
- Multi-Family Residential – Apartment

- Neighborhood Retail
- Elementary School
- Retail Commercial
- Medical Clinic
- Office Park
- Industrial

Because of the County zoning ordinance, development in these categories would probably result in annexation to the City limits. Similar development restrictions would occur on the perimeter of the Blooming Prairie, Ellendale, and Medford. Therefore, future land use patterns are anticipated to remain similar to current conditions.

1.1.3 Current and Projected Employment Indicators

Employment data for Steele County from 2004 to 2013 was obtained from the Minnesota Department of Employment and Economic Development (DEED) and presented in as Table 3. The unemployment rate has been steadily improving since its worst rate in 2009 with the current unemployment rate of 3.7 percent, lower than the state average rate.

The employment projections are anticipated to continue to improve and level off. Employment outlook for southeast Minnesota from 2010 to 2020 are also provided by Minnesota DEED and summarized by occupation in Table 4. Employment opportunities in southeastern Minnesota, including Steele County, are anticipated to increase by 14.3 percent from 2010 to 2020 with a total hiring of 97,350 people.

1.1.4 Local Economic Conditions

A summary of median household income and poverty indicators prepared by the U. S. Census Bureau is presented in Table 5. The U. S. Census Bureau indicates that a median household income for Steele County from 2007 to 2011 was \$57,920. This is an increase of 20 percent in comparison to the median household income reported in 1999-2000 of \$46,106, despite the difficult economic conditions in the late 2000's.

As indicated in Table 5, Steele County and Minnesota generally have a greater median household income than the rest of the United States at \$52,762. Similarly, 2007-2011 poverty levels are lower in Minnesota at 7.9 percent than the 12.2 percent experienced across the nation. Furthermore, the 2007-2011 poverty levels within Steele County at 6.2 percent are lower than the state average indicating the economy in Steele County is stronger than much of the nation and the state.

1.1.5 Current Economic Conditions

In a November 26, 2013, announcement, Minnesota DEED indicated that that new investments in job-creation initiatives have played an important role in incentivizing business expansions statewide. Expansion projects have been announced throughout the state in manufacturing, software companies, food and beverage processing, retail, warehouse/distribution, apparel, construction, printing/publishing and machinery. Viracon, an architectural glass manufacturer, is part of that growth planning a 100,000-square-foot expansion of its manufacturing facility in Owatonna. The \$30 million project is expected to retain between 500 and 800 existing jobs in the city and be operational by August 2014.

Similar evaluations from Minnesota DEED regarding southeastern Minnesota were published on September 9, 2013. Southeastern Minnesota is the heart of the state's health care and agricultural industries. Anchored by the Mayo Clinic in nearby Rochester, the region's health care industry employs more than 38,000 people and the number is likely to rise significantly in the next 20 years due to planned expansions.

Farming and agricultural-related companies are also major drivers of the southeastern Minnesota economy. The region's farmers are responsible for 40 percent of the state's fruit production, more than 25 percent of the state's cattle (because of a strong dairy industry), and 90 percent of the state's production of spring wheat.

Manufacturing is also a major industry, with more than 37,000 people employed in the area. Machinery, chemicals, electronics and glass are among the top products manufactured in the region.

1.1.6 Summary of Demographic, Geographical and Regional Constraints and Opportunities

Historically, the waste generation has been directly related to population and industry. The greatest influences on managing waste have been recycling and disposal options. As the County has moved toward making recycling more accessible, disposal options have varied widely by the contracted haulers. As hauling companies change ownership, some haulers choose to send waste out-of-county as well as out-of-state; when these haulers do not hold contracts with the County, these out-of-state operations directly impact Steele County control on what happens to waste generated and whether recyclables are removed or the waste is processed as projected in County plans.

Options for waste management such as processing facilities and composting are not available in close proximity to Steele County. The cost of hauling to the nearest processing facilities located in other counties, and the environmental impacts of that hauling, present a regional constraint other than landfilling. However, it is still important to maintain adequate waste flows for the County-owned landfill for economic and environmental purposes; adequate tipping fees must be sustained in order to fund all landfill operations and financial assurance mechanisms and retain the landfill as self-sustaining. Therefore, Steele County has opened its landfill gates to out-of-county waste, which is anticipated to continue to be the only viable way to keep the Steele County Landfill economically sound while promoting waste abatement programs.

With the increase in jobs anticipated, the volume of waste generated is also anticipated to increase from households and from industry. With the recent improvements to accessing recycling options and in-county industries pursuing waste minimization and recycling programs, the current integrated solid waste management system will be able to maintain its current programs.

1.2 Solid Waste Collection and Generation

1.2.1 Solid Waste Collection

There are primarily three methods of solid waste collection: municipal, commercial and individual haulers. Municipal services are provided either by city workers and equipment or by equipment and crews under contract to the city with billings through the municipality. Commercial collection services are provided by direct agreement between the generator and the hauler. Individual haulers are generally persons not living in a serviced area, or not wishing to be served, who haul their own waste to a disposal facility.

Approximately 95 percent of County residents contract with haulers or have access to collection service; however, not all of these residents pay a contracted hauler and may self-haul to collection and disposal facilities or conduct on-site disposal. There are generally between 10 and 15 licensed haulers in the County. These commercial haulers bring waste to the Steele County Landfill; 2013 estimates of mixed municipal solid waste (MSW) and industrial received at the Steele County Landfill by commercial hauler are presented in

Table 6. Waste collection in Steele County is primarily handled through these commercial services whereby the individual generator hires a commercial collection firm. Billing for residential and commercial units is handled through the City or through the hauler, depending upon location within the County. MSW is generally collected on a weekly basis contracted individually with costs ranging from \$12.00 to \$16.00 per household per month. Service costs are variable depending on such factors as the type of service, frequency of service (once versus twice per week), quantity of waste, population density, haul distances and disposal costs. Waste from businesses is collected by haulers who use a volume-based rate per cubic yard based on the number of pick-ups required per month, the size of the container and the distance to the facility. The remainder of business and commercial solid waste is hauled by the individual businesses.

There are no existing transfer stations outside of the public drop off at the Steele County Landfill. According to available hauler information, collection areas center on the cities and towns located in Steele County. However, hauler routes do not cover a portion of the rural area. This absence of service is to be expected because the low population density in these areas makes collection services expensive. Open dumping is not a major problem according to County officials.

Some individuals self-haul directly to the landfill and a small percentage of individuals manage their waste on their own property. State law allows rural farm households to dispose of household waste on their property in a nuisance free manner. Based on areas served by haulers, it is estimated that less 2400 residents do not have collection service, or less than 3 tons per day of MSW is disposed of in this manner. As projected in the GVT included in Appendix A, the number of residents who use on-site disposal is anticipated to gradually decrease over time because the younger population that replaces older populations are more likely to pursue other avenues of disposal due to education regarding environmental concerns and preference to other disposal options.

1.2.2 Solid Waste Generation

The year 2013 represents the most recent full year with data available to provide waste generation estimates and is considered representative of current programs. Based on information presented in the 2013 SCORE (Select Committee on Recycling and the Environment) Survey, Steele County generated approximately 59,818 tons of MSW in 2013. Of the MSW generated in 2013, approximately 27,163 tons or 45.4 percent was landfilled, 31,626 tons or 52.9 percent was recycled, and 1,007 tons or 1.7 percent managed on-site.

Residential and commercial entities generated approximately 164 tons per day of solid waste in 2013. Based on the estimated 2013 population of 37,090, the 2013 per-capita solid waste generation rate for Steele County was approximately 8.8 pounds per person per day, including commercial waste. The estimated residential solid waste generation rate was about 3 pounds per person per day.

Of the 27,163 tons of MSW landfilled in 2013, a total of 18,063 tons or 66.5 percent of the waste was disposed at the Steele County Landfill. The remaining 9,100 tons of MSW landfilled was hauled out-of-state for disposal.

Estimates of the projected amount of MSW generated over the next 10 years are included in the GVT in the Appendix A. (Please note that the GVT do not accommodate information regarding industrial waste; in 2013, the Steele County Landfill accepted approximately 480 tons of industrial waste plus another 188 tons of asbestos for land disposal.) With the projected increase in population over the next 10 years, the generation of MSW is also

expected to increase from 59,818 tons/year in 2013 to 66,619 tons/year. The programs described in this plan will determine what percentage of the MSW generated will be managed through land disposal.

As described in Section 1.1.6, the greatest constraint to waste collection is when haulers choose to send waste out-of-county as well as out-of-state. Waste that is removed from the County program is not only difficult to control for recycling or disposal options, but it also is difficult to track for quantities since there are no requirements for reporting waste quantity data to the County.

No nearby alternatives for waste management such as processing facilities and composting are available in close proximity to Steele County. The cost of hauling to the nearest facilities located in other counties and the environmental impacts of that hauling present a regional constraints and opportunities other than landfilling.

1.3 Construction and Demolition Debris

Demolition debris generation and disposal varies dependent upon seasonal fluctuations and construction and demolition activity. Steele County operates the only permitted demolition debris disposal facility in the county. Some construction and demolition (C & D) debris generated within Steele County is hauled to C&D landfills in neighboring counties. In 2013, the Steele County Landfill received 5,212 tons of demolition waste with 478 tons of demolition debris recycled. The recycled material consists primarily of concrete and asphalt.

1.4 Major Solid Waste Generators

The largest waste generators in Steele County are commercial and industrial based services. A list of some of the largest employers is provided in Table 7 and range from office to manufacturing to retail along with several service areas of government, healthcare, and education employers. The second largest waste generator is residential. Details on waste generation rates for the largest employers as well as their site-specific waste abatement activities and actual land disposal quantities are not known except as indicated in Section 2.3.3.4. However, as presented in the GVT (Appendix A), approximately 66 percent of MSW generated in Steele County is *estimated* to be commercial or industrial. The remaining 34 percent is considered residential.

Numerous studies have been performed across the United States in an attempt to quantify and qualify solid waste characteristics. What has been found is that what is average or "normal" for one region or city can be totally different from a similar area in a different part of the country or state, or even from the same location at different times of the year. Solid waste quantities and characteristics vary on a daily, weekly and seasonal basis, depending on various outside influences.

Minnesota completed its most recent statewide MSW composition study in 2013 (Burns & McDonnell, December 2013). In general, the characterization study identified the MSW composition into the following primary categories and distribution:

- Organic (31%)
- Paper (24.5%)
- Plastic (17.9%)
- Metal (4.5%)
- Glass (2.2%)
- Electronics (1.2%)
- Other Waste (18.3 %)

Compared to a 2000 study, the percentages of paper, plastics and organics indicated the greatest change over time was with the percent composition of paper decreasing by about 10% and plastic and organics increasing by about 6% each.

The study also identified potential diversion opportunities as follows:

- Food waste
- Compostable paper
- Bag and film plastic
- Wood waste

1.5 Local and Regional Solid Waste Planning

The history of past solid waste planning is provided in Section 2.2. The first Comprehensive SWMP was completed in 1987. This document is the fifth revision of the SWMP. The County solid waste management program is administered by the Environmental Services Director. Recent and future planning activities are presented in the following sections.

1.5.1 Recent Solid Planning Activities

Steele County has participated and continues to participate in a number of local and regional solid waste planning activities. Solid waste planning activities over the past five years are described in the following sections.

1.5.1.1 Household Hazardous Waste

Since 1992 Steele and Rice Counties entered into a contract for management of household hazardous waste (HHW). A copy of this contract is provided in Appendix B. Under this agreement, Steele County is the co-sponsoring organization that is responsible for the local education program that is involved in managing HHW and the household waste management facility itself. The HHW facility at the Steele County Landfill has been accepting waste materials since 1993.

1.5.1.2 Southeast Minnesota Recycler's Exchange

Steele County has been a member of the Southeast Minnesota Recycler's Exchange (SEMREX) since 1993. This association provides cooperative market development for recyclable materials, cooperative marketing of recyclables, and a materials exchange program.

1.5.1.3 Multi-County Solid Waste Committee

Since 1994, Steele County has been participating in a multi-county (Mower, Freeborn, Steele, Rice, and Waseca Counties) solid waste working committee. Blue Earth County and Tri-County (LeSueur, Sibley, Nicollet) have been added to the group since 2001. From each county two commissioners are appointed to participate in solid waste discussions.

1.5.1.4 Extension of Landfill Life

In 2011, Steele County retained Short Elliott Hendrickson, Inc. to complete a feasibility study for the re-circulation of leachate at the Steele County Landfill in the current MSW disposal area. Other studies have concluded that leachate re-circulation has benefits that include increased waste compaction that could extend the life of the landfill considerably and reduce the county's imminent needs for additional landfill permitted capacity. The results of the final report (SEH, November 2011) indicated that leachate re-circulation could improve waste densities by as much as 500 lbs/cy which would give the landfill an additional 5 years of capacity at the current waste flows.

As a result of this study, the Repermitting Documents (SEH, May 2012) included the development of leachate re-circulation in the remaining four cells of the current MSW landfill footprint with the hope of extending the landfill life until 2032 at the current waste flows. The current disposal area for demolition debris has capacity until 2045 at the current waste flows.

1.5.2 Future Regional Planning Activities

Steele County will continue to pursue a regional discussion of solid waste management opportunities with adjacent counties including Rice, Waseca, Freeborn, Blue Earth, and Mower. Counties such as Waseca do not have an MSW land disposal facilities and the Steele County Landfill has begun accepting waste from out-of-county to help accommodate the disposal needs of the neighboring counties as well as support the necessary waste stream to keep the landfill operations feasible.

Steele County will continue these discussions at the regional solid waste committee meetings for SEMREX and the other multi-county organizations. Meeting minutes will be prepared from each discussion outlining follow-up actions, if needed. The meeting minutes will be filed at the Steele County Environmental Services Office.

In 2012, the MPCA issued one of the first solid waste permits to Full Circle Organics for a source-separated organics composting facility located in Good Thunder, near Mankato, Minnesota. Prior to the permit issuance, the options for organics composting in the region was limited. Steele County plans to work with local haulers to license them for the transfer of organic waste generated in Steele County to the Good Thunder facility or other source-separated organics facilities.

In 2013, Steele County began discussions with the neighboring Freeborn County to identify other joint efforts to improve programs including HHW, waste education, and recycling. As of April 1, 2014, Steele County and Freeborn County entered into an agreement to share staff for waste abatement programs.

1.5.3 Impediments or Barriers to Regional Efforts

Steele County is just one tier of counties north of the Iowa border and less expensive disposal facilities exist within the northern Iowa border counties. The less expensive disposal option will not only impact waste volumes received at the Steele County Landfill, but may also carry recyclable material out of the state for disposal as well. Steele County's proximity to northern Iowa is significant and effects waste assurance. Neighboring counties often develop long-term arrangements for waste disposal outside the region.

Regional efforts at composting, as well as some other solid waste management methods, have been tried, as described in the previous sections. The primary reason these efforts have been unsuccessful relates to the relatively high transport costs over rural transportation ways.

Other factors affecting regional planning is the geographic distances to existing or proposed facilities in the region, demand of recyclable materials, and lack of assurance that state and federal assistance will continue.

1.5.4 Resolution of Planning Challenges

Steele County has not experienced conflicting or overlapping management efforts on a local or regional level. Steele County is open to any discussions with neighboring counties on planning efforts as evident in Section 1.5.1.

One planning challenge has been to maintain viable volumes of waste to the Steele County Landfill while promoting recycling options. To offset the loss of Steele County-generated

waste being recycled or going to other disposal facilities, Steele County has looked to other entities located within the region as sources of waste for the Steele County Landfill. This not only fulfills a need to sustain the revenue for the landfill, but fulfills a disposal need for the neighboring counties. Maintaining those waste flows, even from out of county, can be difficult in the cost-competitive market of solid waste disposal. This is seen with waste not just going out of county, but also out of state.

2.0 Existing Integrated Solid Waste Management System

2.1 Policies and Goals

The goal of Steele County is to make waste education, source reduction, and recycling programs available to all residents, businesses, schools, and all levels of government throughout Steele County. Steele County's solid waste ordinance provided in Appendix C includes the statement of purpose as follows:

"This document has been adopted by the Steele County Board of Commissioners to protect the public's health and prevent nuisance; to protect air, surface and ground water resources; and to regulate the number, location, and operation of solid waste facilities in order to protect the public's health, safety, and general welfare; and to supplement and support Steele County and the State of Minnesota's control over solid waste management activities."

The Steele County Ordinance No. 27 stipulates that Steele County Environmental Services will administer the County solid waste program to include waste education, recycling, HHW management, and landfill management.

2.2 History of System Development

The Steele County solid waste management programs were developed over a number of years. Federal regulations governing some of the activities may have occurred during different years, activities in reference to Minnesota regulations are summarized as follows:

1971: Minnesota passes the County Solid Waste Management Act that empowered counties outside the Twin Cities metropolitan area to conduct solid waste management programs.

1971: Steele County purchases 77 acres to establish the current Steele County Landfill.

1971: Steele County passes the Steele County Solid Waste Disposal Ordinance #6.

1973 – 1984: Steele County Landfill operates under a solid waste permit issued to a private party.

1980: Minnesota passes the Waste Management Act, establishing the goal of fostering an integrated waste management system and a preference of reduction, reuse, recycling, composting, and resource recovery over placing solid waste in landfills.

