

Martin County Minnesota

Comprehensive Solid Waste Management Plan

Updated, 2001

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Chapter I - Executive Summary

Introduction

Background

Martin County has developed an integrated solid waste management system that protects public health and the environment, and provides for convenient and efficient services for County residents and businesses. The County, located in south central Minnesota, works closely with Faribault County, its neighbor to the east and partner in the Prairieland Solid Waste Board, which operates the Prairieland Solid Waste Composting Facility. The Prairieland Facility is located in Truman, in Martin County, and has been in operation for 10 years.

This update of the Martin County Comprehensive Solid Waste Management Plan, which is required every five years, represents a continued effort to conserve resources, protect the environment and meet the public's goals for solid waste management. The plan, as updated, describes current and future plans to meet goals for waste reduction, recycling, composting, household hazardous waste and landfill abatement.

Overview

The plan 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 to attain the most feasible and prudent reduction of the need for land disposal of mixed municipal solid waste (MSW) for Martin County.

This update proposes the continuation of the current solid waste programs operated by the County and the Prairieland Solid Waste Board, as well as for expanding and improving the recycling and composting programs within the County. Martin County remains a strong and active partner in the Prairieland Solid Waste Board, and is committed to continuing to work with Faribault County in this capacity.

Martin County's existing solid waste program is an integrated solid waste management system that includes the elements listed below.

- Comprehensive public education about solid waste issues and the opportunities available to reduce waste, recycle and participate in programs to divert problem materials and household hazardous waste from the waste stream.
- Aggressive curbside recycling programs in cities in the County, as well as numerous locations for rural residents to drop-off recyclable materials.
- Landfill abatement through use of the Prairieland Compost Facility (Prairieland Facility).

This integrated solid waste program supports the Minnesota law, which guides counties in developing solid waste management programs. While Martin County has a mature and stable solid waste management system in place, this update identifies three areas in which the County is seeking future improvements in system performance:

- Greater participation in the solid waste system by rural residents;
- Improved performance and efficiency of waste abatement efforts, notably for household hazardous waste and problem materials; and
- Long-term stability in the management of MSW at the Prairieland Composting Facility.

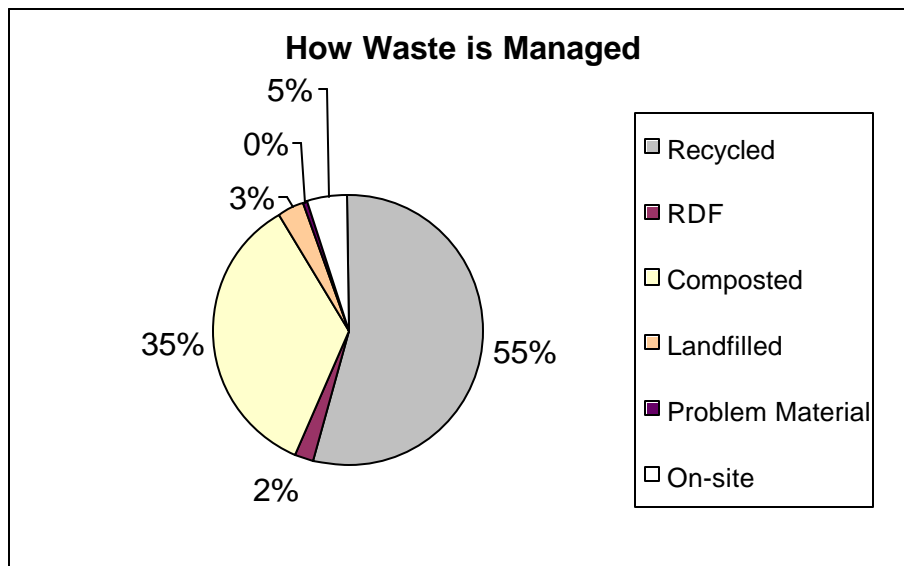
Goals for Solid Waste Abatement Programs

Martin County has a well-established waste abatement program that exceeds the State of Minnesota’s goals for diverting materials from the waste stream for reuse and recovery. Current recycling levels exceed 50 percent. The County anticipates that its existing efforts need to be maintained, but the particular focus for future improvements is centered on greater recovery household hazardous waste and problem materials, notably those products containing lead, mercury and PCB’s. Martin County's 10-year goals are contained in the Goal-Volume Table, which is included in Chapter IV of this plan. The abatement programs and budget for the programs necessary to achieve these goals are described in detail in Chapter IV.

Solid Waste Management Programs and Policies

Existing System

Martin County has established policies and programs to influence and educate the residents to actively reduce, recycle, reuse, compost, and, as a final option, landfill waste. The following chart illustrates that the County has been successful in diverting waste from land disposal.



Martin County, through a Joint Powers Agreement with Faribault County, has established the Prairieland Solid Waste Board. In turn, the Prairieland Board operates the Prairieland Composting Facility. The composting facility is now 10 years old. The Prairieland Board has contractual relationships with solid waste haulers for collection and delivery of MSW to the

composting facility. Those contracts are due to expire at the end of 2001 and the Prairieland Board is seeking to establish new contracts for continued waste collection.

Source Reduction

Source reduction involves any activity that prevents waste at its source. Source reduction is identified as the first priority among solid waste management options, and offers the benefits of reducing environmental impacts associated with waste handling, processing and disposal, and offers potential for the waste generator, whether a business or household to save money by reducing the quantity of waste. Martin County has the following goal and strategies related to source reduction.

Reduce the amount of waste generated.

- A. *Work with several volunteer businesses to demonstrate options for reducing waste generation. Use the know-how available from MnTAP.*
- B. *Make sure the waste guides for households and businesses explain how to reduce waste. Promote volume-based pricing to give generators of waste a clear incentive to reduce the amount of waste generated.*

The County will continue to build its commitment to an effective source reduction program. One important element of effectiveness is to ensure that source reduction efforts are a regular part of the waste-related activities of businesses, households and institutions. In addition, the County intends to evaluate and pursue additional measures that can produce results for waste generators.

Waste Education

The general goals of the waste education program are to:

- Inform citizens on current solid waste issues;
- Promote the Prairieland Compost Facility;
- Inform citizens about how, when and where solid waste can be recycled; and
- Enable residents to reduce waste at home and about where to go for further information

Martin County also supports the recommendations from the Prairieland Board, adopted in 1998, which has a specific goal and strategies related to waste education.

Raise public awareness about waste management (in 1998)

- A. *Continue to meet and discuss waste issues with civic and business groups, cities, and school groups.*
- B. *Build the news coverage of Prairieland into wider coverage of toxic materials programs, recycling opportunities, and the benefits of reducing the amount of waste produced.*
- C. *Publish and distribute waste management guides to households and businesses using grant funds from the Minnesota Office of Environmental Assistance (done in 1998).*

Martin County intends to continue to provide ongoing waste education that contributes to meeting its goals for solid waste management. University of Minnesota Extension Service staff will examine the need for diversifying educational materials for non-English speaking residents.

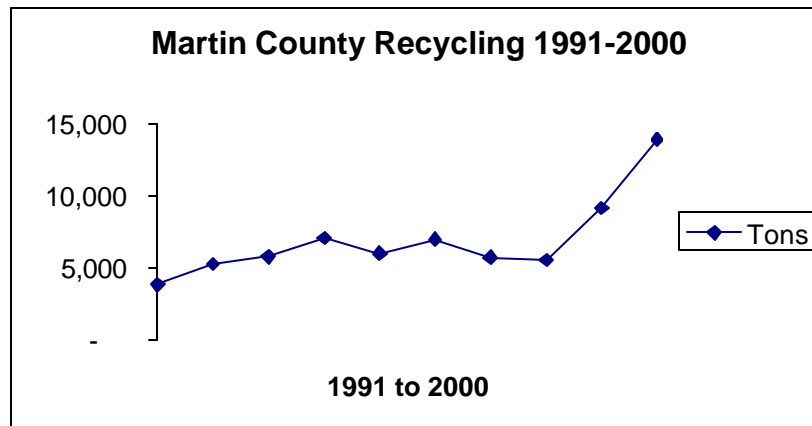
Recycling

Current goals for Martin County recycling programs continue to provide guidance for planning.

- Maintain current recycling levels.
- Increase the participation rate of businesses and commercial operations.
- Satisfy criteria for a 3 percent source reduction credit toward the 35 percent recycling goal.

The advisory committee created by the Prairieland Board in 1997 developed the following strategies to further increase recycling levels:

- Identify greatest potential for improved recycling by businesses, and help the waste haulers and recyclers meet those needs. Consult with the Office of Environmental Assistance, MnTAP and the Chamber of Commerce’s WasteWise Program for assistance.
- Gain the cooperation of businesses that currently recycle to keep track of recycling tonnages and report them to the County.
- Choose one or more materials for Prairieland for recycling beyond the current materials (glass, metals), which will also demonstrate that much of what is discarded is recyclable.
- Evaluate the 1997 recycling numbers and focus efforts to promote recycling more in areas with lower recycling rates.



The County expects to pursue four specific program enhancements.

- Refine recycling education efforts to maintain a consistent message to residents and businesses about the importance of recycling.
- Initiate a creative program for offering students incentives to help administer recycling activities in schools.
- Integrate recycling opportunities into newly-developed rural waste collection system.
- Work closely with recycling collectors to improve the quality of data, especially data on business recycling efforts.