1984: Steele County takes over the landfill facility and operations at the Steele County Landfill.

1985: Minnesota adopts solid waste planning rules for counties.

1985: Minnesota bans waste tires from land disposal; collection, storage and recycling programs are developed at Steele County Landfill.

1987: Minnesota bans used oil from land disposal; collection, storage and recycling programs are developed at Steele County Landfill.

1988: Minnesota bans lead acid batteries from land disposal: collection, storage, and recycling programs developed at Steele County Landfill.

1989: Minnesota bans major appliances (white goods) from land disposal; collection, storage and recycling programs are developed at Steele County Landfill.

1989: Minnesota establishes county-based HHW requirements.

1989: Minnesota launches the Select Committee on Recycling and the Environment (SCORE) legislation to the Waste Management Act to establish recycling goals, required political subdivisions to develop and implement programs or practices to meet their recycling goals, and provided funding for recycling, waste reduction and market development activities.

1991: Steele County implements residential recycling program including curbside pickup of residential recyclables in the communities of Owatonna, Medford, Ellendale, and Blooming Prairie, establish drop off centers in Owatonna and at the Steele County Landfill, Blooming Prairie, Ellendale, Hope, Medford, and Meriden.

1992: Steele County enters into a contract with Rice County for the joint management of HHW; a copy of the current contract is provided in Appendix B.

1992: Minnesota bans yard waste from landfills; municipal yard waste facilities established in Owatonna, Medford, Blooming Prairie, and Ellendale.

1992: Steele County establishes the Steele County Solid Waste Management Service Fee Ordinance No. 19 to provide County funding support for solid waste management programs.

1993: HHW facility at the Steele County Landfill began accepting waste materials.

1993: Steele County becomes a member of the Southeast Minnesota Recycler's Exchange which provides cooperative market development for recyclable materials, cooperative marketing of recyclables, and a materials exchange program.

1993: Minnesota bans antifreeze and other liquid automotive products from land disposal; collection, storage and recycling programs are developed at Steele County Landfill.

1993: Steele and Waseca County Boards enter into a Joint Powers Agreement for the purpose of exploring and planning cooperative solid waste management projects.

1994: Steele County joins a five-county (Mower, Freeborn, Steele, Rice, and Waseca Counties) solid waste working committee.

1994: Steele County completes an evaluation to dispose of waste at the Olmsted County Waste-to-Energy Facility as well as the Prairieland Compost Facility in Truman, Minnesota. Options were rejected due to major expansion requirements at the facilities and the overall estimated costs to implement and service fees.

1994: Steele County completes a comprehensive regional solid waste plan for Steele and Waseca Counties with options to include Freeborn, Mower, and/or Rice Counties to develop a joint MSW composting facility. Options were rejected due to legal issues with waste designation, competitive facilities, capital expenditures, and high service fees.

1994: Steele County completes an evaluation for the diversion of solid waste to Prairieland Compost Facility to produce compost, the current Xcel Energy Wilmarth Power Plant as refused derived fuel, and the Ponderosa Landfill for land disposal. Options were rejected due to capital expenditures, and high service fees.

1994: Steele County concludes that expansion of the current Steele County Landfill as the most environmental and economic option available for solid waste management based on the 1994 studies.

1994: Minnesota bans fluorescent lights and other high intensity discharge (HID) lights from land disposal; collection, storage, and recycling programs developed at Steele County Landfill.

1994: Minnesota bans oil filters from land disposal; collection, storage and recycling programs are developed at Steele County Landfill.

1995: Steele County purchases an additional 80 acres for potential landfill expansion purposes based on favorable landfill siting criteria.

1998: Steele County passes Steele County Solid Waste Ordinance (Ordinance No. 27).

2001: Blue Earth County joins the original five-county (Mower, Freeborn, Steele, Rice, and Waseca Counties) solid waste working committee originally developed in 1994.

2005 – 2006: Minnesota bans cathode ray tubes (CRT) and other electronic waste from land disposal; collection, storage, and recycling programs developed at Steele County Landfill.

2009: Minnesota implements new rules governing the preparation of County Comprehensive SWMP emphasizing integrated solid waste management systems.

2011: Steele County completes leachate re-circulation feasibility study for the Steele County Landfill to evaluate the potential for landfill gas utilization, extend the life of the MSW disposal area, and stabilize waste more quickly to reduce long-term liability.

2012: Steele County submits repermitting documents for the Steele County Landfill and incorporates leachate re-circulation into the active MSW disposal area.

2012: Steele County implements single sort curbside recycling for single family dwellings in Blooming Prairie, Ellendale (including Thompson Oaks), Medford, Owatonna, and the Lazy U Mobile Home Park.

2014: Steele County enters into a shared staff position agreement with Freeborn County for the administration of recycling and waste abatement programs.

2.3 Description of Existing Reduction and Resource Recovery Programs or Facilities

There are no existing resource recovery facilities presently in use in Steele County. Previous studies for the development of an OWEF within Steele County concluded a OWEF to be cost prohibitive.

The nearest resource recovery facility is located approximately 45 miles east of Owatonna in the City of Rochester, Minnesota, at the Olmsted County Waste-to-Energy Facility (OWEF) and was developed as part of their waste-to-energy campus. The OWEF is not available to Steele County residents at this time; the nearest OWEF does, on occasion, accept out-of-

county waste based on facility capacity, but available capacity may not be available at all times. Current market rate for out-of-county waste is \$83/ton, nearly twice the rate contracted haulers pay at the Steele County Landfill plus expenses for additional transportation.

The Prairieland Solid Waste Management Resource Recovery Facility located about 90 miles southwest of Owatonna near the city of Truman, Minnesota (formerly the Prairieland Compost Facility) currently processes MSW to generate refuse derived fuel (RDF); currently, this facility is not being used by Steele County haulers primarily due to cost and hauling distance. Rates for disposal are generally higher than Olmsted County's OWEF. Xcel Energy's Wilmarth RDF Facility is located over 50 miles southwest of Owatonna, south of the City of Mankato which only burns RDF and any waste must be processed through an RDF facility before being accepted at the waste-to-energy plant; the closest processing facility would be in Truman.

As stated in Section 2.1, the goal of the County is to make waste education, source reduction, and recycling programs available to all residents, businesses, schools, and all levels of government throughout Steele County. The County itself can present a positive example to local municipalities, businesses, and residents by reducing waste generated from County sources. The County believes that education is the most effective method of reducing waste generation. Sample waste education brochures and fliers described in the following sections are included in Appendix D. Steele County's existing resource recovery program is described in the following sections.

2.3.1 Waste Reduction

Steele County regards source reduction as its first priority in solid waste management. Steele County maintains two primary programs on waste reduction: (1) public education and (2) waste reduction in County facilities. Waste reduction involves reducing the quantity of waste produced by changing product designs and consumer behavior. The waste reduction efforts directly relate to less waste available for land disposal. However, measuring the actual volume or tonnage of waste reduction on a county-wide basis is not possible. Some waste reduction programs currently used by Steele County are described in the following sections.

2.3.1.1 Packaging Reduction

Steele County has an established 2011 Waste/Environmental Education Plan as described in Section 2.3.2. As part of the 2011 Waste/Environmental Education Plan, Steele County promotes packaging reduction to both businesses and residences through public education efforts. Flyers have been prepared for general shopping, plus seasonal shopping for holidays, and back to school shopping. The brochures educate consumers about wasteful excess packaging and encourage customers to call or write manufacturers that use excessive packaging. The county also maintains a "Recycling Hotline" and their web-based "A to Z Disposal Guide" that provides additional consumer information. Examples of brochures and flyers are provided in Appendix D.

Internally, Steele County has implemented source reduction activities including purchasing guidelines, an employee source reduction recognition program, and the distribution of education material to employees.

2.3.1.2 Office Paper Reduction

Steele County has implemented programs to reduce the amount of office paper that is discarded, thereby reducing the waste stream. Easily implemented waste reductions techniques include printing double sided copies, increasing use of microfiche and magnetic

tapes, using throw away paper for scratch paper and office note pads, scan/electronic storage and reducing the size of business forms. Information posters encouraging using double sided copies have been distributed. Steele County has implemented internal source reduction activities including an employee source reduction recognition program and distributes education material to employees.

2.3.1.3 Backyard Composting

In accordance with state law, yard waste is banned from burial in the landfill. Therefore, Steele County has provided education on backyard composting and established community yard waste compost sites. The education program includes brochures explaining the composting process and materials conducive to composting. Reduction in yard waste is also encouraged by mulching with your lawn mower and leaving grass clippings on the lawn. Steele County has also targeted rural residents to use backyard composting to manage suitable degradable materials. Information on composting is also available to residents by calling the Recycling Hotline.

2.3.1.4 Volume-Based Garbage Collection Fees

A volume based garbage collection rate is a program where the generator is charged on a per can, per bag, or weight basis. Experiences show that volume based fees encourage the general public to reduce waste. All haulers in the County offer volume-based fees. Any material placed in the recycling program directly reduces the volume-based fee for disposal.

2.3.2 Waste Education

Steele County most recently updated its waste education program in its 2011 Waste/Environmental Education Plan (Appendix D-1) which focused on educating targeted groups regarding waste reduction, recycling, and the management of special wastes. The strategy identified in the program includes operating the Recycling Hotline, speaking at schools and other groups, distribution of news releases, conduct print and/or electronic ad campaigns, brochures, and newsletter information. Target residents included:

- City and rural residents, students, apartment dwellers and County employees for recycling.
- Homeowners for yard waste composting, HHW management and website information.
- Organizers of community events for event recycling.

In addition, every March, Steele County presents waste abatement information as part of the annual township meetings to promote development of local programs to township officials. Farmers are also targeted specifically for agriculture container and pesticide disposal.

The strategies identified to achieve the established goals and have continued through 2013 include:

1. Continue documenting calls to the Recycling Hotline, tracking the number of callers, the source of calls (location as well as whether the call is from a resident, school, church or business), subject of calls, how the request was answered and, if mail was sent as a result of the call, what was mailed.
2. Continue to speak to any Steele County school and any other in county group that asks, provided dates are compatible. Make appearances on local radio and cable TV talk shows as appropriate.

3. Continue distribution of news releases, news advisories and photo opportunities to all local media whenever a newsworthy event occurs. Continue to write columns for distribution in two local newspapers. Write a monthly article for inclusion in Owatonna Public Utilities newsletter.
4. Continue work with the Employees' Waste Reduction and Recycling Committee, publicizing tips on reducing waste, increasing participation in county office recycling and waste reduction programs, answering employee questions regarding waste management at work and writing an article for the monthly employees' Wellness at Work newsletter, should the newsletter begin publication again.
5. Produce and mail the annual curbside recycling brochure, including working with students to insert the popular reminder stickers. Design, produce and mail a new rural recycling brochure annually to all rural homes in the county. Revise and distribute the Owatonna Compost Site flyer. Revise and distribute information on recycling of special wastes. Revise, print in-house and distribute an updated brochure on recycling and waste management in apartments. Revise, print in-house and distribute an updated brochure on HHW. Develop a new apartment recycling brochure, print in-house and distribute to apartment managers.
6. Conduct print and radio ad campaigns on the following: residential curbside recycling changes due to holidays, event recycling bin loan program, yard waste composting and household hazardous waste management.
7. Host a booth at the Steele County Free Fair using existing displays or producing display signs in-house. Include Bernie the Burn Barrel to curb the use of backyard burning.
8. Continue expansion and updating of the Environmental Services pages of the Steele County website as needed including the web-based "A to Z Disposal Guide". Explore developing a Facebook presence for recycling and other solid waste programs.
9. Continue to promote the use of event recycling containers at community events and private parties.
10. Monitor the "Message in A Bottle" recycling program for gas/convenience stores and assist Jobs Plus in implementing an "It's In the Bag" program for businesses that generate large amounts of plastic bags and shrink wrap.
11. Promote the "Take it to the Box" program for disposal of unwanted medications that the Steele County Sheriff's office implemented.
12. Switch information found on the current Recycling Hotline so that callers can choose which option they wish to listen to, rather than have to listen to the entire lengthy message.

In addition, Steele County has identified additional areas to distribute waste education materials such as including backyard burning materials to residents when they obtain a burning permit. Steele County has also implemented internal source reduction activities including purchasing guidelines, an employee source reduction recognition program and distributes education material to employees.

Copies of examples brochures and flyers used in the waste education program are included in Appendix D-2. Since implementation of the 2011 Waste/Environmental Education Plan,

Steele County has also developed recycling guidelines for the roll-out of the single or no-sort recycling program described in Section 2.3.3.2 with 2012 brochures included in Appendix D-2. Staffing for waste education is included under the overall County abatement program.

2.3.3 Recycling

Recycling in the form of source separation has become the backbone for waste management programs. Source separation involves the separation of recyclable materials from the main solid waste stream at their source by the waste generator. The separated materials are then collected from the source by means of special collection trucks or are taken by the generator directly to a recycling center, which may pay for the materials or merely accept them for recycling. Steele County encourages recycling through numerous programs including education, residential collection, community recycling centers, and a Recycling Hotline. Additionally, collection containers are provided for County employees to recycle paper, cardboard, plastic, metal, and glass in Steele County facilities and transported to the recycling center by County staff.

Quantifying recycling programs is included in the GVT included in Appendix A. Based on the 2013 information, approximately 31,648 tons or 52.9 percent of the MSW waste was recycled from residential, commercial/industrial/institutional, and organic programs as well as problem materials banned from land disposal.

2.3.3.1 Recycling Education

Recycling education is addressed by Steele County in its 2011 Waste/Environmental Education Plan described which focuses on waste reduction and recycling. The strategy identified in the program include operating the Recycling Hotline and the A to Z Disposal Guide, speaking at schools and other groups, distribution of news releases, conduct print and/or electronic ad campaigns, brochures, and newsletter information.

2.3.3.2 Residential Recycling Program

Steele County has maintained a residential recycling program since June 1991. The County has established an Agreement with a private contractor (Waste Management) for five year intervals. The Agreement provides for:

- Curbside pickup of residential and church recyclables every other week in the communities of Owatonna, Medford, Ellendale, and Blooming Prairie.
- A drop off center in Owatonna open six days per week and permanent drop off sites at the Steele County Landfill, Blooming Prairie, Ellendale, Hope, Medford, and Meriden.
- Recycling service to all multi family dwelling units that have requested this service from the County.

The Agreement also allows small businesses to use drop off sites for recycling.

Steele County made significant changes to its residential recycling program during the fall of 2012 when urban residents received larger carts to hold recyclables, rural recycling drop sites all switched to using large metal containers that can hold many more materials, and all recyclers can mix materials together for Single or No-Sort recycling. New blue 64 gallon recycling carts with yellow lids and wheels are now used at homes in Owatonna, Blooming Prairie, Ellendale (including Thompson Oaks), Medford and Lazy "U" Mobile Home Park. The recycled material is sorted at Waste Management's Recycle America facility in Minneapolis. At that facility, the materials are able to be sorted mechanically using sensors from a single line, making a single-sort system possible.

2.3.3.3 Commercial/Industrial Recycling Programs

Steele County encourages and supports recycling programs by commercial and industrial facilities. Steele County is home to a number of industries (listed in Table 7) that have developed effective recycling programs. As presented in the 2013 SCORE Survey, these industries recycle large quantities of material including glass, metal, and paper. Viracon/Curvlite alone reported their recycling of glass at 19,136 tons during 2013. Currently, some business recycling opportunities are not able to participate in the single sort recycling program because the recycling carts cannot be placed on storefront streets.

2.3.4 Yard Waste Compost Program

In accordance with state law enacted on January 1, 1992, yard waste is banned from burial in the landfill. Therefore, Steele County has provided an education program on backyard composting and supported the development of community yard waste compost sites.

The cities of Blooming Prairie, Ellendale, Medford, and Owatonna have established community compost sites for residents. The sites are open seasonally in the spring through the fall and collect yard waste defined as garden wastes, lawn cuttings, weeds and prunings or brush under six inches in diameter. The sites also collect trees and stumps (less than 10 feet long), Christmas trees and wreaths, sod strippings, pumpkins, melons, and straw. A residential fee schedule has been established for disposal of these materials at the Owatonna facility. The materials are composed or mulched at the compost sites and resold at the Owatonna facility. Products include brush mulch, oak hardwood landscape mulch and screened compost. Information is also provided at the compost centers for beneficial reuse of these products (i.e., weed control, soil amendment, etc.).

No measurements are made at the yard waste compost sites to quantify the volume or tonnage of yard waste that is composted. Compared to neighboring counties and populations, it is estimated that the municipal yard waste compost sites manage no more than 1,000 tons of yard waste compost annually. At an approximate density of 500 lbs/cy, that is equivalent 4,000 yds of yard waste compost generated annually.

Steele County primarily provides public education for yard waste compost programs. The County will continue to promote on-site management of yard waste in educational programs.

2.4 Description of Land Disposal Facilities

Solid waste generated in Steele County is delivered to the Steele County Landfill, owned and operated by Steele County, and to Central Disposal Facility in Lake Mills, Iowa, owned and operated by Waste Management. Information on each of these facilities is described in the following sections.

2.4.1 Steele County Landfill

The Steele County Landfill serves communities and residents throughout the county. The landfill and the facility are owned and operated by Steele County under Permit No. SW-131, issued by the Minnesota Pollution Control Agency (MPCA). Standard tipping fees for waste material collected at the Steele County Landfill is provided in Table 8.

The Steele County Landfill is located approximately 12 miles southeast of Owatonna, Minnesota, off U.S. Highway 218. Steele County purchased the original 77.4-acres of property in 1971 from Paul Fisher. Landfill operations began in 1973, under a private permittee. Steele County assumed landfill ownership and operations in 1985. In 1995, Steele County purchased an additional adjacent 80 acres from the Christianson family to expand the landfill.

2.4.1.1 MSW Disposal Areas

In 1973 the MPCA issued construction permit SW-131 for a 14-acre MSW landfill (Phase I MSW Area). The MPCA modified the permit in 1978 to allow construction and operation of a contiguous 6-acre landfill (Phase II MSW Area). This area (known as Phase I/II MSW Area) had a combined capacity of approximately 523,770 cubic yards (cy). Final closure of the Phase I/II MSW Area was approved in a letter from the MPCA dated August 18, 1986.

Construction plans for the Phase III MSW Area, Cell III-A were approved by the MPCA on July 5, 1985. On October 23, 1987, the MPCA modified and reissued the permit to allow filling in the Phase III MSW Area, Cells III-A, III_B, and III-C providing a total Phase III MSW capacity of 535,291 cy. On July 25, 1994, the MPCA again modified and reissued the permit authorizing the development of the approximately 5 acre Phase III MSW Area, Cell III-D and increased the capacity by 350,782 cy of airspace to a total Phase III MSW Area capacity of 886,073 cy. Final closure of the Phase III MSW Area was completed in 2006.

On January 17, 2002, Steele County was re-issued their permit to include an additional air space capacity of 1,483,000 cy in the Phase IV MSW Area giving an MSW total ultimate capacity for Phases I through IV of 2,892,443 cy. The 2002 permit authorized use of 222,000 cy of capacity in Cell IV-A of the Phase IV MSW Area. The 2007 permit authorized use of 703,000 cy of capacity in Cells IV-A through IV-D.

As part of this 2006 repermitting application, the design capacity of the Phase IV MSW Area was recalculated using an updated survey and computer aided design software. The ultimate capacity of the Phase IV MSW area was found to be slightly less than the originally permitted value, and is revised to 1,443,000 cy. This brings the total revised ultimate capacity for all on-site MSW facilities to 2,852,743 cy.

In 2012, Steele County applied to renew the solid waste permit and allow construction and operation of all the Phase IV MSW Areas, Cells IV-A through IV-G. The Permitting Documents (SEH, May 2012) included the development of leachate recirculation in Cells IV-D through Cell IV-G. Research has shown that leachate recirculation can extend the life of the MSW disposal area by improving settlement by more than 20 percent, stabilizing decomposition of waste more quickly to reduce long-term environmental liability, and potentially developing future conditions for a landfill gas utilization program. In order to extend the life of the MSW disposal area, a 20 percent settlement rate results in approximately 150,000 cy of additional air space. Based on waste flows of approximately 30,000 tons per year, recirculation of leachate is likely to provide an additional 5 years of life to the Phase IV MSW Area and extend the anticipated closure date from the year 2027 to 2032.

The MPCA placed the draft permit renewal on public notice in 2013; final permit issuance is pending. Based on the Permitting Documents (SEH, May 2012) and capacity utilized during 2012 and 2013, the remaining permitted capacity is summarized as follows:

- Ultimate Capacity: 1,443,000 cy
- Permitted Capacity (2012 Permit Application): 1,443,000 cy
- Remaining Permitted Capacity through 2011 (2012 Permit Application): 960,000 cy
- 2012 Capacity Used (2012 Annual Report): 46,658 cy
- 2013 Capacity Used (2013 Annual Report): 57,842 cy
- Remaining Permitted Capacity through 2013: 856,000 cy (rounded to nearest thousand)

2.4.1.2 Demolition Disposal Areas

The North Demolition Debris Disposal Area began operation in 1986 and was closed in the summer of 1989 with two feet of compacted clay. This area covered approximately 3.4 acres with a capacity of approximately 104,740 cy. The 1994 permit modification authorized an expansion (known as the Fisher Site) to the demolition area which consisted of 3.15-acres and 66,800 cy of airspace. Together, these areas are known as Phase I Demo Area. Final closure of the Phase I Demo Area was completed in 2005.

A permit application was submitted to MPCA on April 28, 1989, for filling the South Demolition Debris Disposal Area (known as Phase II Demo Area), adding 73,400 cy of airspace. The July 25, 1994, permit modification and reissuance authorized the continued development of the Phase II Demo Area until its closure in 1995.

On January 17, 2002, Steele County was re-issued their permit to include an additional air space capacity of 344,000 cy in the Phase III-A&B Demo Area giving a demolition debris total ultimate capacity for Phases I, II and III of 588,940 cy. The 2002 permit authorized use of 97,600 cy of the Phase III Demo Area. As part of the 2006 repermitting application, the design capacity of the Phase III Demo Area was recalculated using an updated survey and computer aided design software resulting in an ultimate capacity of 337,000 cy, slightly less than the originally permitted value. This brings the total revised ultimate capacity for all the on-site demolition facilities to 581,940 cy. The Permitting Documents (SEH, May 2012) included the expansion of Phase III Demo Area, Cell III-C for the 10-year permit period for a permitted capacity in the Phase III Demo Area of 68,000 cy. This brings the total revised permitted capacity for all the on-site demolition facilities to 398,940 cy. Based on an estimated waste of 6000 tons per year, the remaining ultimately capacity will last until 2045.

2.4.1.3 Solid Waste Transfer Area

In 2007, Steele County constructed facilities to eliminate the need for residential and small load customers to enter the active landfills. The solid waste permit issued on November 19, 2007, included the facility as a new waste activity area referenced as the Solid Waste Transfer Area and no changes are anticipated in operations in the pending permit issuance.

2.4.1.4 Recycling, Special Waste, and Household Hazardous Waste Areas

Minnesota landfills are not allowed to bury liquids of any kind, hazardous waste or fluorescent light bulbs, tires, major appliances, vehicle batteries, motor oil, oil filters and electronic devices containing a screen or video display such as TV sets and computer monitors. The Steele County solid waste ordinance does not specifically prohibit the land disposal of recyclables except in reference to State and Federal regulations because prohibition may cause incidental materials to become an illegal activity that is difficult to enforce and may penalize those residents that generally do take advantage of waste abatement programs. To support the existing programs, recycling, special waste, and HHW are also collected at the Steele County Landfill to promote recycling, reuse, or recovery in accordance with regulatory requirements. Standard fees for collection are provided in Table 8.

From May through September, the HHW facility accepts hazardous wastes from homes for proper disposal free of charge. The landfill also has a recycling station where people may recycle numerous types of papers and cans and bottles and a tank where residents may recycle used motor oil and used oil filters free of charge. For various fees, the landfill also accepts appliances, electronics (computers, TVs, DVD players, VCRs), tires, and clean concrete/bituminous for recycling. Appliances include dishwashers, refrigerators, stoves and ranges, water heaters, clothes dryers, clothes washers, garbage disposals, trash compactors, microwave ovens, freezers, residential furnaces, dehumidifiers and heat pumps.

2.4.1.5 Regulatory Compliance

Regulatory compliance of the land disposal facility is determined through training, inspections and monitoring requirements stipulated by the facility solid waste Permit No. SW-133, the Industrial Wastewater Permits with the City of Owatonna (No. 020) and City of Albert Lea (11-001), the Multi-Sector General Permit (MSGP MN R0500000 (Industrial Stormwater Permit), and the Spill Prevention Control and Countermeasure (SPCC) Plan prepared under 40 CFR 112.

Training of facility staff is completed annually, as necessary, in accordance with permit and other regulatory requirements through landfill operator refreshers including stormwater components.

Inspections are conducted by facility staff on daily, weekly, monthly, and annual schedules depending on the feature being inspected and outlined in an Operations and Maintenance (O & M) Plan. Annual inspections are conducted by regulatory staff; the land disposal facility has not been cited by the MPCA for permit violations in the last 5 years.

The site monitoring program at the Steele County Landfill consists of sample collection, analysis, and reporting for leachate, leak detections, ground water, surface water, and landfill gas. Monitoring results can be summarized as follows:

- Leachate characterization for the closed Phase III MSW Area and active Phase IV MSW Area confirms that the leachate chemistry meets discharge criteria established in the municipal discharge permits.
- Leak detection monitoring of the closed Phase III MSW Area and active Phase IV MSW Area indicates that no leachate leakage has occurred or is occurring through the engineered liners and the landfill liners are functioning as designed.
- Ground water monitoring of the closed Phase I/II MSW Area indicates that minimal leachate-related contamination is present in ground water below intervention limits; however, the final cover effectively controls leachate generation in the unlined disposal area and that the perimeter drainage system successfully intercepts leachate for collection and disposal to reduce the potential to further impact ground water.
- Ground water monitoring of the closed Phase III MSW Area indicates that no leachate-related ground water contamination has occurred or is occurring; the final cover effectively controls leachate generation in the lined disposal area and the leachate collection system and landfill liner are functioning as designed.
- Ground water monitoring of the active Phase IV MSW Area indicates that no leachate-related ground water contamination has occurred or is occurring; the partial final cover and active landfill operations effectively control leachate generation in the lined disposal area and the leachate collection system and landfill liner are functioning as designed.
- The land disposal facility is in compliance with surface water monitoring requirements conducted as part of the Industrial Stormwater Permit.
- Landfill gas monitoring indicates the facility is in compliance with Minn. Rules; no methane is detected in facility structures, no methane is migrating beyond the property boundary, and installed gas ventilations systems are functioning as designed. Based on estimated air emission for the facility, the landfill is not currently subject to requirements of the federal Clean Air Act (40 CFR Part 63) or the U.S.EPA's Greenhouse Gas reporting threshold (40 CFR Part 98).

Based on the above information, the Steele County Landfill is operating in accordance with regulatory requirements and provides an environmentally safe means for the land disposal of solid waste. In addition, the Steele County Landfill maintains a financial assurance fund to reduce the long-term financial liability of the landfill during current operations and following facility closure; the current balance of the financial assurance fund exceeds \$2 million.

2.4.2 Central Disposal Facility, Lake Mills, Iowa

Central Disposal Facility located near Lake Mills, Iowa, is owned and operated by Waste Management Inc. and is approximately 55 miles south of the City of Owatonna. The land disposal facility is constructed and operated under Permit No. 95-SPD -01-72 issued by the Iowa Department of Natural Resources. The facility accepts non-hazardous waste including: MSW, construction and demolition debris, industrial and special waste, asbestos (friable and non-friable), and CERCLA waste.

Since 2006, Central Disposal Facility has been operating a landfill gas-to-energy generating facility at the landfill site. The electricity generated by the 4.8 MW renewable energy facility is purchased by Dairyland Power Cooperative and places it on the power grid for its 25 member cooperatives. A Touchstone Energy Cooperative, Dairyland Power Cooperative's service area encompasses 62 counties in four states (Wisconsin, Minnesota, Iowa and Illinois).

2.5 Special Waste Management

Steele County has established an education program through its 2011 Waste/Environmental Education Plan to educate the public on proper recycling of materials banned from land disposal and other wastes. Informational brochures outlining recycling locations have been published. Steele County has also established a recycling hotline and an "A to Z Disposal Guide" on its website to assist with management of these banned and special wastes. The Steele County Landfill facility recycles some of the banned materials. Banned materials from landfills include, but may not be limited to, processed or collected recycling materials, yard waste, lead acid, nickel-cadmium, and vehicle batteries, tires, major appliances, fluorescent lamps, used motor oil and motor oil filters, electronics, and HHW.

As indicated in the GVT in Appendix A, total problem materials (including mattresses) recycled in 2013 (including HHW as described below) was 1,101 tons.

2.6 Household Hazardous Waste Management

Since 1992, Steele and Rice Counties have operated a joint program for the management of HHW. A copy of this contract is provided in Appendix B. Under this agreement, Steele County is the co-sponsoring organization that is responsible for the local education program that is involved in managing HHW and the household waste management facility itself.

Many common household products, such as paints, solvents, cleaning products, adhesives, mercury and pesticides can be hazardous to humans, animals and the environment when improperly disposed. The HHW facility at the Steele County Landfill has been accepting waste materials since 1993. Residents may also bring usable hazardous products to these facilities where they will be placed on shelves for others to take home for use free of charge.

There is no charge for Steele County residents to bring HHW to the Steele County HHW Facility or the Rice County HHW Facility. Businesses which generate 220 pounds or less of hazardous waste per month (known as a very small quantity generator or VSQG) may dispose of their wastes by bringing them to either the Rice County Hazardous Waste Facility near Faribault or the Olmsted County Hazardous Waste Facility in Rochester. Although

businesses will be charged for the disposal costs, it is typically much cheaper for a business to use one of these facilities than to work directly with a hazardous waste contractor.

As indicated in the GVT in Appendix A, total HHW recycled in 2013 (included HHW as described below) was 6 tons; an additional 6 tons of latex paint was also managed.

2.7 Costs Associated with Operating and Maintaining the System

Costs associated with the existing integrated solid waste management systems falls primarily into four categories: administrative, recycling, HHW, and landfill operations. Details on current and projected costs are presented in Section 4.21.

Administrative costs primarily include staffing and facilities. Specifically, staff duties include program development, maintenance, public coordination, waste education, and regulatory reporting as well as budget management. Private haulers collect residential and commercial solid waste and are not included in the overall administrative costs except for hauler licensing and coordination. Similarly, waste from many businesses is also collected by private commercial haulers licensed by the County. Waste from any remaining businesses, commercial solid waste, and some residents is hauled directly by individual businesses or residents.

Recycling costs are established through a services agreement with a private contractor (Waste Management) for five year intervals to provide curbside pickup and drop-off centers including the provision of recycling containers, carts, or roll-offs as needed. The current agreement is effect in November 1, 2012, to October 31, 2017. As part of this agreement, all materials collected by the private contractor must be marketed for re-use or reclamation. Although the services are provided to Steele County for a fee, the private contractor and Steele County split proceeds from the sale of recyclable items. Costs associated with recycling activities housed at the landfill are included with the landfill operating costs.

HHW costs are associated with staffing, facility maintenance, waste management, and education. These costs are primarily accrued during the summer months when the HHW facility located at the landfill is operational. There is no charge for Steele County residents to bring HHW to the Steele County HHW Facility or the Rice County HHW Facility, so management of the waste represents an additional cost to Steele County.

The Steele County Landfill represents the greatest expense for the integrated solid waste management program, but also represents the greatest source of revenue. Landfill costs include operations, development, engineering, construction, leachate treatment, monitoring, reporting, and financial assurance. Without the landfill, many of the recycling activities located at the landfill would generate a separate cost to Steele County.

2.8 Summary of Achievements and Challenges

As part of previous Comprehensive SWMPs, Steele County adopted and endorsed state recycling goals and policies. The 2004 Comprehensive SWMP established an ambitious recycling goal calling for the recycling of more than 50 percent by weight per year of the County's total MSW through the year 2012. As summarized in the GVT (Appendix A), the 2013 base year numbers are as follows:

Recycled (excluding organics)	52.9%
Organics Recycled (excluding yard waste)	0.03%
Land Disposal	45.4%
On-Site Disposal - Burned / Buried	1.7%

Steele County's greatest achievement is the successful roll-out of the single or no-sort recycling program in late 2012. Over 10,500 covered and wheeled carts were initially delivered to single family and two-to-four unit apartment buildings in Blooming Prairie, Ellendale, Medford, Owatonna and Lazy "U" Mobile Home Park. Tonnage of recyclable materials collected in the residential program in November 2012 was 252 tons or a 47 percent increase over tonnage collected in November 2011. As reported in the SCORE Surveys, residential recycling was reported at 2,674.8 tons in 2012 and 4084.4 tons in 2013, or an increase of 52 percent. Over the next several years, the recycling rates are anticipated to increase through the single-sort recycling program until a mature system has been established.

The recycling material collected by a private contractor. Waste Management holds the current agreement that is in effect from November 1, 2012, to October 31, 2017. Waste Management market the collected recyclables themselves; the higher return Waste Management gets on the recycled material, the greater their own profit since Steele County only receives 50 percent of the sales revenue. Therefore, Steele County does not track the market and economic factors of the individual recyclables.

There are no existing resource recovery facilities presently in use in Steele County. The nearest resource recovery facility is located in Rochester, Minnesota, at the Olmsted County Waste-to-Energy Facility (OWEF) and was developed as part of their waste-to-energy campus. The OWEF is not available to Steele County residents at this time. The Prairieland Solid Waste Management Resource Recovery Facility in Truman (formerly the Prairieland Compost Facility) currently processes MSW to generate refuse derived fuel; currently, this facility is not being used by Steele County haulers primarily due to cost and hauling distance.

One area representing a challenge to Steele County is the management of source-separated organic materials. As described in Section 1.4, organics still make up a good percentage of waste stream generated throughout the state. MPCA is finalizing a new source-separated organic material compost rule that may open up opportunities for organic composting. In 2012, the MPCA issued one of the first solid waste permits to Full Circle Organics for a source-separated organics composting facility located in Good Thunder, near Mankato, Minnesota. Prior to the permit issuance, the options for organics composting in the region were limited. However, private haulers have not developed hauling programs to the Good Thunder facility.