Household Hazardous Waste (HHW)

Martin County has three primary objectives with respect to HHW programs:

- *Provide education on HHW issues to residents;*
- *Increase separation and management of materials containing lead, mercury and PCB's from the waste stream managed at Prairieland; and*
- *Develop a long-term strategy for HHW that focuses on reducing purchases of products that contribute to the HHW stream, emphasizes the reuse of remaining products, and ensures the proper disposal of these wastes.*

Martin County is part of the regional HHW program, centered around a regional HHW management facility located in Mankato, which serves eight counties. The major components of the regional program include the following:

- Regional HHW Facility;
- Education; and
- One-day event collections.

Martin County intends to work carefully to further the following objectives.

- *Define an education program that addresses alternative products or procedures to those containing HHW and stresses proper management techniques.*
- *Target materials that contribute to lead, mercury and PCB's in the waste delivered to Prairieland.*
- *Continue to provide HHW collection to ensure residents have ample opportunities to properly dispose of HHW wastes.*

With assistance from Prairieland, the County will identify and highlight products that contribute to lead, mercury and PCB's in compost. Those products will be emphasized in ongoing education efforts. In addition, the County will monitor HHW participation and identify steps to ensure the program reaches all segments of the population, including senior, disabled, low income and non-English speaking residents.

Other Abatement Programs

Information on Martin County's programs to manage yard waste, tires, batteries, used oil and oil filters, appliances, and other materials can be found in Chapter IV.

Resource Recovery and Composting

The Board has a strong commitment to operate the Prairieland Facility in the most environmentally sound and efficient manner possible. In September 1997 the Prairieland Board created an advisory committee to work with staff in achieving several goals that would improve waste abatement programs, such as reduction and recycling, and resource recovery efforts at Prairieland. The advisory committee produced a set of consensus recommendations that serve as guidance to Martin and Faribault Counties and to the Prairieland Board and staff. The recommendations are priority areas for improvement in the resource recovery system.

Martin County, Faribault County and the Prairieland Board have implemented or have begun to implement these recommendations in a systematic manner. These efforts have produced several outcomes that improve the resource recovery and disposal system in Martin County, as well as Faribault County, and have significantly improved the performance of the Prairieland facility.

- ✓ The Prairieland tip fee has been raised to \$75 per ton and appears to be set at a stable level.
- ✓ The County's solid waste management service charge has been reduced, after helping to address short-term financial needs, and also appears to be at a stable level.
- ✓ Prairieland has voluntary three year contracts for waste delivery to the facility with all but one of the waste haulers working in the two Counties.
- ✓ The solid waste budget for the County and Prairieland are balanced.
- ✓ The Prairieland Board has selected a strategy for odor control at the facility and has secured funding to install new odor control equipment in 2001.
- ✓ Operations at the Prairieland facility are improved, though the recovery rate is somewhat lower and fewer residuals are sent to NRG-Wilmarth as RDF.

Currently, the Prairieland Board has three year waste delivery contracts in place with solid waste haulers operating in both Faribault and Martin Counties. During 2001, Prairieland will be seeking to negotiate new, longer term contracts with the waste haulers to further promote stability in the resource recovery and disposal system.

In addition, the County has a property-based service charge that contributes to the funding of solid waste management activities, including operations at the Prairieland facility. Since 1998, the hauler contracts and the service charge revenues used to subsidize the tipping fee at Prairieland have contributed to improved waste assurance for the Prairieland facility. The resulting improvements in operations and financial performance have contributed to greater stability for the County and Prairieland. Martin County, as a member of the Prairieland Board, will continue to support use of negotiated contracts with waste haulers as a primary waste assurance tool.

Rural Waste Collection and Public Collection

Martin County also will explore expanding service for rural residents and the potential for becoming a market participant for MSW collection and management services. Based on the interest of protecting public health, safety, welfare and the environment, the County will examine alternative methods for market participation. Those alternatives include contracting with waste haulers, and public provision of waste collection services by obtaining and operating MSW collection equipment.

Solid Waste Ordinance

Martin County's solid waste ordinance was passed in December 1992 and significantly amended in 1998. Each ordinance addressed volume-based pricing requirements, land disposal restrictions for various waste stream components, and special management for waste tires, HHW, appliances, batteries and other materials.

Contingency Solid Waste Management System

In the event of a short-term emergency that would require bypassing the Prairieland Facility, the contingency system calls for short term holding of waste at the Facility. The Facility tipping floor has the capacity to store over 200 tons of waste. If the emergency would require the solid waste be landfilled, contracted haulers will be directed to deliver waste to area landfills. In the event that the emergency should extend over an extended period, haulers would be informed of the need to make alternative arrangements. The Prairieland Solid Waste Board may seek the assistance of the OEA and MPCA in the alternative system analysis, if necessary.

At this time, the Prairieland Solid Waste Board does not anticipate considering other alternatives than improving the flow of waste to the Prairieland Facility. The Prairieland Solid Waste Board also believes that over the long term it will be in the Prairieland Solid Waste Board's best economic and environmental interests to continue to participate in regional solid waste management programs to the maximum extent possible.

Local and Regional Management and Planning

Regional Planning

Martin County recognizes the need to evaluate and consider solid waste management alternatives, including regional solutions for landfill abatement. The County and Prairieland Solid Waste Board are concerned about the rising cost of waste management, the environmental impacts of land disposal, long-term waste abatement solutions, and achieving waste reduction and recycling goals set by the state. Regional cooperation and planning reduce the landfill capacity needs throughout the region and increase the recovery of resources.

Local Planning

Martin County believes that the existing waste management system described in this plan is the most feasible and prudent system available at this time. Within four and one-half years, the County will begin to update this plan for further system improvements.

Waste Stream Flow and Budget Tables

In 2000, Martin County generated over 25,000 tons of municipal solid waste. Future county abatement goals and projected solid waste generation rates are included in the Goal-Volume Table in Chapter V. Households produce about 35 percent of this waste, while businesses and institutions produce the remaining 65 percent. About 15 percent of the County's households manage their waste on-site, either through burning or burying.

Table II-5. Waste Generation and Management (tons), 2000 to 2005

	2000	2001	2002	2003	2004	2005
Total Waste	25,738	25,802	25,828	25,827	25,808	25,780
Recycling	13,959	13,950	13,941	13,931	13,922	13,913
Composting	9,034	9,105	9,145	9,160	9,160	9,152
Refuse-derived Fuel	522	526	528	529	529	529

<i>Problem Material</i>	42	43	44	45	46	46
<i>On-site</i>	1,334	1,323	1,313	1,302	1,291	1,281
<i>Landfill</i>	847	854	857	859	859	858

Waste System Budget

Martin County’s solid waste program budget and the Prairieland Composting Facility operating budget are included in Chapter IV of the plan.

Chapter II - Background Information

A. Population

[Note: Population and demographic data presented here are from the Minnesota Demographer's Office and U.S. Census Bureau. Economic data are from the Region IV Development Commission.]

Martin County's population has decreased over the past 20 years, nearly 12 percent since 1980. The 1980 to 1990 period saw the largest rate of change, as the population remained more stable during the 1990 to 2000 decade. Table II-1 shows total population and households for 1980 to 2000.

Table II-1. Population and Households, 1980 to 2000

	1980	1990	2000
Population	24,687	22,914	21,802
Households		9,157	9,129

Martin County anticipates population and households to remain somewhat stable over the next 10 years, with slight declines, as illustrated in Table II-2.

Table II-2. Population and Households Projections, 2000 - 2010

	2000	2005	2010
Population	21,802	21,840	21,580
Households	9,129	9,294	9,183

Table II-3 provides a breakdown of population by city and township. Fairmont, the county seat and largest city, has 50 percent of the population. The population density is 31 persons per square mile.

Table II-3. Population Distribution, 2000

Cities	Population	Townships	Population	Townships	Population
Ceylon	413	Cedar	260	Manyaska	337
Dunnel	197	Center Creek	269	Nashville	234
Fairmont	10,889	East Chain	345	Pleasant Prairie	273
Granada	317	Elm Creek	209	Rolling Green	309
Northrop	262	Fairmont	298	Rutland	472
Ormsby	56	Fox Lake	289	Silver Lake	494
Sherburn	1,082	Fraser	316	Tenhassen	253
Trimont	754	Galena	237	Waverly	245
Truman	1,259	Jay	269	Westford	331
Welcome	721	Lake Belt	237		
		Lake Fremont	175	Total	21,802

B. Geography and Land Use

Martin County is located on the southern border of the state. Martin County is 703 square miles in area and includes 10 cities, only one of which has a population over 1,500. The topography is characterized as level to gently rolling surfaces at an average of 1,600 feet above sea level. The climate exhibits the typical features of the continental climate of the central U.S., long winters and relatively hot summers.

The main highway is Interstate 90 (I-90), which runs east to west through the middle of the County. The major north-south highways are Trunk Highway 4 on the western side and Trunk Highway 15 on the eastern side. The Chicago and North Western Railway provides daily service for commercial and industrial hauling. No passenger railway service is available. Fairmont has a municipal airport.

Land use is predominantly rural. Zoning classifications include agricultural, light industrial, commercial, and residential. The vast majority of industrial activity is based in Fairmont.

C. Employment

Martin County employment totals 10,375 persons over the age of 16. Manufacturing (durable and nondurable), retail trade and agriculture are the largest industry employment categories. Together, these categories comprise over half of the total employment in the County. The County’s employment profile by industry is summarized in Table II-4 below.