Another area representing a challenge to Steele County is to obtain waste generation and recycling records for commercial and industrial facilities. Steele County has not been able to establish an industry-friendly incentive program that not only encourages recycling, but provides good documentation of all their solid waste activities.

All services provided at the Steele County Landfill are paid through tipping fees and user (recycling/disposal) fees collected at the landfill. The self-sufficient landfill operations are proposed to be maintained in order to provide a cost-effect and environmentally sound management of solid waste. In addition to the landfill fees, Steele County currently receives funding for the existing solid waste programs as follows:

- Hauler license fees;
- A portion of the sales of recyclable material from the recycling contractor;
- State funding provided to assist in funding recycling programs (SCORE); and
- Solid waste service fees.

3.0 Proposed Integrated Solid Waste Management System

3.1 Goals

The goal of Steele County's Solid Waste Management System is to provide a comprehensive and accessible solid waste program that is protective of the environment and has economic sustainability.

3.2 Objectives

The primary objective of Steele County's Integrated Solid Waste Management System is to establish accessible, environmentally sound, and cost-effective programs that encourage use of the best solid waste management practices. This objective is addressed through the development of County-wide facilities readily available to the public as well as solid waste education and a variety of recycling, composting, and disposal programs.

The 2004 Comprehensive SWMP established an ambitious recycling goal calling for the recycling of more than 50 percent by weight per year of the County's total MSW through the year 2012. As summarized in the GVT (Appendix A), that goal was exceeded in 2013 as follows:

Recycled (excluding organics)	52.9%
Organics Recycled (excluding yard waste)	0.03%
Land Disposal	45.4%
On-Site Disposal - Burned / Buried	1.7%

For the next 10-years, the County has established a new solid waste abatement goal of 60 percent by weight as presented in the GVT in Appendix A. This goal will be accomplished by:

- Continued education to residents and businesses on waste reduction and recycling.
- Potential expansion of single-sort recycling *collection* programs to more residents and businesses.
- Identifying potential waste reduction and recycling opportunities and providing incentives for non-county public entities, commercial, industrial, and institutional facilities.
- Identifying opportunities to reduce or eliminate source separated organic materials from the landfill waste stream and divert the organic material to compost facilities.
- Develop programs to provide incentives for waste abatement itself as well as better tracking and reporting of waste abatement volumes.

In addition to the above waste abatement programs, Steele County will reduce the volume of capacity utilized on an annual basis at the Steele County Landfill through the implementation of leachate recirculation.

Despite the efforts described above, Steele County will continue to face challenges in waste abatement programs such as:

- Education.
- Tracking and reporting.
- Waste generated from natural disasters.
- Percentage of nonrecyclable materials in residential waste.
- Insufficient waste streams to create demand of some recyclable resources.
- Lack of end markets for recovered resources.
- Cost competitive out-of-state land disposal options.

3.3 Integrated Solid Waste Management System

Through this 10 year plan, the County plans to continue to manage its solid waste through source reduction, recycling, and problem material removal programs as well as land disposal. Minn. Stat. § 115A.02 establishes a waste management hierarchy in order of preference as follows:

1. Waste reduction and reuse.
2. Waste recycling.
3. Composting of source-separated compostable material including yard waste and food waste.
4. Resource recovery through MSW composting or incineration.
5. Land disposal with no measurable methane emissions (methane retrieved for energy).
6. Land disposal with measureable methane emissions (no methane retrieved for energy).

Current waste abatement programs in Steele County fall under waste reduction and reuse, waste recycling, composting (yard waste only), and land disposal with measurable methane emissions. The following programs are not available within Steele County and, as a result, are generally not cost-effective or may even present another form of environmental impact due to hauling distances to the nearest facilities:

- Solid waste processing facilities.
- SSOM composting facilities for food waste (limited availability of collection services).
- Resource recovery through MSW composting or incineration.
- Land disposal with no measurable methane emissions (landfill gas to energy).

As a result, the only options readily available to Steele County are the programs already in-place. However, as described in detail in Section 2.4.1, Steele County has taken steps to implement a leachate re-circulation program at the Steele County Landfill for a number of beneficial reasons including the enhancement of methane generation to potentially develop a landfill gas utilization program at some time in the future; actual implementation of a methane use program cannot be determined until monitoring of landfill gas indicates quantities are sufficient for development.

As presented in the GVT (Appendix A), land disposal of the MSW generated is proposed to decrease from the current 2013 rate of 45.4 percent of the waste generated to 38.3 percent in 2023. Although waste flows are important to maintain an economically viable landfill operating system, any diverted waste may be replaced by other waste streams as necessary to maintain viability. For example, Steele County, as a regional facility, may provide more options for out-of-county waste streams as it has in the past. Therefore, the viability of the Steele County Landfill is not solely dependent on solid waste generated within the County and becomes a regional disposal option.

Steele County's GVT estimate that the County will need approximately 383,200 cubic yards of landfill disposal capacity for the 10-year planning period (2014 to 2023 including daily/intermediate covers). Information on the current permit status of the landfill including available airspace as of 2014 is provided in Section 2.4.1.

In the interest of environmental protection, Steele County will continue to consider additional landfill abatement alternatives. The full analysis of the alternative solid waste management systems analyzed in this plan is presented in Section 4.22.

3.4 Public Entities

Public Entities must ensure that their waste is managed in a manner consistent with the County's preferred methods for waste management, according to the state Public Entities Statutes (Minnesota Statute § 115A, 151, 115A.46, subd. 5, and 115A.471). These statutes state that public entities that manage waste, or contract to have their waste managed, must manage their waste in a manner that is not inconsistent with the county plan, unless they obtain the permission of the county to do otherwise.

The definition of public entities includes any of the following:

- An office, agency, or institution of the state;
- The metropolitan council;
- A metropolitan agency;
- The metropolitan mosquito control district;
- The legislature;
- The courts;
- A statutory or home rule charter city;
- A town;
- A school district;
- Another special taxing district; or
- Any contractor acting pursuant to a contract with a public entity.

In order for these provisions to work effectively, the County can take a number of steps to further improve the ability of the Public Entities Statutes to achieve the desired result:

- The county's waste management preferences should be clearly stated in the County's Solid Waste Management Plan.
- Clearly articulate that only waste collected by or contracted for collection by a public entity is covered under this statute, and provide information to public entities that explains the benefits of this law to public entities.
- The County can work closely with the state to ensure public entities law is enforced.

Consistent with these policies and statutes, Steele County hereby establishes that the County plans to continue to manage its solid waste through source reduction, recycling, and problem material removal programs as well as land disposal as described in the SWMP.

4.0 Solid Waste System Evaluation and Ten-Year Implementation Plan

As described in the previous sections, Steele County's Solid Waste Management System provides a comprehensive and accessible solid waste program that is protective of the environment and has economic sustainability. This system establishes accessible, environmentally sound, and cost-effective programs that encourage use of the best solid waste management practices. The current solid waste system will be in-place for a 10-year period. The following sections describe the solid waste system and its implementation over the next 10-years.

4.1 Waste Reduction

As presented in Section 2.3.1, Steele County regards source reduction as its first priority in solid waste management. Waste reduction involves reducing the quantity of waste produced

by changing product designs and consumer behavior. Ultimately, the waste reduction efforts directly relate to less waste available for land disposal. However, measuring the actual volume or tonnage of waste reduction on a county-wide basis is not possible. Steele County maintains two primary programs on waste reduction: (1) public education and (2) waste reduction in County facilities.

4.1.1 General Policy and Goals

As described in Section 2.3.2, Steele County endorses Minn. Stat. § 115A.55, § 115A.5501, and §115A.5502 which address and encourage source reduction through waste education programs, promotion of waste reduction, technical and financial assistance to solid waste generators, and reduction of packaging in waste. Although the County recognizes waste reduction as an essential component of a successful solid waste management program, measuring the actual volume or tonnage of waste reduction on a county-wide basis is not possible with the available programs. For instance, County facilities have made efforts to reduce paper use through a number of programs, but documentation of paper use prior to those efforts is not available.

The County also endorses Minn. Stat. § 115A.93 and § 115A.9301 which require volume or weight-based pricing for the collection and disposal of solid waste. The County considers the volume or weight-based pricing system an important factor in accomplishing waste reduction and landfill abatement.

The Steele County Ordinance No. 27 stipulates that Steele County Environmental Services will administer the County solid waste program to include waste education, recycling, HHW management, and landfill management.

4.1.2 Existing Solid Waste Reduction Program

Steele County's existing solid waste reduction program is presented in Section 2.3.1 with a primary focus on waste education as described further in Section 4.2.

Steele County has an established 2011 Waste/Environmental Education Plan that educates consumers and businesses about wasteful excess packaging and promotes recycling, waste reduction, and other waste management programs. The waste education program also educates the public on the proper management of banned waste materials from landfilling as well as promoting backyard composting to directly decrease the available waste for land disposal. Steele County also supports the operations of community-based yard waste compost facilities in the cities of Blooming Prairie, Ellendale, Medford, and Owatonna.

Internally, Steele County has implemented source reduction activities including purchasing guidelines, an employee source reduction recognition program, and distributes educational materials to employees.

4.1.3 Programs to Maintain, Expand, or Implement

All existing programs will be maintained including implementation of the 2011 Waste/Environmental Education Plan and internal County programs. Waste education programs primarily require a time commitment to keep the waste education materials up-to-date and to participate in public awareness activities such as speaking at schools, government and business functions, and County fairs as well as provide tours at recycling and disposal facilities.

One area of solid waste reduction that has not been implemented could directly impact waste reduction and re-use options for residents is programs developed for public participation.

Program ideas will be researched and determined whether the program may be effective and complement the existing programs. Some ideas to be evaluated and implemented (as appropriate) during the 10-year include but may not be limited to:

- Volunteer fix-it clinics;
- Reuse promotions through access to and/or development of directories for thrift stores, the Reuse Alliance (Reuse MN), the Materials Exchange-Minnesota Technical Assistance Program (MnTAP), etc; and
- Establish reuse areas for public access at the landfill and/or other public facilities.

Another area of solid waste reduction that is not well defined in current Steele County programs is that associated with non-county public entities, commercial, industrial, and institutional facilities. Many businesses and institutions may already have waste reduction programs in place or are not aware of how to implement waste reduction programs. Because very limited existing data is available from these facilities, it is difficult to project goals; data must be gathered first before programs can be developed and projections of waste abatement made. Therefore, Steele County proposes to work with area businesses to determine or develop the following:

1. Current waste generation materials and rates.
2. Current waste abatement programs and rates.
3. Potential improvements to current waste abatement programs.
4. Effective incentives to recycle and provide data to the County.

Coordinating with local businesses to review their current programs and to obtain waste generation and recycling data will also require an additional time commitment of County staff.

4.1.4 Program Budget

Staffing of the waste reduction program is provided under administrative tasks of the Environmental Services Department and as described in Section 4.17. The program budget including capital and program expenses and revenues is presented in Section 4.18. Budget details are presented in Section 4.21.

4.1.5 Schedule

No schedule is necessary for programs that are being maintained.

Information regarding waste programs associated with non-county public entities, commercial, industrial, and institutional facilities is currently limited and Steele County cannot identify areas of improvement or provide site-specific incentives until existing programs are defined. Therefore, the general schedule to expand and implement waste reduction programs will be as follows:

- Years 1 through 5: Collect information on existing programs.
- Years 5 through 6: Identify potential site-specific improvements or incentives for selected facilities based on need or best opportunities.
- Years 6 through 8: Implement site-specific improvement or incentive programs.
- Years 8 through 10: Evaluate effectiveness of site-specific improvement or incentive programs.

4.2 Waste Education

As presented in Section 2.3.2, Steele County considers public education an important component in its strategy to achieve waste abatement goals. Ongoing public education will be provided for all elements of the solid waste management program that can benefit from an informed public as defined in the 2011 Waste/Environmental Education Plan. The strategy identified in the program include operating the Recycling Hotline, speaking at schools and other groups, distribution of news releases, conduct print and/or electronic ad campaigns, brochures, and newsletter information. Copies of examples brochures and flyers are included in Appendix D.

4.2.1 General Policy and Goals

The primary key to implementing any program to reduce the volume of solid waste disposed in landfills is a public education program. Steele County believes that public service announcements on radio, brochures, newspaper articles on waste disposal issues, and presentations at schools or civic meetings can stimulate the necessary public awareness of waste generation practices to initiate changes in disposal habits. Particular emphasis is made regarding illegal activities regarding burial and burning of trash as outlined in Minn. Stat. § 17.135 and 88.171.

Steele County's Waste/Environmental Education Plan (Education Plan) was updated in 2011 and included in Appendix D-1. The four specific goals established as part of the Education Plan included:

1. To maintain participation in recycling by Steele County residents in cities and rural areas.
2. To maintain participation in can/bottle recycling during special events.
3. To increase citizen's knowledge of proper solid waste disposal practices.
4. To maintain citizen participation in the HHW collection and product exchange programs.

Since development of the 2011 Education Plan, the goals and objectives originally established have been met and exceeded particularly through development of education brochures, Recycling Hotline, on-line A to Z Disposal Guide, and the roll-out of the single sort or no-sort recycling program. Therefore, the waste education goals have been revised as follows:

- To maintain and possibly expand recycling participation by Steele County residents who receive single-sort curbside collection services and homeowner usage of the HHW facility and product exchange.
- To increase participation in recycling and other waste abatement programs by small businesses, as well as other non-county public entities, commercial, industrial, and institutional entities.
- To increase business and citizen awareness of waste reduction concepts, alternatives to using hazardous products (as described under Section 4.1), and proper solid waste management and disposal practices (including illegal disposal or environmental risks associated with legal on-site disposal).
- To increase business, farmer, citizen, and youth awareness of what constitutes a sustainable community and increase actions to promote sustainability.

The Steele County Ordinance No. 27 stipulates that Steele County Environmental Services will administer the County solid waste program to include waste education, recycling, HHW management, and landfill management.

4.2.2 Existing Solid Waste Education Practices

Steele County's existing solid waste education program is presented in Section 2.3.2. Most recently, Steele County established a 2011 Waste/Environmental Education Plan (Appendix D-1) to educate promote waste reduction, recycling, and other waste abatement programs. The strategy identified to achieve the program goals include such activities as operating the Recycling Hotline and the web-based A to Z Disposal Guide, speaking at schools and other groups, distribution of news releases, conduct print and/or electronic ad campaigns, brochures, and newsletter information. Further details are provided in Section 2.3.2.

The education program also educates the public on the proper management of banned waste materials from landfilling as well as promoting backyard composting to directly decrease the available waste for land disposal.

Within their own facilities, Steele County has also implemented internal source reduction activities including purchasing guidelines, an employee source reduction recognition program and distributes education material to employees. Staffing of the educational program is included under the overall County abatement programs.

4.2.3 Programs to Maintain, Expand, or Implement

Existing education programs will be maintained to the greatest extent possible. As described in Section 4.1, waste education programs primarily require a time commitment to keep the waste education materials up-to-date (including brochures and website) and to participate in public awareness activities such as speaking at schools, government and business functions, and County fairs as well as provide tours at recycling and disposal facilities.

Steps to maintain and update the current waste education programs will include:

- Annual and periodic review of regulatory changes, necessary program changes, or public input to current program to identify target areas for updating educational materials and website; update education materials and website for targeted areas.
- Continue to participate in outreach through promotion at community events and to organizations, such as county fairs, trade shows, local home and farm shows, community festivals, and organization activities for clubs, groups, and schools.
- Continue to publish notices and promotions quarterly in accordance with Minn. Stat. § 115A.552.

Steps to expand the current waste education programs will include:

- Collaborate with Freeborn County on new waste education opportunities and materials.
- Develop materials and website to promote availability of reuse programs such as Reuse Alliance (Reuse MN), Materials Exchange-MnTAP, and Source Separated Organic Materials (Full Circle Organics).
- Create a directory of thrift stores or reuse opportunities.

- Obtain information on waste streams generated at non-county public entities, industrial, institutional, and commercial facilities in order to identify target materials and opportunities for new education efforts. Research waste abatement options of targeted materials. Prepare educational materials and present waste abatement options to facilities. Facilitate business opportunities for waste abatement programs.

In addition, coordinating with local businesses to review their current programs and to obtain waste generation and recycling data will also require an additional time commitment of County staff.

4.2.4 Program Budget

Staffing of the waste education program is provided under administrative tasks of the Environmental Services Department and as described in Section 4.17. The program budget including capital and program expenses and revenues is presented in Section 4.18. Budget details are presented in Section 4.21.

4.2.5 Schedule

No schedule is necessary for programs that are being maintained; however, existing written material brochures will be reviewed and updated annually as necessary to reflect current regulatory requirements and program needs. In addition, publications will be prepared once every three months in accordance with Minn. Stat. § 115A.552.

Collaboration with Freeborn County has been initiated in 2014 with the implementation of a shared recycling coordinator position between the two counties. Materials and website information promoting reuse programs and thrift stores will be developed in the first three years of the plan.

Expanding and implementing waste education programs associated with non-county public entities, commercial, industrial, and institutional facilities will be conducted in conjunction with the waste reduction programs described in Section 4.1. Information on existing programs at these facilities are currently limited and Steele County cannot identify areas of improvement or provide site-specific incentives until existing programs are defined. Therefore, the general schedule to expand and implement waste education programs will be as follows:

- Years 1 through 5: Collect information on existing programs at identified non-county public entities, commercial, industrial and institutional facilities. Largest employers will be initially targeted since they have the greatest potential to generate the greatest amount of waste.
- Years 5 through 6: Identify potential site-specific improvements or incentives for selected facilities based on need or best opportunities.
- Years 6 through 8: Implement site-specific improvement or incentive programs.
- Years 8 through 10: Evaluate effectiveness of site-specific improvement or incentive programs.

4.3 Recycling

As presented in Section 2.3.3, recycling in the form of source separation has become the backbone for waste management programs. Source separation involves the separation of recyclable materials from the main solid waste stream at the source by the waste generator. The separated materials are then collected from the source by means of special collection trucks, volunteer (non-profit) groups or are taken by the generator directly to a recycling center, which may pay for the materials or merely accept them for recycling. Additionally,

collection containers are provided for County employees to recycle paper, cardboard, plastic, metal, and glass in Steele County facilities and transported to the recycling center by County staff.

4.3.1 General Policy and Goals

The primary objective of Steele County's Integrated Solid Waste Management System is to establish accessible, environmentally sound, and cost-effective programs that encourage use of the best solid waste management practices. Recycling education is addressed by Steele County in its 2011 Waste/Environmental Education Plan which focuses on waste reduction and recycling. Steele County encourages recycling through numerous programs including education, residential collection, community recycling centers, a Recycling Hotline, and a comprehensive website. The strategy identified in the program includes operating the Recycling Hotline and the web-based A to Z Disposal Guide, speaking at schools and other groups, distribution of news releases, conduct print and/or electronic ad campaigns, brochures, and newsletter information.

The Steele County Ordinance No. 27 stipulates that Steele County Environmental Services will administer the County solid waste program to include waste education, recycling, HHW management, and landfill management.

As presented in Section 3.0 and the GVT (Appendix A), the County has established a new recycling goal increasing recycling from the current 52.9 percent by weight to over 60 percent by weight over the next 10-years. This goal will be accomplished by:

- Continued education to residents and businesses on waste reduction and recycling opportunities.
- Potential expansion of single-sort recycling programs through self drop-off or contracted hauler programs to include additional apartment buildings as well as rural residents and businesses.
- Identifying potential waste reduction and recycling opportunities and providing incentives for non-county public entities, commercial, industrial, and institutional facilities.

4.3.2 Existing Recycling Practices

Steele County's existing solid waste education program is presented in Section 2.3.3. Although Steele County does not have mandatory recycling requirements, recycling is encouraged through numerous programs including education, residential collection, community recycling centers, the Recycling Hotline, and the web-based A to Z Disposal Guide. Waste education programs are described in Section 2.3.2 and Section 4.3. Steele County feels their waste education in reference to recycling is very effective and will be maintained and updated as necessary.

As indicated in Section 2.3.3, Steele County has established an Agreement with a private contractor (currently Waste Management, Inc.) for five year intervals to provide curbside pickup in larger communities, operate a drop-off center in Owatonna, and provide recycling services to multi-family dwellings. The current agreement is in effect in November 1, 2012, to October 31, 2017. Curbside pick-up of recyclables is provided on a biweekly basis with drop-off locations for recyclables only available 24-hours a day throughout the County. The Agreement also provides for recycling of problem recyclable materials including automotive batteries, tires and household appliances (white goods). Presently these materials are collected at Steele County Recycling Center in Owatonna on Monday through Friday from 9 am to 5 pm and on Saturday from 8 am to noon. All materials collected under the contract

are required to be marketed for re-use or reclamation. In addition, problem recyclable materials are also collected at the Steele County Landfill and transported for recycling and reclamation.

As described previously, Steele County made significant changes to its residential recycling program during the fall of 2012 when urban residents received larger carts to hold recyclables, rural recycling drop sites all switched to using large metal containers that can hold many more materials, and all recyclers can mix materials together for Single or No-Sort recycling. The recycled material is sorted at Waste Management's Recycle America facility in Minneapolis. At that facility, the materials are able to be sorted mechanically using sensors from a single line, making a single-sort system possible.

Steele County also encourages and supports recycling programs by non-county public entities, commercial, industrial, and institutional facilities. Steele County is home to a number of industries (listed in Table 7) that have developed their own effective recycling programs that are currently not well defined. In addition, a number of local businesses provide crucial recycling opportunities for residents and businesses for everyday items including:

- The Retrofit Companies (appliances , electronics, fluorescent lamps)
- Various retail stores (bags, lead acid and rechargeable batteries, fluorescent lamps, holiday lights)
- Salvation Army, Clothesline, Minnesota Epilepsy Foundation, USAgain Red Box (clothing)
- Various utility companies (fluorescent lamps)
- Automobile repair shops (tires, used oil)

Steele county also promotes the use of event recycling containers at community events and private parties as well as other target recycling programs such as "Message in a Bottle" recycling programs for gas/convenience stores and "It's in the Bag" program for businesses that generate large amounts of plastic bags and shrink wrap.

Annual recycling tonnages documented in SCORE reports over the last five years are summarized in the following table:

Recycling Tonnages by Sector					
Sector	2009	2010	2011	2012	2013
Documented Commercial, Industrial, and Institutional	33,753	32,005	34,176	28,235	27,542
Estimated Commercial, Industrial, and Institutional	892	658	42	Not Reported	Not Reported
Residential	2,830	2,682	2,462	2,675	4,084

4.3.3 Programs to Maintain, Expand, or Implement

Existing recycling programs will be maintained to the greatest extent possible. Steps to maintain and update the current recycling programs will include:

- Continue waste education and publication programs described in Section 2.3.2 including the Recycling Hotline and the web-based A to Z Disposal Guide.

- Continue work with the Employees' Waste Reduction and Recycling Committee,
- Continue to promote the use of event recycling containers at community events and private parties as well as targeted programs such as "Message in a Bottle" and "It's in the Bag".
- Maintain the current Agreement with a private contractor for operating Steele County's recycling program including the single-sort collection program. Steele County will continue to monitor the marketing of recyclables for re-use or reclamation as part of the agreement with the recycling contractor (currently Waste Management, Inc.). Although the services are provided to Steele County for a fee, the private contractor and Steele County split proceeds from the sale of recyclable items.
- Continue participation in local and regional waste abatement organizations.

Steps to expand the current recycling programs will include:

1. Offer the recycling carts to residents outside of the major urban areas has not been implemented at this time. As the current program matures and the system evaluated, Steele County will continue to evaluate and potentially identify opportunities to expand the single-sort recycling program.
2. Promote and organize special days for collection and handling hazardous waste and other special waste. Incorporate joint mobile collection programs currently in use within Freeborn County.
3. Because waste generation and recycling information is not readily available from non-county public entities, commercial, industrial, and institutional facilities, incentive programs will be developed to obtain that information and encourage recycling programs at County businesses.
 - a) Identify, develop initiatives, and provide technical assistance on Best Management Practices (BMP), to increase recycling. This may be at Schools, businesses, multi-unit dwellings, industries, or other identified generators.
 - b) Measurement and tracking effectiveness may and will consist of using waste audits, costs, container sizes, pickup frequencies and other metrics to measure progress.
4. Annually review and compare data to measure incremental progress of various initiatives, for example SCORE data with projections from the GVT, waste audits, costs, collection frequencies, container sizes:
 - a) If recycling rate falls below the goal, the county will determine additional recycling opportunities for residents and businesses. Those opportunities could include increased educational efforts, mandatory recycling, etc.
 - b) Use the 2013 Solid Waste Composition Study to identify what recyclables are being missed. Determine who the generators of those materials are why those materials are not being recycled, and develop a specific work plan to address recycling barriers.
 - c) Implement specific initiatives that are targeted at correcting the barriers.

5. Evaluate existing recycling programs annually.
 - a) Identify missed opportunities for increased recycling such as curbside collection, rural opportunities, contracts, mandates, ordinances, organized collection.
 - b) Identify materials currently not being collected such as mattresses, source separated organics, Styrofoam, furniture, and carpeting and research potential recycling programs; initiate and/or support programs for their collection and recycling.
6. Support and promote local markets for recyclable materials such as Reuse Alliance (Reuse MN), Materials Exchange-MnTAP, SEMREX (Southeast MN Recycling Exchange), and SSOMs (Full Circle Organics).

4.3.4 Program Budget

Staffing of the recycling program is provided under administrative tasks of the Environmental Services Department and as described in Section 4.17. All expenses of recycling programs managed at the landfill are paid by landfill fees. The budget including capital and program expenses and revenues is presented in Section 4.18 with details presented in Section 4.21.

4.3.5 Schedule

No schedule is necessary for programs that are being maintained. As part of the preparation of the annual SCORE survey, Steele County will evaluate the effectiveness of the current waste abatement activities including placement of recycling drop off sites and implementation of the single sort program. At that time, any opportunities to make improvements or increase service are identified and can be implemented in subsequent years.

Expanding and implementing recycling programs associated with non-county public entities, commercial, industrial, and institutional facilities will be conducted in conjunction with the waste reduction programs described in Section 4.1. Existing programs at these facilities are currently limited and Steele County cannot identify areas of improvement or provide site-specific incentives until existing programs are defined. Therefore, the general schedule to expand and implement recycling programs will be as follows:

- Years 1 through 3: Collect and evaluate information on existing programs, giving the new part-time recycling coordinator to become familiar with existing programs.
- Years 3 through 6: Identify potential site-specific improvements or incentives for selected facilities based on need or best opportunities.
- Years 6 through 8: Implement site-specific improvement or incentive programs.
- Years 8 through 10: Evaluate effectiveness of improvement or incentive programs.

4.4 Yard Waste Management

Composting is a biological process used to partially decompose the organic materials in solid waste. The decomposition may take place aerobically or anaerobically, but is normally carried out aerobically to avoid odors. The bacterial activity produces a dark, humus-like material characterized by a low nutrient value and high moisture retention. Due to its higher moisture content, lower contaminant content and homogenous quality, yard waste compost produced from leaves and grass clippings has been marketed successfully. Development of yard waste composting is a simple, environmentally preferable method to reduce solid waste volumes, and should be considered by any community.

4.4.1 General Policy and Goals

In accordance with state law enacted on January 1, 1992, yard waste is banned from burial in the landfill. Therefore, Steele County has enacted a major education program on backyard composting and supported the development of community yard waste compost sites. Steele County primarily provides public education for the municipal yard waste compost programs established in Owatonna, Medford, Blooming Prairie, and Ellendale. The County will continue to promote on-site management of yard waste in educational programs.

The Steele County Ordinance No. 27 stipulates that Steele County Environmental Services will administer the County solid waste program to include waste education, recycling, HHW management, and landfill management.

4.4.2 Existing Yard Waste Compost Programs

As described in Section 2.3.4, the County has banned yard waste from MSW since 1992. Steele County has enacted an education program on backyard composting and assisted in the development of community yard waste compost sites. No collection services are offered. The self-haul option appears to be adequate for managing yard waste in municipal areas; on-site mulch, re-use through tillage or land application is common in rural areas.

Yard waste compost facilities have been developed in four communities across the County: Blooming Prairie, Ellendale, Medford, and Owatonna. The sites are open seasonally in the spring through the fall and collect yard waste defined as garden wastes, lawn cuttings, weeds and prunings or brush under six inches in diameter. The sites also collect trees and stumps (less than 10 feet long), Christmas trees and wreaths, sod strippings, pumpkins, melons, and straw. A residential fee schedule has been established for disposal of these materials at the Owatonna facility. The materials collected at the Owatonna facility are composted or mulched at the compost sites and resold. Products include brush mulch, oak hardwood landscape mulch and screened compost. Information is also provided at the compost centers for beneficial reuse of these products (i.e., weed control, soil amendment, etc.). Although some products are sold from the Owatonna facility, compost generated at other compost facilities are not marketed but are given away free. Currently records on the products produced and sold at the Owatonna facility are not available.

Steele County primarily provides public education for the municipal yard waste compost programs. As indicated in the GVT (Appendix A), yard waste composting through the municipal facilities is anticipated to be maintained at approximately 4000 cubic yards. Backyard composting practices are not documented. Backyard composting in municipal areas are estimated to be low due to the availability of municipal facilities.

4.4.3 Programs to Maintain, Expand, or Implement

The current community-based yard waste compost facilities are effective at eliminating yard waste in the MSW received at the Steele County Landfill. Therefore, the County will support and maintain the current programs through waste education efforts. Steps to maintain and update the current yard waste programs will include:

1. Encourage/educate organized and backyard composting as described in Section 4.2.
2. Develop an incentive program to obtain composting and product data from the yard waste compost sites.

4.4.4 Program Budget

The yard waste management programs are completely staffed and funded through the communities of Blooming Prairie, Ellendale, Medford, and Owatonna. Yard waste management is not included in the Steele County budget.

4.4.5 Schedule

No schedule is necessary for programs that are being maintained.

Therefore, the general schedule to expand and implement recycling programs will be as follows:

- Years 1 through 3: Collect and evaluate information on existing programs as part of the annual SCORE survey.
- Years 3 through 5: Identify potential site-specific improvements or incentives for selected facilities based on need or best opportunities.
- Years 5 through 10: Implement site-specific improvement or incentive programs and evaluate effectiveness of site-specific improvement or incentive programs.

4.5 Source-Separated Organic Materials Composting

Biodegradable (organic) MSW (particularly food and yard waste) consumes landfill space. Instead of landfilling, composted organic material can be used as a soil amendment — a resource that can potentially displace some amount of petroleum-derived synthetic fertilizer and some best (management) practices for reducing stormwater runoff and surface water pollution. The Minnesota Pollution Control Agency is currently finalizing changes to solid waste rules to address source-separated organic materials (SSOM) composting. The MPCA is considering amendments that would authorize and regulate the operation of a compost facility that is dedicated to source-separated food waste, yard waste, and other source-separated bulking agents such as nonrecyclable paper.

As stated below, the Steele County Ordinance No. 27 stipulates that Steele County Environmental Services will administer the County solid waste programs.

4.5.1 General Policy and Goals

Currently there are no policies or goals in Steele County regarding source-separated organic materials composting. In 2012, the MPCA issued one of the first solid waste permits to Full Circle Organics for a source-separated organic materials composting facility located in Good Thunder, near Mankato, Minnesota. Prior to the Full Circle Organics permit issuance, the options for organics composting in the region was limited. As indicated in Section 2.1, the goal of Steele County is to make waste education, source reduction, and recycling programs available to all residents, businesses, schools, and all levels of government. As part of that goal, Steele County can work with local haulers to license them for the transfer of organic waste generated in Steele County to the Good Thunder facility or other source-separated organic material facilities.

As indicated in the GVT (Appendix A), Steele County plans to increase SSOM composting to 0.5 percent by weight over the next 10 years.

The Steele County Ordinance No. 27 stipulates that Steele County Environmental Services will administer the County solid waste program to include waste education, recycling, HHW management, landfill management, and hauler licensing.

4.5.2 Existing Source-Separated Organic Materials Compost Programs

As indicated above in Section 4.5, there are no existing source-separated organic materials compost programs in Steele County. The closest facility is located in Good Thunder, near Mankato, Minnesota, approximately 60 miles southwest of Owatonna. The Good Thunder facility accepts all food scraps, food soiled paper products, yard debris, wood debris from land clearing, clean wood, and animal bedding. At the facility, the material is mixed with a carbon source (leaves, grass, cornstalks) and allowed to decompose for six to eight months outdoors on a concrete pad. When the process is complete, the material is generally sold for landscaping.

The primary barriers to using the Full Circle Organics facility is hauler driven and cost. Currently, few haulers offer collection services for SSOM and the distance to the facility increases transportation cost when compared to the distance of a landfill.

As indicated in the GVT in Appendix A, 18 tons of organic material was used for food to livestock in 2013.

4.5.3 Programs to Maintain, Expand, or Implement

Steele County plans to work with local haulers to license them for the transfer of organic waste generated in Steele County to the Good Thunder facility or other source-separated organic material facilities. In addition, as part of the waste reduction, education, and recycling programs described in Sections 4.1, 4.2, and 4.3, Steele County will work with existing non-county public entities, commercial, industrial, and institutional facilities that generate food waste to evaluate alternatives for organic material waste management, possibly source-separated organic materials compost facilities such as the Full Circle Organics facility.

As part of the non-county public entities, commercial, industrial and institutional facilities efforts, steps to expand and implement SSOM composting will include:

1. Identify high organics generating businesses (restaurants, cafeterias, hospitals, etc).
2. Work with selected high organics generating businesses to establish organics diversion programs

4.5.4 Program Budget

Staffing of any potential source-separated organic materials composting programs would be provided under administrative tasks of the Environmental Services Department and as described in Section 4.17. As appropriate, the program budget including capital and program expenses and revenues is presented in Section 4.18. Budget details are presented in Section 4.21.

4.5.5 Schedule

Steele County has already started discussions with haulers to offer collection of organic waste and will continue to work with them to obtain licenses through the county.

As part of the programs described in Sections 4.1, 4.2, and 4.3, Steele County will work with existing non-county public entities, commercial, industrial, and institutional facilities that generate food waste to evaluate alternatives for organic material waste management. Existing programs at these facilities are currently limited and Steele County cannot identify areas of improvement or provide site-specific incentives until existing programs are defined.