Table II-4. Employment by Industry, 2000

Employed Persons (16 and over)	10,375	100%
Agriculture, forestry, fisheries	1,240	12.0%
Mining	14	0.1%
Construction	415	4.0%
Manufacturing, nondurable	955	9.2%
Manufacturing, durable	1,448	14.0%
Transportation	466	4.5%
Communications/public utilities	164	1.6%
Wholesale trade	384	3.7%
Retail trade	1,780	17.2%
Finance/insurance/real estate	363	3.5%
Business/repair services	233	2.2%
Personal services	299	2.9%
Entertainment/recreation services	89	0.9%
Health services	746	7.2%
Education services	787	7.6%
Other services	705	6.8%
Public administration	287	2.8%

D. Local Economic Conditions

Median Household Income

The 2000 Federal Census estimated the median household income in Martin County to be \$24,414, below the Minnesota (\$30,793) and National (\$28,542) averages for median household income. Per capita income is \$11,387. More than 2,500 people in Martin County are estimated to be living below the Poverty Level, which is 11 percent of the County population.

Current Economic Conditions

Agricultural activities strongly influence economic conditions in Martin County. Although the overall economic conditions have been reasonably stable over the past five to ten years, low agricultural commodity prices have suppressed farm-related incomes. For instance, soybean prices have been at historic lows in the past year. Prices for hogs have been extremely volatile, at best, and have contributed to low income levels.

E. Waste Generation and Management

In 2000, Martin County generated over 25,000 tons of municipal solid waste. Future county abatement goals and projected solid waste generation rates are included in the Goal-Volume Table in Chapter V. Households produce about 35 percent of this waste, while businesses and institutions produce the remaining 65 percent. About 15 percent of the County's households manage their waste on-site, either through burning or burying. Table II-5 presents projections for the County's solid waste management practices through 2005, based on current practices.

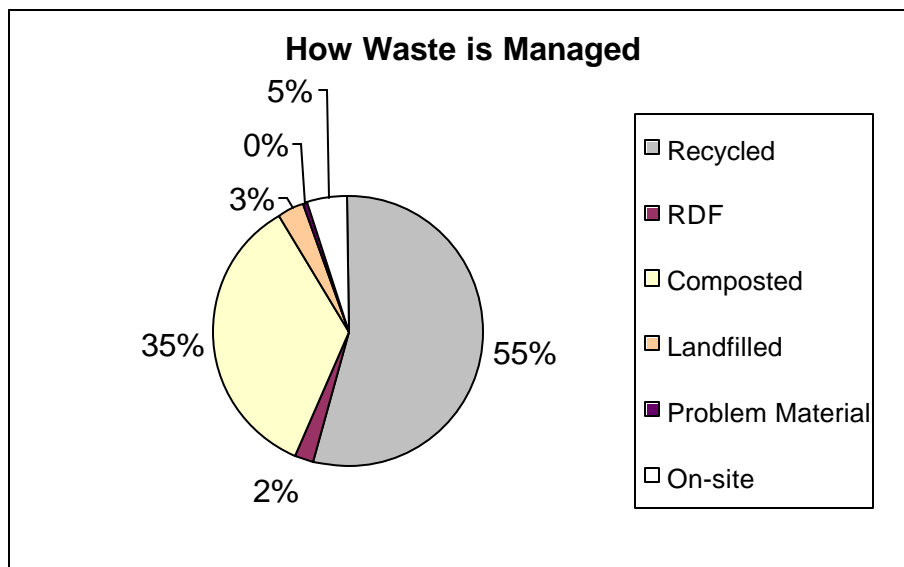


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Refuse-derived Fuel	522	526	528	529	529	529
Problem Material	42	43	44	45	46	46
On-site	1,334	1,323	1,313	1,302	1,291	1,281
Landfill	847	854	857	859	859	858

Major business generators in Martin County are listed below, however these businesses and institutions do not provide with data on waste quantities or composition.

- 3M Company, 710 North State Street, Fairmont
- Weigh-Tronix, Inc., 1000 Armstrong Drive, Fairmont
- Fairmont Foods of Minnesota, 905 East 4th Street, Fairmont
- Fairmont Area Schools
- Fairmont Community Hospital, 835 Johnson Street

F. Waste Composition

Minnesota conducted a statewide municipal solid waste composition study in 1999-2000, the results of which were published in 2000. The Prairieland Composting Facility was one of the Greater Minnesota facilities that participated in the study and, as a result, has up-to-date composition data.

Table II-6. Waste Composition, 1999

Primary Material Category	Percent (average)
Paper	34.2%
Plastic	11.7%
Metals	6.0%
Glass	3.0%
Organic Materials	22.9%
Problem Materials	2.0%
Household Hazardous Waste	1.0%
Textiles	3.4%
Carpet	1.5%
Sharps and Infectious Waste	<0.1%
Rubber	0.7%
Construction & Demolition Debris	3.2%
Household Bulky Items	2.9%
Empty Household Hazardous Waste Containers	0.7%
Miscellaneous	6.7%
Total Waste	100%

G. Municipal Solid Waste Collection

All MSW collected in Martin County is delivered to the Prairieland Facility or taken to a landfill in the surrounding region. The County has licensed haulers for collecting and hauling waste to the appropriate facilities. Haulers are required to renew their license on an annual basis, subject to the County’s approval. All licensed solid waste haulers must employ volume-based pricing as required by the license.

Private haulers collect residential and commercial solid waste. The haulers use a colored bag system and charge an advertised rate per 10 bags for MSW collection. While the haulers do not provide the County with published rates, the per bag price ranges from \$1.75 to \$2.50. Households that do not use the colored bag system pay a monthly rate. 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 tipping or transfer facility. The remainder of business and commercial solid waste is hauled by the individual businesses.

Table II-7. Licensed Solid Waste Haulers

Hauler Name	Waste Type (residential, commercial and/or industrial)	Areas Served (by township or municipality)	Collection Offered (MSW, recycling, yard waste, appliance, demo debris, etc.)
Waste Management, Inc.	Residential, Commercial, Industrial	Dunnell, Ceylon, Sherburn, Welcome, Trimont, Truman, Fairmont, Granada, East Chain, Silver Lake, Fox Lake, Imogene, Rural Martin County	MSW, Recycling, Yard Waste, Appliances, Demolition Debris
Madelia Sanitation	Residential, Commercial	Truman	MSW
Southland Sanitation	Residential, Commercial	Fairmont, Rural Martin County, East Chain, Northrop,	MSW
Curry Sanitation	Residential, Commercial	Granada, Truman, Welcome, Ceylon	MSW
LJP Enterprises	Commercial	Fairmont	MSW
City of Fairmont	City Property	Fairmont	MSW

H. Review of Planning History

Past Solid Waste Planning Activities

The Minnesota Pollution Control Agency approved the Martin County Solid Waste Management Plan in July 1996. Both Faribault and Martin Counties have an agreement with Blue Earth County, established since 1993, for the development and operation of a HHW collection program. In 1997 and 1998, the County actively participated in planning activities related to the Prairieland Facility, which resulted in specific strategies intended to improve solid waste program impacts in the County. These strategies are described in detail in Chapters III and IV of this plan. As part of that planning effort, the County adopted amendments to its Solid Waste Ordinance in 1998.

Existing Management Structure

Martin County Environmental Services Department carries out all regulatory functions related to solid waste management. The County manages all other solid waste activities through an agreement with the University of Minnesota Extension Service and through its partnership with Faribault County. The Joint Powers Agreement, established in 1989, designates a Prairieland Solid Waste Board that is authorized to oversee the Compost Facility, and to support other solid waste management activities.

Current Local and Regional Planning

Martin County has determined that the proposed solid waste management system described in this plan is the most feasible and prudent system available at this time. Within five years, the County will again submit an update to this plan to address changes and improvements to the overall system, including regional planning and initiation of greater resource recovery and landfill abatement.

The County recognizes the need to evaluate and consider MSW management alternatives, including regional solutions for landfill abatement. The County and Prairieland Solid Waste Board are concerned about the cost of solid waste management, the environmental impacts of land disposal, long-term waste abatement, and achieving waste reduction and recycling goals set by the state.

Past Impediments or Barriers to Development of Regional Projects

It is difficult for counties to develop and implement regional projects. One critical barrier to greater regional participation is the size of each of the counties within the region. The distance between facilities increases transportation costs and restricts the ability of other counties to choose to make the necessary arrangements for waste to be delivered to the Prairieland facility.

Resolution of Conflicting or Overlapping Local Waste Management Efforts

The Prairieland Solid Waste Board has not experienced conflicting or overlapping management efforts. Close collaboration throughout the history of the Prairieland facility has ensured that each County is well aware of the critical issues, and fully participates in decision-making related to the facility and solid waste programs.

Chapter III - Resource Recovery & Disposal System Analysis

A. System Background

Minnesota state law (chapter 115A) directs counties to implement solid waste management systems that reduce land disposal, to the extent feasible and prudent, and expresses a clear preference for resource recovery over landfills. This direction, provided in the Waste Management Act, provides specific direction to the general authority given to counties for solid waste management under chapter 400:

In order to protect the state's water, air and land resources so as to promote the public safety, health, welfare and productive capacity of its population, it is in the public interest that counties conduct solid waste management programs.

To meet these requirements, the Prairieland Board, comprised of representatives from both Faribault and Martin Counties, owns and operates the Prairieland Compost Facility, which began operations in September 1991. The facility is located on 20 acres in the City of Truman (Martin County) and is 74,000 square feet in size. The buildings are enclosed for environmental and quality control purposes. The enclosed buildings help control odors of incoming MSW, control noise from processing equipment, help maintain the temperature of the compost piles and prevent leachate generation from precipitation.

The Prairieland Facility operates 8 hours per day, 5 days per week and has a permitted process capacity of 26,000 tons per year (100 tons per day). The Prairieland Facility currently receives waste from Faribault and Martin Counties.

Martin County has determined that the long-term environmental and economic costs and benefits make the Prairieland Facility the most prudent and feasible waste management system available at this time. The feasibility and efficiency of the project has been examined several times since operations began in 1991, and the results have reaffirmed that the Prairieland Facility is a sound technical and financial approach to integrated solid waste management. The Board fully intends to continue in its efforts to provide an integrated waste management system, which will reduce the waste stream, recover materials for recycling and minimize the land disposal of unprocessed MSW.

Facility Description

The processing of MSW into compost, recyclables, refuse-derived fuel (RDF) and residuals is a four-stage process. The following description outlines the process used at the Prairieland Facility.

Tipping Floor

The mixed MSW is delivered by packer trucks to a tipping floor where it is visually inspected for non-processible waste. Non-processible waste (listed in Table III-1) is removed by a picker on the tipping floor and a front-end loader and stored for recycling or disposed of as appropriate. The tipping floor is sized to allow for several days of storage capacity and ample truck maneuvering area. In addition, facility staff identify and separate recyclable materials, such as wood and metals, and items prohibited from the waste stream (e.g., tires, appliances, household hazardous wastes).

The front-end loader pushes the processible waste on a conveyor for delivery to the processing building.

Processing Building

The conveyed processible waste from the tipping floor is delivered to the shredder located within a concrete enclosure. The shredder rips open plastic bags, and shreds the processible waste to a nominal size of three inches. The processible waste is conveyed from the shredder to a magnetic separator and the ferrous material is separated and conveyed to the load out area for transport to market. The remaining compostable waste is conveyed to a two stage trommel screen, which includes 1 inch and 3 inch openings that separate the processible waste into three fractions: less than one inch, greater than one inch but less than three inches, and greater than three inches. Materials that are greater than 3 inches are conveyed to a load-out area for delivery to the NRG-Wilmarth waste-to-energy facility as RDF. Delivery to NRG-Wilmarth is dependent on available capacity each day. If capacity is not available to accept the material, it is delivered to a landfill. The intermediate fraction that is greater than one inch and less than three inches is conveyed to the mixer. The fraction less than one inch is directed to the vibrating screen which contains an air classifier that separates the heavier non-compostable material from the lighter organic fraction. The lighter organic fraction is conveyed to the mixer where process water is added to achieve a moisture content of approximately 50 percent. The moisture conditioning of the compost feedstock is the final step in the mechanical processing procedures. The compost feedstock is then conveyed to the siloda building. The small, heavy non-compostable fraction from the vibrating screen, which consists primarily of glass, stones, and ceramics, is directed to a roll-off container. This material may be used as aggregate for highway projects.

Table III-1. Unacceptable Waste at Prairieland Composting Facility

Hazardous Wastes as defined by Federal and State rules and regulations
Pesticide Containers
Asbestos
Waste containing Polychlorinated Biphenyls in any concentrations
Wastes That Could Spontaneously Combust
Foundry Waste
Paint Residues, Filters, and Dust
Fiberglass Urethane, Fiberglass Dust, Polyurethane and Epoxy Resin Waste
Explosive Waste
Liquid Waste of any type in large quantities
Radioactive Waste
Steel Banding
Paints, Solvents, Gasoline and Flammable Liquids
Used Engine Oil
Propane Tanks

Hospital Wastes which is infectious, hazardous, or toxic including human remains
Tires
Auto Hulks and large auto parts, including gasoline tanks, hardened steel shafts, engine blocks and steel wheels
Large Metal Items
Steel Fence Materials
Sludges
Mining Wastes
Ash
Street Sweepings
Large Wood Items
Demolitions and Building Waste including asphalt shingles
Cathode-ray tubes (televisions, computer monitors)
Pesticides, Insecticides, Chemicals, or Other Toxic Materials (when not normally in residential or commercial waste)
Plastics (PVC, HDPE, PET) in large quantities such as waste from a plastics plant

Siloda Building

The majority of the biological activity in the compost process occurs within the siloda building. The oxygen content and the moisture content of the compost feedstock are controlled to promote microbial activity, which accelerates decomposition and generates heat. This heat (140 to 165 degrees Fahrenheit) is effective in killing pathogens. The building contains ten ground level parallel concrete rows or horizontal silos. The compost feedstock is stacked with the overhead conveyor system into the horizontal silos where the compost feedstock is aerated by forced air and is turned by the patented OTVD siloda paddle-wheel. The process of turning the compost material with the paddle-wheel results in the destruction of pathogens. This turning process also allows the rearrangement of the compost feedstock and eliminates the risk of poor air distribution through compaction. The compost feedstock is turned every two to four days by the paddle-wheel, which consists of blades mounted on a fixed revolving cylinder open at the top. The blades slice the compost feedstock from bottom to top and discharge it, by gravity, from the uppermost point of the paddle to a conveyor installed in the shaft of paddle-wheel. The conveyor transfers the compost feedstock into the adjacent row. The paddle-wheel maneuvers from one horizontal row to another by use of a crab mounted on a rail system located at the end of the horizontal rows. The compost feedstock is retained within the siloda for minimum of 28 days. At the end of the compost feedstock is conveyed to the curing building.

Curing Building

After active composting in the siloda building, the compost is conveyed to the curing building for curing and stabilization. The stabilization process is intended to transform the waste such that the regrowth and multiplication of pathogens cannot occur. This process takes 60 days prior to refining

the compost material. Refining consists of screening the material with a vibratory screen, which produces fine compost, coarse compost and RDF.

B. Opportunities for Improvement

The Board has a strong commitment to operate the Prairieland Facility in the most environmentally sound and efficient manner possible. In September 1997 the Prairieland Board created an advisory committee to work with staff in achieving several goals that would improve waste abatement programs, such as reduction and recycling, and resource recovery efforts at Prairieland. The advisory committee produced a set of consensus recommendations that serve as guidance to Martin and Faribault Counties and to the Prairieland Board and staff. The recommendations are summarized here and are priority areas for improvement in the resource recovery system.

GOAL #1: Raise public awareness about waste management (in 1998)

- A. Continue to meet and discuss waste issues with civic and business groups, cities, and school groups.
- B. Build the news coverage of Prairieland into wider coverage of toxic materials programs, recycling opportunities, and the benefits of reducing the amount of waste produced.
- C. Publish and distribute waste management guides to households and businesses using grant funds from the Minnesota Office of Environmental Assistance.

GOAL #2: Remove more toxics from the waste stream.

- A. Offer more household hazardous waste collection and exchange events in the population centers of Blue Earth, Wells and Fairmont. Schedule small cities for one day collections, as always.
- B. Market the “Very Small Quantity Generator” program extensively to businesses in the two counties.
- C. Work with several volunteer businesses to demonstrate options for reducing toxic material use and generation. Use know-how available from the Minnesota Technical Assistance Program (MnTAP).
- D. Continue to use mobile collections as a primary method of recovering toxics.

GOAL #3: Demonstrate increased recycling (1997 to 1998).

- A. Identify greatest potential for improved recycling by businesses, and help the waste haulers and recyclers meet those needs. Consult with the Minnesota Chamber of Commerce’s WasteWise Program for assistance.
- B. Gain the cooperation of businesses that recycle now to keep track of recycling tonnages and report them to the County.
- C. Choose one or more materials for Prairieland to recover for recycling beyond the current materials (glass, metals), which will also demonstrate that much of what is discarded is recyclable.
- D. Evaluate the 1997 recycling numbers and focus efforts to promote recycling more in areas with lower recycling rates.

GOAL #4: Reduce the amount of waste generated.

- A. Work with several volunteer businesses to demonstrate options for reducing waste generation. Use the know-how available from MnTAP.
- B. Make sure the waste guides for households and businesses explain how to reduce waste.
- C. Promote volume-based pricing to give generators of waste a clear incentive to reduce the amount of waste generated.

GOAL #5: Build participation of rural residents in the system.

- A. Remove barriers for self haulers at Prairieland by making it convenient and cost effective to drop off waste at the facility.
- B. Provide better opportunities and incentives for rural residents to use the household hazardous waste, recycling, and processing facilities through information and access.
- C. Prepare ordinances that establish the Counties as market participants for waste collection. Conduct a public review and input process that would define the role of the Counties in arranging for garbage service for all or a portion of the two Counties. If necessary, implement the ordinance through an RFP and contracting process. This system would be similar to collection arrangements in Winnebago and Minnesota Lake.

GOAL #6: Recover Martin and Faribault Counties' waste.

- A. Seek voluntary contracts for waste recovery from all haulers in Martin and Faribault Counties.
- B. Examine the various volume-based tax and fee options, and discuss these options with the public. Select and implement one that is fair and can reduce the tip fees at Prairieland, in order to compete with landfills in the region.

GOAL #7: Improve the operations at Prairieland.

- A. Outline odor control options and costs to Prairieland Board and City of Truman. If operations continue and odor persists, select and implement the preferred odor reduction system (in 1998-99).
- B. Open negotiations with NRG to reduce the amount of waste being delivered to Prairieland from Nicollet, Sibley, Le Seuer and Blue Earth Counties, and lower the costs to Prairieland for RDF combustion in Mankato.
- C. Continue to improve promotion, marketing and quality of compost.
- D. Establish an equipment replacement fund.

Martin County, Faribault County and the Prairieland Board have implemented or have begun to implement these recommendations in a systematic manner. These efforts have produced several outcomes that improve the resource recovery and disposal system in Martin County, as well as Faribault County, and have significantly improve the performance of the Prairieland facility.

- ✓ The Prairieland tip fee has been raised to \$75 per ton and appears to be set at a stable level.
- ✓ The County's solid waste management service charge has been reduced, after helping to address short-term financial needs, and also appears to be at a stable level.
- ✓ Prairieland has voluntary three year contracts for waste delivery to the facility with all but one of the waste haulers working in the two Counties.