Therefore, the general schedule to expand and implement SSOMs programs will be consistent with other programs as follows:

- Years 1 through 5: Collect information on existing programs.
- Years 5 through 6: Identify potential site-specific improvements or incentives for selected facilities based on need or best opportunities.
- Years 6 through 8: Implement site-specific improvement or incentive programs.
- Years 8 through 10: Evaluate effectiveness of site-specific improvement or incentive programs.

4.6 Mixed Municipal Solid Waste Composting

Similar to the source-separated organic materials described in Section 4.5, biodegradable (organic) MSW consumes landfill space and when composted, the organic material can be used as a soil amendment.

4.6.1 General Policy and Goals

In 1994, Steele County completed a comprehensive regional solid waste plan for Steele and Waseca Counties with options to include Freeborn, Mower, and/or Rice Counties to develop a joint MSW composting facility. The option was rejected due to legal issues with waste designation, competitive facilities, capital expenditures, and high service fees. Therefore no policy or goals are established for a MSW compost program in Steele County.

The Steele County Ordinance No. 27 stipulates that Steele County Environmental Services will administer the County solid waste program to include waste education, recycling, HHW management, and landfill management.

4.6.2 Existing Mixed Municipal Solid Waste Compost Programs

In 1994, Steele County completed an evaluation for the diversion of solid waste to the nearest facility, Prairieland Compost Facility, located approximately 90 miles southwest of Owatonna near the city of Truman, Minnesota. The option was rejected due to capital expenditures and high service fees. Since then, the Prairieland Compost Facility has seized composting operations. Currently, there are no other MSW compost facilities operating in southeast Minnesota.

4.6.3 Programs to Maintain, Expand, or Implement

Because there are no MSW compost facilities operating in southeast Minnesota and Steele County has eliminated them as a County alternative, there are no programs to maintain, expand, or implement.

4.6.4 Program Budget

Because there are no MSW compost facilities operating in southeast Minnesota and Steele County has eliminated them as a County alternative, no budget has been established for a MSW composting program.

4.6.5 Schedule

No schedule is established for mixed municipal solid waste compost programs.

4.7 Solid Waste Incineration and Energy Recovery

Energy can be recovered from the incineration of solid waste. Energy is produced either from a mass-burn incineration or a refuse derived fuel (RDF) incineration. Heat from the burning

waste is captured in a heat recovery system to produce either steam or hot water that can be used for heating/cooling applications or for electrical generation.

4.7.1 General Policy and Goals

As part of previous evaluations, a number of environmental concerns regarding solid waste incineration were identified including air pollution control on disposal of the combustor ash. Furthermore, the development of a Steele County Waste to Energy facility would require major capital expenditure as well as difficult regulatory siting and permitting requirements.

In 1994, Steele County completed an evaluation to dispose of waste at the Olmsted County Waste-to-Energy Facility as well as the then Prairieland Compost Facility in Truman, Minnesota (currently a processing facility to produce RDF). Options were rejected because major expansions would be necessary at the facilities, the overall estimated costs to implement, and the high service or tipping fees at the receiving facilities. As a result, solid waste incineration for energy recovery was eliminated as a viable waste management option. Therefore no policy or goals are established for a solid waste incineration and energy recovery program in Steele County. Since 1994, Olmsted County has expanded their waste-to-energy facility to manage its own waste generation needs. Although they occasionally have capacity for additional waste, they cannot provide long-term guarantees for managing Steele County waste since their own county waste is the priority. As a result, Steele County does not see them as a long-term viable alternative to divert Steele County waste from land disposal. Steele County will continue to evaluate and consider possible alternatives to landfilling.

The Steele County Ordinance No. 27 stipulates that Steele County Environmental Services will administer the County solid waste program to include waste education, recycling, HHW management, and landfill management.

4.7.2 Existing Solid Waste Incineration and Energy Recovery Programs

As described in Section 2.3, there are no existing solid waste incineration and energy recovery programs presently in use in Steele County. The nearest resource recovery facility is located about 45 miles from Owatonna in the city of Rochester, which is not available to Steele County residents at this time. Xcel Energy's Xcel Energy's Wilmarth RDF Facility is located over 50 miles southwest of Owatonna, south of the City of Mankato, which only burns RDF; the closest RDF processing facility is located 90 miles southwest of Owatonna near Truman.

As indicated in the previous section, Olmsted County has indicated that although they occasionally have capacity for additional waste, they cannot provide long-term guarantees for managing Steele County waste since their own county waste is their priority. As a result, Steele County does not see them as a long-term viable alternative to divert Steele County waste from land disposal.

4.7.3 Programs to Maintain, Expand, or Implement

Because there is no existing solid waste incineration and energy recovery programs operating in Steele County, the County has eliminated them as a waste management alternative, there are no programs to maintain, expand, or implement.

4.7.4 Program Budget

Because there are no existing solid waste incineration and energy recovery programs in Steele County, no budget has been established for a solid waste incineration and energy recovery programs.

4.7.5 Schedule

No schedule is established for solid waste incineration and energy recovery programs.

4.8 Land Disposal of Mixed Municipal Solid Waste

Steele County owns and operates the Steele County Landfill which receives most MSW generated in Steele County. Some MSW generated within Steele County is also diverted out-of-state to Central Disposal Facility located near Lake Mills, Iowa, owned and operated by Waste Management Inc.

4.8.1 General Policy and Goals

During the early to mid-1990's, Steele County undertook a number of studies to determine the best options for managing solid waste in accordance with regulatory requirements and environmentally sound alternatives. Based on these studies, Steele County concluded that expansion of the current Steele County Landfill was the most environmental and economic option available for solid waste management.

Steele County's solid waste policies are implemented to support the entire solid waste management program including the landfill. Without sufficient waste streams into the landfill, operations would not be economically viable and environmental issues become a greater concern at the landfill. There is a balance that must be achieved between land disposal and diverting waste from the landfill through waste reduction efforts such as recycling and reclamation programs. With the successful roll-out of the single or no-sort recycling program in 2012, recycling increased by more than 50 percent and did not impact waste flows at the Steele County Landfill indicating that the proper efforts are made to divert waste while bringing in other waste to sustain landfill operations. Therefore, Steele County has opted to allow out-of-county waste for disposal into their landfill; in 2013, the Steele County Landfill, in addition to Steele County waste, accepted MSW from the counties of Dodge, Freeborn, Mower, Rice, and Waseca. As a result, the Steele County Landfill has become a more regional land disposal option and provides a necessary service in this area of southeast Minnesota. The acceptance of waste from out of county is reviewed and approved on a case-by-case basis as determined necessary to financially support the existing landfill or to provide a beneficial service to a neighboring county.

Steele County has also incorporated policies to maximize potential benefits of the landfill operations. As described in Section 2.4.1.1, the recent Permitting Documents (SEH, May 2012) submitted to the MPCA included the development of leachate recirculation to extend the life of the MSW disposal area by improving settlement by more than 20 percent, stabilize the decomposition of the waste more quickly to reduce long-term environmental liability, and potentially develop a landfill gas utilization program at some time in the future. Based on waste flows of approximately 30,000 tons per year, recirculation of leachate is likely to provide an additional 5 years of life to the facility and extend the anticipated closure date from the year 2027 to 2032.

Other than removing materials from the waste stream through waste reduction and recycling programs, Steele County cannot control waste that is being land disposed out-of-state at Central Disposal Facility located near Lake Mills, Iowa.

The Steele County Ordinance No. 27 stipulates that Steele County Environmental Services will administer the County solid waste program to include waste education, recycling, HHW management, and landfill management.

4.8.2 Existing Land Disposal of Mixed Municipal Solid Waste Programs

Steele County's land disposal of MSW program is presented in Section 2.4. Solid waste generated in Steele County is delivered to the Steele County Landfill, owned and operated by Steele County, and to Central Disposal Facility in Lake Mills, Iowa, owned and operated by Waste Management. Information on each of these facilities is described in the following sections.

Information regarding recycling quantities are presented in the GVT (Appendix A). Annual land disposal tonnages documented in SCORE reports over the last five years are summarized in the following table:

Annual Land Disposal Tonnages by Destination Facility					
Destination Facility	2009	2010	2011	2012	2013
Steele County Landfill	23,801.4	26,914.1	18,002.0	20,938.0	18,063.0
Central Disposal Facility Lake Mills, IA	2,762.9	6,655.2	9,310.1	9,200.0	9,100.0
Annual Total Tonnage	26,564.3	33,569.4	27,312.1	30,138.0	27,163.0

4.8.2.1 Steele County Landfill

The Steele County Landfill serves communities and residents throughout the county. The landfill and the facility are owned and operated by Steele County under Permit No. SW-131, issued by the Minnesota Pollution Control Agency (MPCA). The Steele County Landfill is located approximately 12 miles southeast of Owatonna, Minnesota, off U.S. Highway 218. The facility operates the following waste management programs:

- Land disposal of MSW
- Land disposal of demolition debris
- Solid waste transfer area (for residential and small load customers)
- Recycling, special waste, and HHW facilities

In reference to recycling, special waste, and HHW, the Steele County provides public drop off for tires, major appliances, vehicle batteries, motor oil, oil filters and electronic devices containing a screen or video display such as TV sets and computer monitors. The landfill also provides collection of other recyclables and includes the HHW facility. Recycling, special waste, and HHW are collected at the Steele County Landfill for recycling, reuse, or recovery in accordance with regulatory requirements.

The Steele County Landfill operates in accordance with regulatory requirements and provides an environmentally safe means for the land disposal of solid waste. The facility includes two closed MSW disposal areas and two closed demolition debris disposal areas. The closed and open facilities are monitoring in accordance with the facility permit; no water quality standards related to landfill-leachate exceeded in groundwater samples and the existing landfill gas systems are effective in managing any methane generation. Leachate is currently hauled by Agreement to the City of Owatonna with the City of Albert Lea providing a contingency disposal option. Leachate recirculation will commence once sufficient waste is available estimated in 2018. There are no potential environmental and public health impacts

requiring action. There have been no significant permit violations issued by the MPCA or safety issues at the facility in the past five years.

As described in Section 2.4, the remaining permitted capacity through 2013 is approximately 856,000 cy. The current solid waste permit will expire in 2024 with the permit application for re-issuance prepared and submitted to the MPCA at least 180 days prior to the expiration date. The Environmental Assessment Worksheet (EAW) completed in 2000 was for conducted for the entire facility as designed and permitted; no additional EAW is anticipated during the life of the facility. Currently, no new phase developments are anticipated under the current permitted capacity except for the construction of Cells IV-F and IV-G estimated to occur in 2018. There is nearly 20 years of capacity currently available at the landfill. As included in the GVT in the Landfill Use data tables (Appendix A), the 10-year landfill capacity use for the Steele County Landfill is projected to be 383,200 cy.

In addition, the Steele County Landfill maintains a financial assurance fund to reduce the long-term financial liability of the landfill during current operations and following facility closure; the current balance of the financial assurance fund exceeds \$2 million.

4.8.2.2 Central Disposal Facility, Lake Mills, Iowa

As described in Section 2.4.2, Central Disposal Facility located near Lake Mills, Iowa, is owned and operated by Waste Management Inc. The land disposal facility is constructed and operated under Permit No. 95-SPD -01-72 issued by the Iowa Department of Natural Resources. No additional information regarding compliance or safety operations are available.

Central Disposal Facility also operates a landfill gas-to-energy generating facility at the landfill site. The electricity generated by the 4.8 MW renewable energy facility is purchased by Dairyland Power Cooperative and places it on the power grid for its 25 member cooperatives.

4.8.3 Programs to Maintain, Expand, or Implement

Steele County feels their land disposal facility, for both MSW and demolition debris, is run very efficient, maximizing the permitted air space of the facility. Operations will be maintained and updated as necessary. Leachate recirculation will be implemented as part of landfill operations estimated to occur in 2018.

Other on-site operations on the landfill property for recycling, special waste, and HHW facilities are maintained and expanded as described throughout this Comprehensive SWMP.

4.8.4 Program Budget

Staffing of the Steele County Landfill operations are provided under a separate landfill operations budget with assistance from administrative staff of the Environmental Services Department as described in Section 4.17. The landfill operations and any recycling programs provided at the landfill are managed through the landfill budget and is self-sustaining. The program budget including capital and program expenses and revenues is presented in Section 4.18. Budget details are presented in Section 4.21.

4.8.5 Schedule

No schedule is necessary to maintain land disposal programs of mixed municipal solid waste. Leachate recirculation support structures were constructed during 2012; implementation of leachate recirculation is planned in about 5 years once sufficient waste has accumulated in the open landfill cells. Construction for Cells IV-F and IV-G is estimated to occur in 2018. Closure of the active cells will occur once final elevations are reached in specific cells of the landfill; anticipated closure dates are projected to occur in 2015 and 2032.

4.9 Waste Tire Disposal and Recovery

4.9.1 Policy and Goals

The Waste Management Action (1988 amendments) require that counties include collection and processing of waste tires in their solid waste management plans (Minnesota Statute § 115A.914, subd. 3). Under this statute, counties shall adopt ordinances for the management of waste tires that meet or exceed the MPCA Rules (MS 115A. 914, subd. 3., and MR 9220.0200 to 9220.0680).

Waste tires were banned from land disposal in Minnesota after July 1, 1985 (MS 115A.904). Although banned from disposal in landfills, waste tires may be stored above ground at landfills permitted by the MPCA. A permitted landfill may store no more than 10,000 waste passenger car tires or the equivalent weight of other tires or tire-derived products at any time without obtaining additional permits. Any person that collects, stores, or processes 500 or more waste tires must have a waste tire facility permit. State statute does exempt individual and businesses from the need to obtain a waste tire facility permit if certain criteria are met.

Proper tire disposal is addressed in the Solid Waste Ordinance No. 27.

The Steele County Ordinance No. 27 stipulates that Steele County Environmental Services will administer the County solid waste program to include waste education, recycling, HHW management, and landfill management.

4.9.2 Existing Waste Tire Disposal and Recovery

Tires are accepted at the Steele County Landfill and the Steele County Recycling Center in Owatonna for recycling. As indicated in the GVT (Appendix A), 1,952 tires (73 tons) were collected at the Steele County Landfill for recycling in 2013. Steele County contracts with Liberty Tire, which is licensed by the Minnesota Department of Transportation and the MPCA for the proper management of waste tires. Tipping fee schedule is based on the type of tire as follows:

- Car (\$3.00 per tire)
- Truck (\$12.00 per tire)
- Tractor (\$15.00 per tire)

The County continues to clean up tires dumped on public lands and right-of-ways. No large known unpermitted tire dumps are located in Steele County.

4.9.3 Programs to Maintain, Expand, or Implement

Steele County is aware of additional tire recycling being conducted by Steele County Recycling Center and local automotive businesses. Steele County will consider collecting information from these existing programs for incorporation in SCORE reports.

4.9.4 Program Budget

Staffing of the waste tire disposal and recovery program is provided under administrative tasks of the Environmental Services Department and as described in Section 4.17. The program budget including capital and program expenses and revenues is presented in Section 4.18. Budget details are presented in Section 4.21.

4.9.5 Schedule

No schedule is necessary to maintain the current waste tire program.

4.10 Electronic Products

4.10.1 General Policy and Goals

It is the policy of Steele County to comply with Minnesota Statute § 115A.9565 which prohibits Cathode Ray Tubes (CRTs) from disposal in a landfill. To this end the County accepts drop off CRTs and other electronic equipment for recycling at the Steele County Landfill and the Steele County Recycling Center.

The Steele County Ordinance No. 27 stipulates that Steele County Environmental Services will administer the County solid waste program to include waste education, recycling, HHW management, and landfill management.

4.10.2 Existing Electronic Products Programs

The County began collecting residential televisions, computer monitors, and other electronic devices when the state banned them from landfills. Electronics are accepted for recycling at the Steele County Landfill, the Steele County Recycling Center, and Retrofit Companies in Owatonna. As indicated in the GVT (Appendix A), 30 tons of electronic products were accepted for recycling at Steele County facilities in 2013. Education programs regarding recycling of solid waste, including electronic products is described in Sections 2.3 and 4.3.

At the Steele County Landfill, televisions and computer monitors are accepted for a fee of \$20.00 each and other electronic devices are accepted for \$5.00 each. Residents of Steele County are allowed to put unusable computer components and other electronics in the MSW waste stream, but are encouraged to recycle them along with other electronic devices. Electronics collected at County facilities are sent to J.R.'s Advanced Recyclers. In 2012, 556 CRT devices and 58 miscellaneous electronics were accepted at the landfill for recycling.

Different fees may apply for electronics accepted at Steele County Recycling Center and Retrofit Companies. These facilities also use different contractors for management and recycling. No records are available on electronics accepted for 2012 at the facilities.

4.10.3 Programs to Maintain, Expand, or Implement

The County will continue to make referrals to licensed electronics recyclers within the state. The County will continue to review alternatives for land disposal of residential electronics wastes and to provide or support private collection opportunities for County residents. Steele County will consider collecting information from these existing programs for incorporation in SCORE reports.

4.10.4 Program Budget

Staffing of the electronic products program is provided under administrative tasks of the Environmental Services Department and as described in Section 4.17. The program budget including capital and program expenses and revenues is presented in Section 4.18. Budget details are presented in Section 4.21.

4.10.5 Schedule

No schedule is necessary to maintain the current electronics products programs.