- ✓ The solid waste budget for the County and Prairieland are balanced.
- ✓ The Prairieland Board has selected a strategy for odor control at the facility and has secured funding to install new odor control equipment in 2001.
- ✓ Operations at the Prairieland facility are improved, though the recovery rate is somewhat lower and fewer residuals are sent to NRG-Wilmarth as RDF.

C. Waste Assurance

Waste assurance is a fundamental element of the successful operation of the Prairieland facility. The quantity and composition of waste received at the facility directly affect the facility performance from a composting standpoint and a financial perspective. An effective approach to waste assurance also contributes to the County's ability to ensure that waste is managed according to the preferred strategies established by the County.

This section describes the waste assurance options that allow an organization to manage waste in a way that it prefers. The following options have been used successfully in Minnesota.

- Public Entities
- County Assessment
- Hauler Negotiations
- Private Sector Option

The public sector uses waste assurance for four key reasons:

- To compete effectively in the marketplace;
- To ensure that waste is managed in a way that protects the public health and welfare and benefits the environment;
- To ensure that waste is managed in a way that protects the taxpayers from the liabilities associated with the management of waste; and
- To protect the public investment that was made to build waste management facilities.

The private sector uses waste assurance to compete effectively in the market place.

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.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 that the public entities law is enforced.

Numerous counties have sent letters to public entities, or the state has sent such letters, explaining what public entities must do to be consistent with the county plan. Counties have also requested assistance from the state in enforcement. Thus far, all public entity cases have been resolved with contact and assistance from the state. The state has not had to resort to using the state's formal enforcement procedure and penalties.

Consistent with this, Martin County hereby establishes that recovery of resources from MSW at the Prairieland Facility is the County's preferred method for managing MSW, including but not limited to MSW collected or generated by Public Entities in the County.

County Assessment

Counties have the authority to make assessments for environmental programs, such as environmental education, household hazardous waste collection, recycling programs, and activities supporting the management of waste as preferred in the county plan, including the direct funding of facilities and/or using the Funds to lower the tipping fee at MSW resource recovery facilities. Counties have a number of options to acquire funding to support these programs: ad valorem taxes, hauler collected service charges, and service charges on property tax statements.

1. Ad Valorem Tax

An ad valorem tax is assessed based on property value, or in the case of commercial establishments, the value of the business, rather than the amount of waste generated. Funds are collected via the property tax statement and are part of the general fund. Funds collected may be used to support any county environmental program, including environmental education, household hazardous waste collection, recycling programs, and activities supporting the management of waste as preferred in the county plan, including the direct funding of facilities.

2. Hauler-Collected Service Charge

This service charge is levied on the waste generator pursuant to Minn. Stat. §400.08, and is designed to be collected by the waste hauler and then remitted to the county. The fee can be set up as a percent of the collection/disposal bill or it can be based on the volume of waste produced by the generator. According to a recent Minnesota Supreme Court decision, the proceeds from a hauler-collected service charge may, in part, be used to lower the tipping fee at a MSW resource recovery facility, such as the Prairieland Facility.

3. Service Charge on Property Tax Statement or Utility Bill

Counties may support environmental programs through a service charge billed on the property tax statement or the utility bill, also pursuant to Minn. Stat. §400.08. The service charge can be structured based on the volume of waste generated or by property type. Typically, residents are charged a lower fee than businesses. Funds may be used to support county waste management programs, including environmental education, household hazardous waste collection, recycling programs, and activities supporting the management of waste as preferred in the county plan.

Hauler Negotiations

Counties have the ability to negotiate contracts with haulers to bring the waste to the facility preferred in the County Solid Waste Management Plan. Many Minnesota counties and cities use negotiated contracts with haulers to bring waste to the preferred waste management facility.

Private Sector Option

Some waste management companies use vertical integration to compete efficiently in the market place, and assure waste is delivered to the facilities that bring the most profit to the company. To vertically integrate, companies develop or acquire landfill capacity and waste collection enterprises in regional area. Doing so allows them to profit from both hauling and landfill operations, and direct collected waste to their facilities.

A key company strategy to maximize profits at the landfill is to own landfills capable of accepting large amounts of waste per day. Because landfills have certain fixed costs, a large daily capacity allows the company to operate at lower cost per ton, because the fixed costs of operating a landfill are spread out over a large amount of waste. These landfills can offer very competitive pricing, and help companies secure a major part of the waste stream in Minnesota.

Implications for Martin County

Currently, the Prairieland Board has four year waste delivery contracts in place with nearly all of the solid waste haulers operating in both Faribault and Martin Counties, negotiated during 2001. Prairieland has pursued these contracts to further promote stability in the resource recovery and disposal system.

Contract status of waste haulers in Prairieland service area.

Waste Hauler	Duration of contract	Expiration date
Waste Management	4 years	December 31, 2005
Southland Sanitation	4 years	December 31, 2005
Madelia Sanitation	4 years	December 31, 2005

City of Minnesota Lake	4 years	December 31, 2005
City of Fairmont	4 years	December 31, 2005
LJP Enterprises	4 years (pending)	December 31, 2005
Curry Sanitation	7 years	2007
B & B Sanitation	No contract	Not applicable

In addition, the County has a property-based service charge that contributes to the funding of solid waste management activities, including operations at the Prairieland facility. Since 1998, the hauler contracts and the service charge revenues used to subsidize the tipping fee at Prairieland have contributed to improved waste assurance for the Prairieland facility. The resulting improvements in operations and financial performance have contributed to greater stability for the County and Prairieland.

Martin County, as a member of the Prairieland Board, will continue to support use of negotiated contracts with waste haulers as a primary waste assurance tool. These contracts are intended to work in combination with the continuation of the County service charge and continued implementation of the Public Entities statutes by the County.

Chapter IV - Policies and Program Implementation

A. Solid Waste Abatement Programs

1. Source Reduction

General policy and goals

Source reduction involves any activity that prevents waste at its source. Source reduction is identified as the first priority among solid waste management options, and offers the benefits of reducing environmental impacts associated with waste handling, processing and disposal, and offers potential for the waste generator, whether a business or household to save money by reducing the quantity of waste. As defined in State law:

Waste reduction or source reduction means an activity that prevents generation of waste or the inclusion of toxic materials in waste, including: reusing a product in its original form; increasing the life span of a product; reducing the material or the toxicity of material used in production or packaging; or changing procurement, consumption, or waste generation habits to result in smaller quantities or lower toxicity or waste generated. (Minnesota Statutes §115A.03, subd. 36a)

The Waste Management Act contains specific requirements for source reduction efforts, and including requirements for county solid waste management programs.

- Political subdivisions, educational institutions and other public agencies must aggressively pursue purchasing practices that encourage solid waste and toxicity reduction.
- Each county's solid waste management plan must include mechanisms for providing financial incentives to businesses, households and all other solid waste generators to reduce the amount of waste generated.
- Licensing authorities must require that licensed haulers impose charges for collection of MSW that increase with the volume or weight of waste collected.
- A local government that collects fees for picking up MSW directly from businesses, households and others that generate the waste must implement charges that increase with the volume or weight of waste collected.
- Any political subdivision that provides or pays for the costs of collection or disposal of solid waste must make the share of those costs for each business, household or other entity visible and obvious to the generator of that waste.

Martin County has embraced the recommendations adopted by the Prairieland Board in 1998, including the following goal and strategies related to source reduction.

Reduce the amount of waste generated.

- A. *Work with several volunteer businesses to demonstrate options for reducing waste generation. Use the know-how available from MnTAP.*

- B. *Make sure the waste guides for households and businesses explain how to reduce waste. Promote volume-based pricing to give generators of waste a clear incentive to reduce the amount of waste generated.*

Existing program

Martin County has an ongoing commitment to source reduction, and has integrated state requirements and the Prairieland Advisory Committee strategies into its source reduction program. The County's efforts include adopting practices that reduce waste within the County's operations, education and promotion of source reduction to households and schools, and outreach and assistance to businesses and institutions.

A partnership with the University of Minnesota Extension Service in Martin County has provided the mechanism for implementing these efforts. University of Minnesota Extension Service has produced comprehensive waste education materials that highlight source reduction, actively sought to provide every business in the County with assistance information, visited schools to educate students, and maintained a consistent message through regular public communications (e.g., flyers, news articles, posters). Martin County's source reduction efforts are extensive enough to qualify for the three percent source reduction credit. In 2000, the County satisfied 30 of the 43 program criteria for the credit, which translates to a full three percent credit added to the recycling rate.

Government offices seek to reduce waste generation through several specific activities, and the County encourages all schools and other public institutions to adopt these practices as well. Local officials have found many benefits in pushing governments and schools to lead source reduction efforts. These benefits include a reduction in waste removal costs, a decrease in the amount of waste generated, and finally, allows staff members to get first hand experience in developing programs that they are promoting. The County uses *The Environmentally Preferable Purchasing Guide*, and regularly makes the following purchasing choices related to source reduction:

- ✓ Specify soy-based inks for printing;
- ✓ Energy efficient office equipment;
- ✓ Remanufactured toner cartridges;
- ✓ Refurbished furniture;
- ✓ Less toxic cleaning products;
- ✓ Reuse of gravel and bituminous road materials;
- ✓ Using reclaimed vehicles;
- ✓ Use of recycled paint; and
- ✓ Recycled trash bags and barrels.

Both counties in the Prairieland region practice economic incentives to reduce waste. These incentives have proven to be an effective component in encouraging source reduction. Volume-based fees were introduced in the 1992 Solid Waste ordinances for Faribault and Martin Counties. Businesses, such as 3M Company, have responded to this fee structure by developing in-house programs to reduce waste.

Specific programs to be developed

The County will continue to build its commitment to an effective source reduction program. One important element of effectiveness is to ensure that source reduction efforts are a regular part of the waste-related activities of businesses, households and institutions. In addition, the County intends to evaluate and pursue additional source reduction measures that can produce results for waste generators.

- Targeted outreach to businesses that have strong source reduction potential.
- Source reduction promotion and assistance to rural residents as part of expanded rural waste management and recycling programs.
- Examination of opportunities to integrated source reduction measures into County building projects.
- Further development of County purchasing guidelines that support source reduction.
- Consideration of creating greater source reduction incentives through variable-rate pricing requirements for solid waste collection.

Responsible persons

The focal point for source reduction efforts at Martin County will continue to be the University of Minnesota Extension Service. Source reduction efforts are part of the County's overall waste abatement program and are often delivered in conjunction with efforts related to recycling, household hazardous waste management and problem materials management. In addition, cooperative efforts with staff at the Prairieland facility will help promote a comprehensive approach to identifying source reduction opportunities that are priorities for the County and Prairieland.

Required staff time

Extension Service staff time is expected to remain stable for this activity, which has been a part of the County's abatement efforts for several years.

Estimated program budget

County source reduction expenditures will be financed through SCORE funds and County revenues.

Implementation schedule

The source reduction efforts that are designed to assist businesses will continue as part of the County's ongoing source reduction program. Source reduction education has been an ongoing program priority for many years, starting with an OEA grant in 1994. As the County makes a decision on rural collection options, specific elements related to source reduction promotion will be considered. Also, as the County and Prairieland work on MSW and recycling collection contracts, consideration will be given to opportunities to enhance incentives for reduction. During 2001-2002, the County will consider adopting source reduction concepts related to building projects and expanding purchasing efforts.

2. Waste Education

General policy and goals

The Waste Management Act directs to counties to provide public education to its residents and businesses on solid waste issues. The general goals of the waste education program are to:

- Inform citizens on current solid waste issues;
- Promote the Prairieland Compost Facility;
- Inform citizens about how, when and where solid waste can be recycled; and
- How to reduce waste at home and where to contact local and state officials for further information.

Martin County also supports the recommendations from the Prairieland Board, adopted in 1998, which has a specific goal and strategies related to waste education.

Raise public awareness about waste management (in 1998)

- D. Continue to meet and discuss waste issues with civic and business groups, cities, and school groups.*
- E. Build the news coverage of Prairieland into wider coverage of toxic materials programs, recycling opportunities, and the benefits of reducing the amount of waste produced.*
- F. Publish and distribute waste management guides to households and businesses using grant funds from the Minnesota Office of Environmental Assistance (done in 1998).*

Existing programs

Martin County waste education efforts have been important in helping the County achieve its objectives for waste abatement and resource recovery. The County has an ongoing commitment to education – to residents, businesses and schools – and, as with other abatement efforts, works in partnership with the University of Minnesota Extension Service and the Prairieland facility. Examples of Martin County waste education activities are listed below.

- ✓ Numerous public service announcements on the local cable access channel and in newspapers;
- ✓ Television and radio appearances;
- ✓ Development and use of traveling displays promoting solid waste activities;
- ✓ Educational materials and displays at a manned booth during the county fair and other events;
- ✓ Visiting all businesses in the county, in person, with recycling and waste reduction information;
- ✓ Staff training for businesses on recycling and waste reduction;
- ✓ Advertising to promote successful examples of source reduction by businesses;
- ✓ Development of county specific brochures that outline where individuals and businesses can take waste within each county and how to handle it;
- ✓ Solid waste newsletters to citizens and businesses;
- ✓ Promotion of special days for handling hazardous waste;
- ✓ County training program that includes information on waste abatement;
- ✓ Tours of the compost facility (an average of three to five tours a month occur);
- ✓ Use of State’s “What-A-Waste” curriculum (as well as other curriculum materials) in school and youth presentations, work to promote school use of curriculum;

- ✓ Organizing and promoting events in recycling week, pollution prevention week, and Earth Day activities; and
- ✓ Development and distribution of a Solid Waste Manual to residents and businesses in the County.

Specific programs to be developed

Martin County intends to continue to provide ongoing waste education that contributes to meeting its goals for solid waste management. University of Minnesota Extension Service staff will examine the need for diversifying its educational materials to address non-English speaking residents. The County recognizes the need for consistent education that reinforces existing messages. New materials or messages will build upon existing information and encompass the priority strategies recommended to the County by the Prairieland Board and its advisory committee. Particular points of emphasis include:

- ✓ Source reduction, with special emphasis on toxicity reduction;
- ✓ Improved resource efficiency among businesses in the County;
- ✓ Greater participation in HHW and VSQG programs to de-toxify the waste stream, with emphasis on products that contain lead, mercury and PCB's; and
- ✓ Improvements in system efficiency.

The County will work together with Faribault County and the Prairieland Board to design and implement new education program elements.

Responsible persons

The focal point for waste education efforts at Martin County will continue to be the University of Minnesota Extension Service. Waste education efforts are part of the County's overall waste abatement program and are often delivered in conjunction with efforts related to recycling, household hazardous waste management and problem materials management. In addition, cooperative efforts with staff at the Prairieland facility will help promote a comprehensive approach to identifying education opportunities that are priorities for the County and Prairieland.

Required staff time

Extension Service staff conducts waste education activities at nearly a full-time level of effort.

Estimated program budget

Direct waste education spending is at about \$40,000 annually, not including SCORE grants to cities, recycling contracts and University of Minnesota Extension Service staff salary.

Implementation schedule

Waste education activities are ongoing. The County will consider expanded or new education elements during 2001-2002, which will then become a regular part of the County's education efforts.

3. Recycling

General policy and goals

Recycling reduces the waste stream, conserves resources and creates useful products. A successful recycling program hinges on ensuring that households and businesses have convenient options for participating in recycling efforts. Previous goals for Martin County's recycling programs continue to provide useful guidance for planning.

- Maintain current recycling levels.
- Increase the participation rate of businesses and commercial operations.
- Satisfy criteria for a 3 percent source reduction credit toward the 35 percent recycling goal.

The advisory committee created by the Prairieland Board in 1997 developed the following strategies to further increase recycling levels beyond those for 1997:

- Identify greatest potential for improved recycling by businesses, and help the waste haulers and recyclers meet those needs. Consult with the Office of Environmental Assistance, MnTAP and the Chamber of Commerce's WasteWise Program for assistance.
- Gain the cooperation of businesses that currently recycle to keep track of recycling tonnages and report them to the County.
- Choose one or more materials for Prairieland to recover for recycling beyond the current materials (glass, metals), which will also demonstrate that much of what is discarded is recyclable.
- Evaluate the 1997 recycling numbers and focus efforts to promote recycling more in areas with lower recycling rates.

Existing programs

Martin County offers all residents recycling collection points as well as curbside collection in towns and cities. Waste Management (1839 110th Street, Fairmont) is the only business in the County that collects recyclables. The County contracts with Waste Management to collect recyclables in the Fairmont and at Rural Drop Sites. Recyclables in the Fairmont are collected curbside two times per month, using a two-sort system that separates fibers and containers. Other towns in Martin County contract with Waste Management independently.

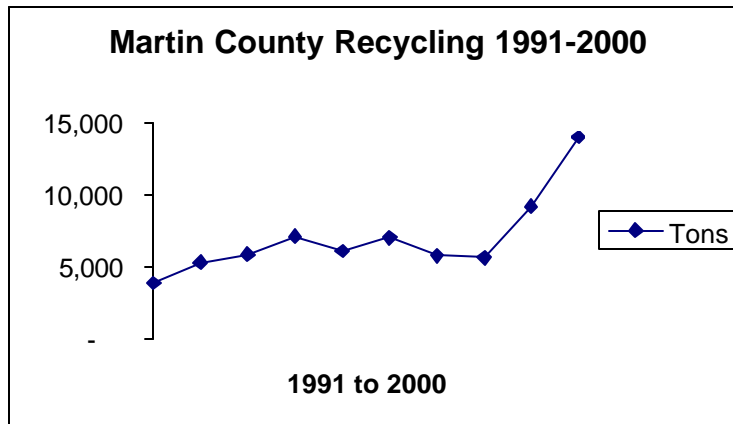
Materials recycled:

- Plastic - #'s 1,2,3,4,5, and 7
- Glass - clear or colored
- Metal - Aluminum and tin
- Paper – Newsprint, Boxboard, Junk Mail, Magazines and Catalogs, Corrugated Cardboard

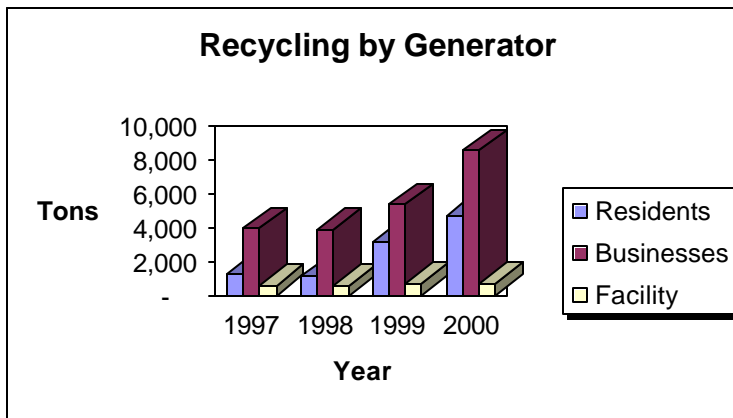
Private Recycling Centers:

Pooley's Scrap Iron & Metal Inc. Recycle all grades of scrap metal/aluminum cans
620 North Main Street
Fairmont

As indicated in the chart below, amount of waste recycled in Martin County has tripled over the past decade, with a dramatic increase achieved in the past two years.