4.11 Major Appliance and Scrap Metal Management

4.11.1 General Policy and Goals

A person may not place major appliances in MSW or dispose of them in a solid waste processing or disposal facility after July 1, 1990 (MS 115A.9561). Major appliances are

clothes washers and dryers, dishwashers, hot water heaters, garbage disposal, trash compactors, conventional ovens, ranges and stoves, air conditioners, microwave ovens, refrigerators, and freezers. Steele will continue to comply with Minnesota Statute § 115A.552 which ensures that residents will have an opportunity to recycle. Major appliances are accepted for recycling at the Steele County Recycling Center and the Steele County Landfill; scrap metal is accepted and stored separate at the Steele County Landfill in order to eliminate scrap metal from the landfill. The Steele County Recycling Center and the Steele County Landfill operate by agreement or by direct management of Steele County staff in order to assure compliance with regulatory requirements. In addition, several private businesses within Steele County provide recycling opportunities for appliances and have maintained compliance.

Steele County will continue to comply with Minnesota Statute § 115A.9561 which requires appliances not be placed in MSW. Steele County will continue with its program for the removal of capacitors and ballasts containing PCBs, the removal of fluorocarbon refrigerant gases, and the recycling or reuse of metal including mercury.

The Steele County Ordinance No. 27 stipulates that Steele County Environmental Services will administer the County solid waste program to include waste education, recycling, HHW management, and landfill management.

4.11.2 Existing Appliance and Scrap Metal Management Programs

The County began collecting appliances when the state banned them from landfills. Appliances are accepted for recycling at the Steele County Landfill and the Steele County Recycling Center. As indicated in the GVT (Appendix A), 664 appliances (218 tons) were accepted at the Steele County Landfill in 2013.

Major appliances are accepted for recycling at the Steele County Landfill for a fee of \$13.00 per appliance. During 2012, 219.2 tons of appliances were processed through this program. The County has a current contract with J.R.'s Advanced Recyclers, which is an appliance recycler located in Inver Grove Heights. The contractor pays the County for the value of recycled materials. J.R.'s Advanced Recyclers is licensed by the MPCA as a hazardous waste handler which allows them to legally remove and process hazardous waste. The company holds an MPCA Refrigeration Recovery Certificate which is required by the EPA and MPCA for the proper removal of CFC's and HCFC's. J.R.'s Advanced Recyclers annually reports to the MPCA on the amounts of hazardous waste they process.

Different fees may apply for appliances accepted at Steele County Recycling Center. The Recycling Center may use different contractors for management and recycling. No records are available on appliances accepted for 2012 at the Steele County Recycling Center.

Steele County has established a scrap metal collection location at the Landfill where residents and businesses can dispose of scrap metal free of charge and hauled to various metal recycling facilities such as I35 Auto Recycling.

4.11.3 Programs to Maintain, Expand, or Implement

Steele County will continue to fund the above major appliance at adequate levels to ensure that appliances and scrap metal received at Steele County facilities will be properly managed. The County will continue to evaluate and monitor the program for possible enhancements to better serve the public. Steele County will consider collecting information from these existing programs for incorporation in SCORE reports. There are no plans for modification of the program at this time.

4.11.4 Program Budget

Staffing of the major appliance and scrap metal management program is provided under administrative tasks of the Environmental Services Department and as described in Section 4.17. The program budget including capital and program expenses and revenues is presented in Section 4.18. Budget details are presented in Section 4.21.

4.11.5 Schedule

No schedule is necessary to maintain the current appliance and scrap metal management programs.

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

4.12.1 General Policy And Goals

Minnesota Statute § 115A.916 states a person may not place used oil in MSW or place used oil in or on land, unless approved by the agency. Used oil includes: spent automotive lubricating oils (including car and truck engine oil), transmission fluid, brake fluid, turbine, bearing oils, hydraulic oils, metal working oils, gear oils, electrical oils, refrigerator oils, railroad drainings, and spent industrial process oils. In addition, Minn. Stat. § 325E.11 requires that any person selling at retail or offering motor oil for retail sale in Minnesota must provide a notice indicating the nearest location, or a location within ten miles of the point of sale, where used motor oil may be returned for recycling or reuse, and provide a collection of used motor oil and post notice of the availability of the tank.

A person may not place a lead acid battery in MSW or dispose of a lead acid battery. A person who violates this section is guilty of a misdemeanor (Minn. Stat. § 115A.915). In addition, a person selling lead acid batteries at retail or offering lead acid batteries for retail in this state shall accept, at the point of transfer, lead acid batteries from the customers (Minnesota Stat. § 325E.115). Retailers are also required to accept your used lead acid batteries, even if you do not purchase a battery.

The Steele County Ordinance No. 27 stipulates that Steele County Environmental Services will administer the County solid waste program to include waste education, recycling, HHW management, and landfill management.

4.12.2 Existing Automotive Mercury Switch, Motor Vehicle Fluids and Filters, and Lead-Acid and Dry Cell Battery Programs

Businesses that sell automotive batteries accept used batteries for recycling in accordance with State law. The Steele County Recycling Center in Owatonna also accepts vehicle batteries for recycling. Minn. Stat. have established a five dollar surcharge that is refundable when motor vehicle batteries are returned for recycling. Persons purchasing new vehicle batteries are exempt from the surcharge if they return a used battery at the time of purchase. As a result of this legislation, Steele County believes most lead-acid batteries will be collected by retailers and, therefore, will just maintain collection at the Steele County Recycling Center. As indicated in the GVT (Appendix A), 223 tons of vehicles batteries were accepted at Steele County facilities in 2013.

Steele County has two locations that may be used by the public free to dispose of used oil and oil filters of charge: one at the Steele County Landfill and another at the Steele County Recycling Center in Owatonna. Steele County utilizes RecycOil Transportation for recycling of used and oil and filters. Full service auto centers often accept used oil as well. Many

places that sell oil filters accept them for recycling. In 2013, 29 tons of used oil and 17 tons of used oil filters were collected at Steele County facilities.

Residents wishing to dispose of dry cell batteries are instructed to bring the batteries to the HHW facility or remote collections. Businesses are able to dispose of dry cell batteries through the VSQG and MQG programs. In addition, the County maintains a list of commercial establishments which accept rechargeable batteries and recycle them through the Rechargeable Battery Recycling Program.

Steele County allows alkaline or zinc carbon batteries to be discarded with MSW. Automotive mercury switches are allowed along with other mercury containing products in the HHW program. Residents and Minimal Quantity Generators may bring them to one of the HHW facilities or remote collections.

4.12.3 Programs to Maintain, Expand, or Implement

Steele County will continue to promote and encourage proper disposal of used oil to residents. Steele County considers this program to be mature and has no plans for expansion at this time.

4.12.4 Program Budget

Staffing of the automotive mercury switch, motor vehicle fluids and filters, and lead-acid and dry cell battery management programs is provided under administrative tasks of the Environmental Services Department and as described in Section 4.17. The program budget including capital and program expenses and revenues is presented in Section 4.18. Budget details are presented in Section 4.21.

4.12.5 Schedule

No schedule is necessary to maintain the current automotive mercury switches, motor vehicle fluids and filters, and lead-acid and dry cell batteries management programs.

4.13 Household Hazardous Waste and Very Small Quantity Generator (VSQG) Hazardous Waste Management

Minn. Stat. § 115A.96, subd.1 (b) defines HHW as waste generated from household activity that exhibits the characteristics listed as hazardous waste under MPCA rules. A waste is defined as hazardous waste if it is:

- Ignitable,
- Toxic,
- Corrosive, or
- Reactive.

HHW may include: pesticides, solvents, preservatives, cleaners, paints, and other common household products. These wastes may affect the environment by impairing air quality, or by contaminating soil, surface water, or ground water. If improperly managed, HHW may be ingested, inhaled, or absorbed through the skin.

The Steele County Ordinance No. 27 stipulates that Steele County Environmental Services will administer the County solid waste program to include waste education, recycling, HHW management, and landfill management.

4.13.1 General Policy and Goals

In accordance with Minn. Stat. § 116.07, Steele County has developed a HHW management plan for the separation of HHW from MSW prior to disposal or processing and for the proper disposal of the waste. This plan was developed to include information regarding the following:

- Participation in public education activities on HHW entering the facility.
- A strategy for reduction of HHW entering the facility.
- A plan for the storage and disposal of separated HHW.

4.13.2 Existing Household Hazardous Waste and Very Small Quantity Generator (VSQG) Hazardous Waste Management Programs

In 1998, Steele and Rice Counties originally adopted a Joint Powers Agreement for management of HHW. The Agreement was renewed in 2009 with a copy of the most recent agreement provided in Appendix B. This agreement outlines responsibilities of each county for joint management of HHW.

The Steele County HHW Facility is located at the Steele County Landfill and is operated from May through September. HHW is accepted free of charge for Steele County residents. Usable products are placed on shelves, product exchange, to be taken free for use by others. The Rice County HHW Facility is open year around and can be used by Steele County Residents without a fee. As indicated in the GVT (Appendix A), approximately 6 tons of HHW with an additional 6 tons of latex paint was accepted at the Steele County facilities in 2013.

One of the goals of the waste education program is to maintain homeowner usage of the HHW facility and product exchange. The strategy identified to achieve these goals include operating the Recycling Hotline, speaking at schools and other groups, distribution of news releases, conduct print and/or electronic ad campaigns, brochures and newsletter information. The County also provides information on safer substitutes for commercial cleaners to reduce the amount of HHW generated and information on how to correctly dispose of hazardous wastes such as old paint, disposable batteries, cosmetics, etc.

4.13.3 Programs to Maintain, Expand, or Implement

This program is mature and is only updated as changes in specific HHW management is stipulated by statute or if alternate management options become available as driven by industry.

4.13.4 Program Budget

Staffing of the HHW and very small quantity generator (VSQG) hazardous waste management programs is provided under administrative tasks of the Environmental Services Department and as described in Section 4.17. The program budget including capital and program expenses and revenues is presented in Section 4.18. Budget details are presented in Section 4.21.

4.13.5 Schedule

No schedule is necessary to maintain the current HHW and VSQG hazardous waste management programs.

4.14 Construction and Demolition Debris

4.14.1 General Policy and Goals

Steele County will continue to operate the existing demolition debris disposal facility at the Steele County Landfill to provide a disposal option to County residents and businesses.

Steele County Ordinance defers to solid waste regulations regarding demolition debris disposal. There are no local permit requirements for permit by rule facilities authorized under Minnesota Rules and the MPCA.

4.14.2 Existing Construction and Demolition Debris Program

The only permitted demolition debris disposal facility in the County is located at the Steele County Landfill operating under the Minnesota solid waste Permit No. SW-131. As indicated in the GVT (Appendix A), 5,212 tons (7,500 cy) of demolition debris were accepted at the Steele County Landfill.

There have been three phases or areas used for demolition disposal at the landfill as follows:

- North Demolition Debris Disposal Area (Phase I): Operated from 1986 to 1989 and again from 1995 to 2005 (Fisher Demolition Landfill) and covers a combined area of approximately 6.55 acres with a completed airspace volume of approximately 171,540 cubic yards.
- South Demolition Debris Disposal Area (Phase II): Operated from 1989 to 1995 and covers 3 acres with a completed airspace volume of 73,400 cubic yards.
- Phase III Demolition Debris Disposal Area: Began operation in 2005 and covers approximately 7-acres and a completed air space volume of 337,000 cubic yards. Based on current waste flows, the Phase III Area has sufficient capacity through 2044.

Although absolute numbers are not available, Steele County estimates that more than half of the demolition debris and concrete generated in the County is transported for disposal outside the county to various facilities.

The Steele County Ordinance No. 27 stipulates that Steele County Environmental Services will administer the County solid waste program to include waste education, recycling, HHW management, and landfill management.

4.14.3 Programs to Maintain, Expand, or Implement

No major changes are anticipated in waste flows construction and demolition debris over the next 10 years. Currently, only concrete material is segregated from the demolition debris waste stream and re-used for road construction projects. Steele County may consider a recovery program in the future for certain demolition debris based on specific quantities generated and the potential for re-use.

4.14.4 Program Budget

Staffing of the construction and demolition debris program is provided under the operations of the Steele County Landfill as described in Section 4.17. The program budget including capital and program expenses and revenues is presented in Section 4.18. Budget details are presented in Section 4.21.

4.14.5 Schedule

At this time, no specific recovery programs have been identified. No schedule is necessary to maintain the current construction and demolition debris programs.

4.15 Salvaging and Reuse

4.15.1 General Policies and Goals

Solid Waste Ordinance No. 27 indicates that junk/salvage yards are regulated by the Steele County Zoning Ordinance and/or the appropriate City Zoning Ordinance, as well as applicable MPCA regulations. The Steele County Ordinance No. 27 stipulates that Steele County Environmental Services will administer the County solid waste program to include waste education, recycling, HHW management, and landfill management. The Steele County Zoning Ordinance is administered for rural portions of Steele County by the Steele County Zoning Administrator as part of the Planning & Zoning/Building Inspection office.

4.15.2 Existing Salvaging and Reuse Program

Steele County does not allow scavenging or salvaging of material received for disposal at the Steele County Landfill. Salvaging must be conducted in accordance with zoning ordinances.

4.15.3 Programs to Maintain, Expand, or Implement

Salvage and reuse falls under the administration for the Planning & Zoning/Building Inspection office. Any salvaging activities must be conducted in accordance with zoning ordinances that will be maintained.

4.15.4 Program Budget

The program budget for salvage and reuse falls under the general budget for the Planning & Zoning/Building Inspection office and are not tracked separately.

4.15.5 Schedule

No schedule is necessary to maintain the current salvaging and reuse programs.

4.16 Solid Waste Ordinance

Steele County has a Solid Waste Ordinance governing solid waste practices in Steele County. A copy of this Ordinance is provided in Appendix C. This ordinance was updated in 1998 to provide more comprehensive management of the County's solid waste. In general, the ordinance outlines the following:

- Purpose
- Definitions
- Responsibilities
- Service fees
- Solid waste storage (referencing requirements by statute)
- Disposal requirements (reference requirements by statute)
- Hauling of solid waste (license requirements)
- Licensing of solid waste facilities
- Special wastes (referencing requirements by statute)
- Enforcement

4.16.1 Ordinance Status

Steele County's solid waste ordinance was enacted in 1973 and updated in 1998. The ordinance gives the County government authority to regulate all solid waste operations as stipulated by state regulations. There are currently no plans to modify the ordinance since it already requires volume-based fees, licensing of haulers and addresses demolition debris and on-site disposal issues.

4.16.2 Implementation and Enforcement Issues

Solid Waste Ordinance No. 27 assigns the responsibilities of implementing the ordinance to the Steele County Environmental Services Department. Environmental Services staff are responsible for reviewing and issuing hauler licenses, inspecting solid waste operations and investigating violations, enforcing the ordinance and working with other agencies to further the purpose of the ordinance.

The principle areas for which the solid waste ordinance has been used to date are the areas of licensing, haulers requirements, surcharge and service fee implementation and enforcement of proper storage and disposal of waste materials.

Voluntary compliance is the preferred method of enforcement. If, in some cases after ample time has been given for compliance of the violation and it has not been corrected, Environmental Staff may provide recommendations of other enforcement actions. To date most implementation and enforcement issues have been resolved without enforcement action. No problems have arisen regarding enforcement of the ordinance.

4.16.3 Planned Amendments

The ordinance will be evaluated on an ongoing basis to determine needed improvements and to make changes necessitated by State statute or rule revisions. There are no planned revisions to Ordinance No. 27 at this time.

Steele County will also continue to analyze its solid waste management service charges for equity and effectiveness. Fees and surcharges are reviewed by the County Board on an annual basis and set at a public hearing. In the event that the County determines that changes are needed in the fees or service charge systems, Ordinance No. 27 will be changed to reflect those changes.

4.16.4 Responsible Person

The Steele County Environmental Services Department is responsible for overseeing and directing the activities of the solid waste program. Specific duties include recycling, yard waste composting, landfill arrangements, HHW management, waste education, and Commercial Hauler licensing. It is also the responsibility of the Environmental Services staff to conduct studies, investigations, and research relating to solid waste management.

It will be the responsibility of Environmental Services to provide recommendations to the Board regarding the following: planning issues, facility development, solid waste programs are development, budgeting allocation, licensing, and vendor selection. It is also the responsibility of the Environmental Services staff to receive complaints from County residents regarding solid waste issues. Environmental Services staff investigates these complaints and perform the necessary enforcement activities, including recommendations to the County Attorney that legal proceedings be initiated against a person or group of persons to compel compliance. Environmental Services spend approximately 20 to 40 hours per year on implementing the ordinance.

4.16.5 Program Budget

The Environmental Services Department is responsible for administering the day to day activities associated with the solid waste ordinance. The program budget for the solid waste ordinance is managed as part of the Administration budget. Budget details are presented in Section 4.21.

4.17 Solid Waste Staff

4.17.1 Existing Staff

Currently the County has authorization for 5.5 full time equivalent (FTE) positions for its solid waste programs. In 2013, approximately 4.5 full time equivalent employees managed the landfill and HHW operations and 1.0 equivalent full time staff worked on the County's solid waste abatement programs including: recycling, HHW, and public education. As of April 1, 2014, Steele County and Freeborn County entered into an agreement to share staff for waste abatement programs in the form of a Recycling Coordinator.