In reviewing the data for the last four years, the dramatic improvements can be attributed to increased recycling by both residential and business sectors. Such increases suggest greater participation, as the recycling options have not increased to this same degree, and improved awareness of the benefits of recycling. The change in tip fee at the Prairieland facility may have contributed to this improved awareness. The County will continue to rely on voluntary recycling rather than establishing a mandatory program.



Waste Management, which does the vast majority of recycling collection, processing and marketing in the County does not provide data on its recycling operations beyond the aggregate data that is reported above. The County relies on Waste Management's access to regional and national outlets for marketing recyclable materials.

Specific programs to be continued or developed

Recent improvements in Martin County's recycling activity strongly indicate that existing efforts should be continued into the future. The County expects to pursue four specific program enhancements.

1. Refine recycling education efforts to maintain a consistent message to residents and businesses about the importance of recycling. While progress has been made, the County understands the importance of recycling as a high-profile element of waste education efforts. Educational and promotional efforts will continue to emphasize recycling and publicize the availability of recycling opportunities for both residents and businesses.

2. Initiate a creative program for offering students incentives to help administer recycling activities in schools. The County believes schools could improve their recycling through a modest effort to offer some creative mechanisms to involve students in the recycling efforts.

3. Integrate recycling opportunities into newly developed rural waste collection system. As the County implements a more extensive waste collection system for rural residents, improved recycling options should go hand-in-hand with improved collection of waste.

4. Work closely with recycling collectors to improve the quality of data, especially data on business recycling efforts. County staff spends considerable time reviewing recycling data submitted by private recycling collectors. By working with both the haulers and cities, the County will seek to improve the quality of data so less time is used to ensure that the reported recycling information reflects actual recycling efforts in the County. Further, such improved data will help the County with its strategy of identifying the best opportunities to improve recycling among businesses.

The County is currently looking at a recycling contract that would enhance the collection activities in place. Negotiations will seek to ensure that haulers help to educate businesses and residents about recycling options and to provide the County with accurate and useful data.

Responsible persons

University of Minnesota Extension Service will continue to lead the County's recycling efforts. Additional recycling program assistance will be provided by staff from Prairieland.

Required staff time

Given the maturing of the recycling efforts, the County is looking to pursue these programmatic improvements using existing staff time allocated for recycling. In particular, steps to improve data quality would enhance staff time available for the other efforts.

Estimated program budget

The County budget for 2001 recycling contracts is about \$150,000. About two-thirds of that amount is funded through County funds, the rest through SCORE recycling funds and County revenues.

Implementation schedule

The County anticipates implementing these program enhancements as soon as possible.

4. Yard Waste Management

General policies and goals

Yard waste increases the solid waste flow, especially in the spring and fall months. The Minnesota legislation adopted in 1991 banned the disposal of yard waste in landfills after January 1, 1992. Martin County has incorporated yard waste abatement and management activities into its integrated solid waste management system in accordance with state policy.

- *Comply with the restrictions on landfill of yard waste.*
- *Educate the public on options for managing their yard waste.*

Source reduction of yard waste, through mulching and backyard composting, represents the most effective and preferred approach. Yard waste that is collected and aggregated is composted.

Existing programs

Martin County has drop-off sites for yard waste, along with a few city-sponsored curbside collection programs operated directly by the cities. County education efforts emphasize both reduction options, through mulching and backyard composting, and options available through drop-off and curbside collection. The Extension Service has given presentations on disposal of yard waste and the “how-to’s” of recycling to school, community, and other interested groups. The County’s Master Gardeners also help with yard waste composting information.

Yard waste collected in the County is brought to the Prairieland facility, where it is composted along with MSW. The compost end product is marketed to several different customers, as described in the composting section of this chapter. No composting sites for yard waste are maintained. As a result, the County does not have specific data on yard waste composting, nor an estimate of backyard composting quantities.

Specific programs to be developed

Martin County intends to maintain current yard waste activities, with continued education emphasis on mulching and backyard composting options.

Responsible persons and required staff time

City personnel are responsible for yard waste sites, except for Christmas trees. University of Minnesota Extension Service staff organizes the Christmas tree collections curbside with the help of Fairmont City Crew, community volunteers, civic organizations and “Sentence-to-Service” crews. The County helps to advertise the leaf collections, which are coordinated by the local Chambers of Commerce. Master Gardeners, organized and managed by the University of Minnesota Extension Service, help with education on composting yard waste.

Estimated program budget

The County budget for yard waste activities is about \$2,000.

Implementation schedule

The planned schedule for these activities is listed below.

- Yard Waste Sites – Determined by the cities
- Christmas Tree Recycling – Drop sites open December 26 – Second Saturday in January / Curbside collection on that Saturday
- Composting Education and Delivery – Summer
- Leaf collections – Spring and Fall

B. Primary Solid Waste Management Programs

1. MSW Composting

General Policy and Goals

In 1991, Faribault and Martin County opened the Prairieland Compost Facility. The Prairieland Facility represents a primary component for meeting Martin County's goals to:

- *Conserve the need for land disposal through reducing the waste stream, and;*
- *Recover resources from the solid waste stream.*

The Prairieland Facility diverts waste from the landfill and through the compost process generates a humus material, which is used as a soil amendment and livestock bedding. The compost facility is compatible with the Martin County and Prairieland Solid Waste Board waste reduction, waste education and recycling programs and benefits these programs. The Prairieland Facility separates and recovers both recyclables and compost from the waste stream. Removal of these materials along with the losses from the composting process reduces dependence on landfills.

Existing Programs

The Prairieland Facility, which began operations in September 1991, operates 8 hours per day, 5 days per week and has a permitted process capacity of 26,000 tons per year (100 tons per day). The Prairieland Facility currently receives waste from Faribault and Martin Counties. The Prairieland facility operations are described in detail in Chapter III of this plan.

University of Minnesota Extension studies show benefits to use of compost in crop production and as livestock bedding. Currently, Prairieland is marketing finished compost to several customers. The list below describes the end user and the application.

- Landscaping contractors – mix compost with topsoil for use as soil bed for sod laying operations.
- Beef producers – compost is used as bedding for beef cattle feedlots.
- Crop farmers – compost is used as soil amendment.
- Hog producers – compost is used as a feedstock for animal mortality composting.
- MPCA – specified use of 10 percent compost in the final cover for the closed Watonwan County Landfill.

In 2002, Prairieland will be working with the Martin County Highway Department to develop some pilot projects using compost.

Environmental and Health Impacts

The feedstock and finished compost is tested by an accredited lab for contaminants and other criteria to ensure the safe distribution of the final product. The MPCA does periodic inspections of the facility to ensure that operations are safe.

The Prairieland Composting Facility operates under MPCA permit #357. A permit reissuance application was submitted to the MPCA in December of 1999. A letter of completeness was sent to the facility Director, but as of the preparation of this document, Prairieland has not received a permit reissuance. The facility will continue to operate under the original permit until reissuance has been completed.

The Prairieland Facility has two primary areas of concern: odors and soil contamination. Since the start of operations, Prairieland staff have worked with surrounding residents to address concerns related to facility odors. The Prairieland Board has evaluated several options for the best approach to long-term odor controls, and is in the process of decision-making on installation of a bio-filter odor control system.

Soil contamination could occur on land where the compost is ultimately used. The principal health risk of finished compost on soil is the possible presence of heavy metals and the potential for those metals to enter the food chain. The Prairieland staff routinely monitor compost for metals content and have identified priority waste abatement efforts intended to reduce metals in the final compost product.

Specific programs to be developed

The feasibility and efficiency of the project has been examined several times since operations began in 1991, and results have reaffirmed that the Prairieland Facility is a sound technical and financial approach to integrated solid waste management. The Board fully intends to continue in its efforts to provide an integrated waste management system, which will reduce the waste stream, recover materials for recycling and minimize the land disposal of unprocessed MSW.

GOAL: Build participation of rural residents in the system.

- A. Remove barriers for self-haulers at Prairieland by making it convenient and cost effective to drop off waste at the facility.
- B. Provide better opportunities and incentives for rural residents to use the household hazardous waste, recycling, and processing facilities through information and access.

GOAL: Recover Martin and Faribault Counties' waste.

- A. Seek voluntary contracts for waste recovery from all haulers in Martin and Faribault Counties.
- B. Examine the various volume-based tax and fee options, and discuss these options with the public. Select and implement one that is fair and can reduce the tip fees at Prairieland, in order to compete with landfills in the region.

GOAL: Improve the operations at Prairieland.

- A. Outline odor control options and costs to Prairieland Board and City of Truman. If operations continue and odor persists, select and implement the preferred odor reduction system (in 1998-99).
- B. Open negotiations with NRG to reduce the amount of waste being delivered to Prairieland from Nicollet, Sibley, Le Seuer and Blue Earth Counties, and lower the costs to Prairieland for RDF combustion in Mankato.
- C. Continue to improve promotion, marketing and quality of compost.
- D. Establish an equipment replacement fund.

Martin County, Faribault County and the Prairieland Board have implemented or have begun to implement these recommendations in a systematic manner. These efforts have produced several outcomes that improve the resource recovery and disposal system in Martin County, as well as Faribault County, and have significantly improved the performance of the Prairieland facility.