The County also contracts for many County solid waste program functions with private businesses, including:

- Contract for the residential recycling program consisting of curbside collection, drop-off sites, a recycling center, and processing and marketing of collected recyclables.
- Contracts for electronics, waste oil, oil filters, tires, and appliances;
- Contracts with engineering firms for technical assistance; and
- Agreement with Rice County for joint services regarding HHW.

4.17.2 Staffing Needs

The County will continue to refine its staffing needs over the next ten years with the goals of keeping costs low, providing necessary levels of service to customers, enabling a strong private sector presence in the County waste system, and providing a reasonable working environment for County employees.

4.18 Solid Waste Program Funding

Steele County employs different means for funding of the solid waste programs. In 2013, \$515,728 was collected through residential service fees and levy, \$88,857 was obtained through SCORE funds, \$1,223 in miscellaneous reimbursements, and \$1.5 million from landfill tipping fees for a total of \$2,105,808.

4.18.1 Policies and Goals

One of the most important issues associated with the implementation of a solid waste management project is the assurance of a steady supply of solid waste to support operations. Waste assurance is a fundamental element of the successful operation of not only the Steele County Landfill but also for the recycling programs managed by the County. Prior to expanding the MSW landfill in the late 1990's, moving toward single or no-sort recycling programs in 2012, and implementing leachate recirculation at the landfill, Steele County evaluated solid waste management options in reference to the waste streams, management needs, customer convenience, and cost. Ultimately, the Steele County uses waste assurance for four key reasons:

- To cash-flow operations through user fees instead of taxes;
- To ensure that waste is managed in a way that protect the public health and welfare and benefits the environment;
- To ensure that waste is managed in a way that protects taxpayers from the liabilities associated with the management of waste; and
- To protect the public investment that was made to build waste management facilities.

4.18.2 Existing Solid Waste Funding Practices

Steele County uses a combination of waste assurance methods to support solid waste management programs. Counties have the authority to make assessments as well as establish fees and service charges or taxes for environmental programs such as environmental education, HHW collection, recycling programs, and activities supporting the management of waste as preferred in the County's Solid Waste Management Plan. Steele County has implemented the measures outlined below to assure flow into the Steele County Landfill and use of recycling or diversion programs available in the County:

1. Working with a law firm to provide legal counsel on issues like waste assurance and contract development.
2. Authorized the disposal of out-of-county waste at the Steele County Landfill.
3. Establish tipping fees and user fees at disposal and recycling facilities to support operational costs.
4. Negotiated contracts with haulers to bring waste to the county preferred waste management facility.
5. Negotiated contracts with waste management for the collection and recycling of the single sort service.
6. Established assessments to support solid waste management programs.
7. Research for grants to support existing and proposed programs.

4.18.3 Amounts and Distribution of Funding Sources

The 2013 funding amounts are as follows:

Landfill Tipping Fees = \$1.5 million

- The Steele County Landfill is a stand-alone enterprise fund where excess revenue (over expenses) in any given year stays in the fund to carry-over for future large capital expenses (i.e. cell construction, equipment purchases, etc.)
- Landfill funds are used solely for landfill expenses, not waste abatement programs

Waste Abatement Program Funding (SCORE, service fees, ad valorem taxes, HHW stipend)
= \$605,808

- The waste abatement programs include recycling, HHW, and education

4.19 Plan Review and Ten-Year Plan

4.19.1 Plan Development Time Line

Annual review of the Solid Waste Management Plan is scheduled for the fourth quarter of each year throughout the 10-year time line. The Environmental Services Director reviews and presents information to the public works committee. Reviews and implementations are modified by the issue to be addressed whether annual budgeting or seasonal demands.

4.19.2 Plan Development Process

Any modifications or amendments to this Plan will be submitted in writing to the MPCA for review and approval. A new plan is required every ten years. The next plan will be developed and submitted to the MPCA six months prior to the 2024 due date.

4.19.3 Responsible Person

The Solid Waste Management Plan is administered by the Solid Waste Officer and associated staff under the Environmental Services Department. Staff will have input into updating and amending the plan. Staff time is anticipated to be .05 and will increase dependent upon number and complexity of amendments made to the plan.

4.19.4 Program Budget

Annual review of the plan and ten year revision are included in the staff and administration section of the Department budget, with the solid waste service fee being the main funding source for the waste abatement programs.

4.20 Goal-Volume Table

The Goal-Volume Table is included as Appendix A.

4.21 Itemized Solid Waste Budget

4.21.1 Annual Department Budget Development Activities

Steele County develops its solid waste budget through the County's overall annual budgeting process. This process includes:

- Department's submittal of major initiatives and capital requests to Finance Department;
- Department's submittal of budget requests to Finance Department;
- Finance returns updated budget worksheets to departments;
- Administrator meets individually with Department Heads to review and discuss their specific budgets and the broader county budget conditions;
- Department Heads meet individually with Finance, Administrator to refine initial department budget;
- Finance, Administration, and Department Heads present initial budget proposal to Board of Commissioners at a Committee-of-the-Whole meeting;
- Board of Commissioners adopt preliminary levy;
- Policy Committees review and refine Department budgets;
- Board of Commissioners budget review;
- Board of Commissioners conduct a public hearing on the budget;
- Board of Commissioners adopt the final budget.

Factors taken into account in budget development include:

- Evaluation of key indicators, goals, and actions;
- Predicted revenues and expenditures;
- Existing contractual commitments; and
- Future program needs.

4.22 Alternatives To Proposed System

Landfilling is the primary method of disposal for Steele County's solid waste. Short and long-term alternatives are described below. Costs to divert to other disposal or processes could

vary widely at \$60 to \$90 per ton. Additional costs would be incurred for hauling and for the potential to develop a centralized waste drop off center such as an MSW transfer station.

4.22.1 Short-Term Alternatives

The Steele County Landfill currently meets the needs for final disposal of all of the MSW generated in the County. If the Steele County Landfill cannot accept waste, it would be delivered to landfills outside the service area during the short term. The short term option chosen would be based on the facility's ability accept the waste, convenience, cost of tipping fees and transportation, and the potential long-term liability. The nearest or nearby landfills and the distance from the Steele County Landfill are as follows:

- Rice County Landfill 38 miles
- Ponderosa Landfill 64 miles

4.22.2 Long-Term Alternatives

If the Steele County Landfill is closed for an extended period of time, other alternatives would be evaluated. Most alternatives would require a centralized waste drop off center and then transferring the waste out-of-county for processing and/or disposal.

The nearby landfills listed for short-term alternatives may be incorporated into a long-term alternative as well. The Steele County Landfill could possibly be used for a centralized drop off center or waste could be delivered directly to either an MSW transfer station at Clarks Grove or Austin, Minnesota (for out-of-state disposal) or to waste processing facilities such as the Olmsted Waste-to-Energy Facility (OWEF) in Rochester or the Prairieland Solid Waste Management Resource Recovery Facility in Truman. The final choice would be based on several criteria, including the cost of tipping fees, contract arrangements available, transportation, whether or not the facility would process or landfill the waste, and the potential long-term liability.

4.23 On-Site and Illegal Disposal (Environmental and Public Health Impacts)

The County promotes programs to prevent environmental impacts to land, air, surface and ground waters and to avoid nuisance conditions from the on-site disposal of MSWs. It is the goal of Steele County to eliminate the illegal disposal of waste materials by residents through a solid waste system that provides convenient, accessible, affordable, and environmentally-safe disposal options. Some residents use private or municipal sanitation services to transport their waste to the Steele County Landfill or other permitted solid waste disposal facility or they may choose to transport their waste to those facilities themselves. Recycling drop off facilities are provided at seven sites throughout the County to encourage recycling. Single or no-sort recycling programs were implemented in 2012 with individual recycling carts provided in Owatonna, Blooming Prairie, Ellendale (including Thompson Oaks), Medford and Lazy "U" Mobile Home Park.

Steele County also provides a HHW storage and collection facility at the Steele County Landfill to further assist residents in properly disposing of waste materials. In addition, Steele County will promote the proper disposal of waste materials through its community education and outreach programs.

Despite the programs available to residents of Steele County, some residents or businesses may not take advantage of those programs. On-site disposal and illegal disposal issues are described below.

4.23.1 On-Site Disposal

State statutes regulate on-site disposal and open burning of MSW in Minnesota. Steele County Solid Waste Ordinance No. 27 does not specifically ban the use of on-site disposal and open burning; however, requirements for on-site disposal or burning of solid waste in Steele County are referenced by statute. In general, Solid Waste Ordinance No. 27 states that all disposal of solid waste must be in accordance with applicable Minn. Rules and no person may dispose of a waste in an area or at a facility that is not licensed for accepting that waste.

State regulations regarding on-site disposal and burning are summarized as follows:

- Open Burning Prohibitions (Minn. Stat. § 88.171) addresses prohibited materials that cannot be burned, including industrial waste, garbage, and hazardous wastes.
- Farm Disposal of Solid Waste (Minn. Stat. § 17.135) covers the specifics relating to farming operations and open burning or burying of MSW. This exemption does not apply to the prohibited materials listed in Minn. Stat. § 88.171 — materials found in most household garbage.

This requirement does not necessarily apply for disposal of waste characterized as MSW on farms, provided that:

1. The solid waste is generated on the farm where the disposal takes place;
2. The disposal practices are consistent with Minn. Stat. § 17.135;
3. Disposal is done in a nuisance free, pollution free, and aesthetic manner on the land used for farming; and
4. The farm does not have regularly scheduled collection service reasonably available as determined by the County Board.

4.23.2 Illegal Disposal

Illegal disposal includes burial and burning of solid waste that is not consistent with the Minn. Stat. § 17.135. Illegal disposal of waste in Steele County is not considered a major issue. The County has been effective at discouraging illegal disposal of waste materials through community education programs and by providing convenient, accessible, affordable disposal services to its citizens with enforcement actions being taken only when necessary. On-site and illegal disposal has decreased steadily over the past 20 to 30 years. Education information regarding illegal disposal is described in Sections 2.3 and 4.3.

The Environmental Services Department is responsible for enforcement of the Steele County Solid Waste Ordinance. Solid Waste Ordinance No. 27 stipulates that Environmental Services staff will receive complaints from County residents regarding solid waste issues. Environmental Services staff will investigate these complaints and perform the necessary enforcement activities. Voluntary compliance is the preferred method of enforcement. If, in some cases after ample time has been given for compliance of the violation and it has not been corrected, Environmental Staff may provide recommendations of other enforcement actions. Steele County Solid Waste Ordinance No. 27 addresses this issue as follows:

- Provisions of Solid Waste Ordinance No. 27 shall be enforced by the Steele County Environmental Services Department.
- All property affected by Solid Waste Ordinance No. 27 shall be subject to inspection by the County in accordance with Minn. Stat.

- When a violation in this Ordinance is discovered by a representative of the Environmental Services Department, he or she shall forward a report to the appropriate prosecution authority.
- Any person within the County who violates this Ordinance, or permits a violation to exist on property under his or her control, or fails to take action to abate the existence of the violation as ordered or notified by the County, shall be guilty of a misdemeanor, and upon conviction shall be punished as provided by law.
- The County may issue an Administrative Penalty Order (APO) in accordance with Minn. Stat. § 116.072 to aid in the enforcement of the Ordinance and to provide deterrence for future noncompliance.

In addition to actions taken by the County, illegal disposal issues may be discussed with appropriate regulatory authorities which may impose their own requirements and penalties.

4.23.3 Responsible Person

The Environmental Services Department is the responsible person for enforcement of the Steele County Solid Waste Ordinance. Solid Waste Ordinance No. 27 stipulates that Environmental Services staff will receive complaints from County residents regarding solid waste issues. Environmental Services staff will investigate these complaints and perform the necessary enforcement activities. Environmental Staff may provide recommendations to the County Attorney that legal proceedings be initiated against a person or group of persons to compel compliance.

4.23.4 Program Budget

Funding for the program is derived from ad valorem taxes and service fees.

4.24 Solid Waste Facility Siting Program

4.24.1 Federal Landfill Siting Requirements

The Resource Conservation and Recovery Act of 1976 directs the U.S. Environmental Protection Agency (EPA) to publish guidelines that describe recommended considerations and practices for the location, design, construction, operation, and maintenance of solid waste landfill disposal facilities. EPA is also responsible for implementation of these guidelines. This is generally accomplished through approval of a state's regulations. The regulations for disposal of solid waste in any state must be as stringent as or more stringent than the Federal regulations. In Minnesota, the Pollution Control Agency is responsible for enforcement of both State and Federal regulations.

Federal guidelines recommend avoiding environmentally sensitive areas in the location of landfill disposal facilities. According to Federal guidelines the following areas are environmentally sensitive:

- Wetlands;
- Flood plains (100-year flood);
- Critical habitats of endangered species;
- Recharge zones of sole source aquifers;
- Zones of active faults; and
- Areas of karst topography (limestone region with sinks, underground streams, and caverns).

Federal guidelines also recommend that landfill site selection be done in consideration of:

- Ground and surface water conditions;
- Geology, soils, and topographic features;
- Social, geographic, and economic factors; and
- Aesthetic and environmental impacts.

Other factors to be considered in landfill site selection are:

- Sites traversed by pipes or conduits for sewage, stormwater, etc.;
- Suitability of onsite soil for cover material and vehicle maneuverability;
- Sites located near airports where birds would become a hazard to aircraft;
- Sites should be accessible by all-weather roads from the public road system; and
- Safety considerations of vehicular traffic.

These guidelines permit the location of a landfill disposal facility in a generally unsuitable area if no other feasible alternative exists, provided the site is prepared through the application of proper, and in some cases sophisticated, engineering techniques for design and operation. The final design of a landfill disposal facility can only be accomplished after a thorough analysis of tradeoffs among environmental impacts, economic considerations, and future use alternatives. These general guidelines, when applied to a site-specific situation, are subject to interpretation by the MPCA with regard to the intrinsic suitability of the given site.

4.24.2 Minnesota Landfill Siting Requirements

The regulations for siting and operating a sanitary landfill in Minnesota are set forth in Minnesota State Regulations under Chapter 7035, Solid Waste Rules. The MPCA is responsible for enforcing these regulations. A summary of state landfill siting requirements are presented on the following page. MPCA is also responsible for reviewing and approving the permit applications for sanitary landfill sites. Chapter 7035 prohibits MPCA from approving permit applications for landfills located in the following areas:

- 1,000 feet from the normal high water mark of a lake, pond, or flowage;
- 300 feet from a stream;
- a regional flood plain (100 year flood);
- wetlands;
- 1,000 feet from the nearest edge of the right-of-way of any state, federal or interstate highway;
- 1,000 feet from the boundary of a public park;
- 1,000 feet from an occupied dwelling; and
- location considered hazardous because of proximity to airports.

Chapter 7035 also prohibits sanitary landfills from being sited in areas which are unsuitable due to topography, hydrology, geology, or soils. However, these criteria are subject to interpretation by MPCA. These criteria may be modified at the discretion of the MPCA Commission, taking into account such factors as noise, dust, litter, and other aesthetic and environmental considerations.

4.24.3 Steele County Landfill Siting Requirements

Landfill siting criteria are based on applicable federal, state, and local regulations along with other discretionary criteria. These criteria can be revised by local officials reflecting local concerns. With an agreement on the siting criteria to be considered for a new landfill, a screening procedure would be applied to land in the study area to develop potential sites. These sites would then be evaluated in greater depth to determine suitability for landfill use.

The land environment has certain waste disposal limitations; therefore, the site selection process must measure the level of environmental protection provided by the site's physical characteristics, and the degree to which the proposed site is consistent with public policy and values. In general, landfills should not be located in environmentally sensitive areas. When no feasible alternative exists, disposal facilities proposed for these sensitive areas will require special design, construction, operation, and maintenance to assure environmental safety.

The following land areas may not be used as landfills:

- Areas where existing land use would be incompatible with a landfill, such as urbanized areas and areas of significant rural population. Also included are areas constrained by local land use plans or zoning.
- Water bodies, water courses, wetlands, and areas with groundwater tables at depths less than five feet from the surface.
- Areas of extremely steep slopes or hills.

Once search areas are determined, broad engineering and environmental analyses should be applied to those areas to identify specific sites. Specific sites should then be subjected to detailed hydrogeological studies. Maps should be used to document the entire screening and selection process. The following factors should be considered:

- Topography
- Soils
- Geology
- Surface water
- Ground water
- Surface drainage
- Climatology
- Environmentally unique areas
- Present and future land use
- Utilities
- Transportation

4.25 Public Participation

Steele County incorporates public participation as part of its solid waste management planning and implementation activities as follows:

- The County Board of Commissioners discusses solid waste management issues on a regular basis and makes all overriding solid waste program decisions.
- Department staff attends local government meetings, citizen meetings, and other events to receive input and explain the County's programs.
- Meeting documentation is contained in County Board minutes, local units of government minutes, and staff records and on the page of the County's web site.

The County will continue to strengthen its public participation programs. Steps that will be taken in order to do this include:

1. The County is broadening its educational outreach activities to keep the public informed of current issues and decisions and solicit input. In addition, County brochures and other publications regarding solid waste management programs will continue to be updated and distributed as part of the County's public education efforts.
2. The County will maintain contacts with state enforcement and planning advisors.