- ✓ The Prairieland tip fee has been raised to \$75 per ton and appears to be set at a stable level.
- ✓ The County’s solid waste management service charge has been reduced, after helping to address short-term financial needs, and also appears to be at a stable level.
- ✓ Prairieland has voluntary three year contracts for waste delivery to the facility with all but one of the waste haulers working in the two Counties.
- ✓ The solid waste budget for the County and Prairieland are balanced.
- ✓ The Prairieland Board has selected a strategy for odor control at the facility and has secured funding to install new odor control equipment in 2001.
- ✓ Operations at the Prairieland facility are improved, though the recovery rate is somewhat lower and fewer residuals, and none for 2002, are being sent to NRG-Wilmarth as RDF.

Currently, the Prairieland Board has waste delivery contracts in place with nearly all of the solid waste haulers operating in both Faribault and Martin Counties, negotiated during 2001. Prairieland pursued these contracts to further promote stability in the resource recovery and disposal system.

Contract status of waste haulers in Prairieland service area.

Waste Hauler	Duration of contract	Expiration date
Waste Management	4 years	December 31, 2005
Southland Sanitation	4 years	December 31, 2005
Madelia Sanitation	4 years	December 31, 2005
City of Minnesota Lake	4 years	December 31, 2005
City of Fairmont	4 years	December 31, 2005
LJP Enterprises	4 years (pending)	December 31, 2005
Curry Sanitation	7 years	2007
B & B Sanitation	No contract	Not applicable

In addition, the County has a property-based service charge that contributes to the funding of solid waste management activities, including operations at the Prairieland facility. Since 1998, hauler contracts and service charge revenues used to subsidize the tip fee at Prairieland have contributed to improved waste assurance for the Prairieland facility. The resulting improvements in operations and financial performance have contributed to greater stability for the County and Prairieland.

Martin County, as a member of the Prairieland Board, will continue to support use of negotiated contracts with waste haulers as a primary waste assurance tool. These contracts are intended to work in combination with the continuation of the County service charge and continued implementation of the Public Entities statutes by the County.

Martin County also will explore the potential for expanding service for rural residents and becoming a market participant for MSW collection and management services. Based on the interest of protecting public health, safety, welfare and the environment, the County will examine alternative methods for

market participation. Those alternatives include contracting with waste haulers, and public provision of waste collection services by obtaining and operating MSW collection equipment.

Responsible Persons

The Prairieland Solid Waste Board is ultimately responsible for the Prairieland Facility. The day-to-day management of the operation is the responsibility of the Director of the Prairieland Facility.

2. Land Disposal of MSW

General policy and program

Martin County actively encourages businesses and residents to reduce, reuse and recycle materials to conserve resources, and to divert waste from land disposal to recover resources and protect the environment. Martin County does not operate a landfill and has no plans to open a landfill at any point in the future. Contracted solid waste haulers are responsible for delivering any waste or process residuals to a permitted land disposal facility.

Existing Programs

Martin County does not own or operate a land disposal facility. Prairieland contracts for disposal of non-compostable and residual materials with Waste Management. Waste Management uses either the Lake Mills or Spirit Lake landfills, both located in northern Iowa. These landfills are permitted by the Iowa Department of Natural Resources. Through these disposal contracts, Waste Management provides Prairieland (and Martin and Faribault Counties) with indemnification from future liability associated with either landfill facility.

Central Disposal Systems, Lake Mills, Iowa

Facility Description

Central Disposal Systems (CDS) Landfill is located approximately 2.5 miles southwest of Lake Mills, Winnebago County, Iowa, in the NW ¼ of Section 21, R99N, R23W. CDS operates the landfill under the Iowa Department of Natural Resources Sanitary Disposal Permit No. 96-SDP-1-72P. The Landfill has a permitted capacity of 32 years and an ultimate life capacity of 32 years. The landfill property encompasses approximately 360 acres. The landfill is bordered to the north by 430th Street and to the west by a gravel road. The southern and eastern portions of the site are bordered to the south by a gravel road. A surface water drainage ditch extends from the northwest corner of the active site along the western and southern peripheries and exits the site at the southeastern corner. The land use surrounding the site is rural residential and agricultural.

Landfill History

Central Disposal System, Inc., owned the company until 1998 when Waste Management, Inc., of Houston, Texas, bought it. The site was initially an 18-acre area. This portion is referred to as the “Old Waste Area” and was closed prior to the October 26, 1989, closure regulations. The site was expanded sometime after this to a permitted area of 200 acres and was designed to handle a waste stream of approximately 1000 tons of solid waste per day. The permit was re-issued on November 18, 1999, and the 200-acre property was expanded to 360 acres with the permitted footprint

covering approximately 200 acres. The site currently receives approximately 1,500 tons of waste material per day and has received over 357,000 tons of waste material from Minnesota in year 2000.

Hydrogeologic Description

A geologic cross section of the site indicates the geology consists of weathered till overlying unweathered till. The unweathered till is also termed the Intermediate Zone. The surficial weathered till unit has an average thickness of 15 feet and the underlying Intermediate Zone has a thickness that ranges from 50 to 65 feet across the site. The interfacial transition from the weathered till to the Intermediate Zone often causes localized areas of perched groundwater. The Perched Zone exists as discontinuous, saturated areas across the site. This groundwater is of limited horizontal and vertical extent, and much of the Perched Zone has been excavated as part of landfill construction. It is likely that the deep ditchline present along the southern boundary of the current site, and flowing to the east, acts as a discharge point for locally perched groundwater. The bottom of the ditchline is generally lower than the base of the Perched Zone or the base of the weathered till. Due to this fact, and the presence of seepage faces on the banks of the ditchline, this is an indication that the ditch is a discharge point for perched groundwater. The general drainage of the facility is south and east and along a ditch that travels around the west and south perimeter of the site. Drainage near the entrance and office building is east toward the ditch that parallels 430th Street. Both ditches drain to a wetland located approximately ¼ mile southeast of the site. Drainage near the maintenance building is southeasterly directly towards the wetland. The wetland eventually drains into Beaver Creek approximately two miles southeast of the facility.

The intermediate zone acts as an aquiclude, or confining layer, with respect to the saturated portion unweathered till unit. The Monitorable Zone lies below the Intermediate Zone, and is comprised of saturated clayey sand layers roughly 5 to 10 feet in thickness, and laterally extensive across the site (i.e., it has been found in all borings at the site installed deep enough to find it.)

The Monitorable Zone is the uppermost continuous aquifer beneath the landfill, and during 2000, nine wells were used to monitor up-gradient and down-gradient water quality and water elevation in this unit. The Perched Zone exists as discontinuous, saturated areas across the site. Six wells were used to monitor groundwater quality and elevation. Monitoring wells are also placed up-gradient and down-gradient of the leachate ponds and the spray treatment areas.

There exists very little groundwater usage within the surrounding area. Known nearby groundwater usage consists of domestic wells screened in bedrock (the Cedar Valley Formation) at a depth of approximately 155 feet. No known groundwater usage utilizes the water in the Monitorable Zone.

Closure and Post-Closure Plan

A closure and post-closure plan detailing the schedule for and the methods by which the operator will meet the conditions for proper closure and post-closure adopted by rule by the State of Iowa. The plan shall include, but is not limited to, the proposed frequency and types of actions to be implemented prior to and following closure of an operation, the proposed post-closure actions to be taken to return the area to a condition suitable for other uses, and an estimate of the costs of closure and post-closure and the proposed method of meeting these costs. The post-closure plan shall reflect the thirty-year time period requirement for post-closure responsibility.

The CDS Landfill has established a financial assurance mechanism for site closure and post-closure care. Financial assurance is provided in the form of a Performance Bond. The Performance Bond will be modified as needed.

C. Special Waste Management Policies

1. Waste Tire Disposal and Recovery

General policy and goals

Martin County seeks to provide convenient sites for individuals and small businesses to deposit damaged and worn tires. The waste tire program goals are to:

- *Keep waste tires out of the landfills, woods and ditches of the County;*
- *Identify and clean up existing “clandestine” tire sites; and*
- *Reuse or recycle the tire material into other useful products.*

Old tires that are collected for proper manage have a number of end uses, including tire-derived fuel (TDF), shredding for road construction, and other miscellaneous uses

Existing programs

Tire sales and service retail businesses take old tires from customers and will accept tires from the public. In addition, one private waste hauler will accept old tires at a public drop-off site, at a charge to the disposer. Based on MPCA records one company is permitted for waste tire transport:

Tim Steuber Trucking, Inc.
RR 1, Box 22
Fairmont, MN

Martin County’s primary strategy for waste tires is to support these efforts through public education about waste tire disposal options. However, both the County and select cities include tires in their public clean-up days, though they charge a per-tire fee to accept tires. As part of its comprehensive education program, the University of Minnesota Extension Service educates and encourages residents to participate in waste tire collection and disposal opportunities. These activities are through public notices, advertisements, and other public information mechanisms. The County’s Solid Waste Ordinance includes language that meets the MPCA requirements related to tire storage and disposal.

Specific programs to be developed

Martin County intends to maintain its current approach to waste tire management, by emphasizing the education of tire management and promotion of existing tire collection options. The County intends to consider an initiative to identify and clean up priority “clandestine” tire sites in the rural areas of the County. If the County pursues this option, “Sentence-to-Serve” crews would be used for the clean-up activities.

Responsible persons and required staff time

Education and collection event organization related to waste tires will continue to be provided by the University of Minnesota Extension Service.

Estimated program budget

The annual budget for activities related to old tires is about \$2,500.

Implementation schedule

Current activities are ongoing. The County may consider a “clandestine” tires initiative in 2002.

2. Major Appliance Management

General policy and goals

Martin County’s policy is to ensure that appliance disposal options exist for major appliances, consistent with State law (Minn. Stat., section 115A.552). The goals of the County are to:

- *Assure a clean and healthy environment by keeping white goods out of lakes, woods, and ditches;*
- *Contribute to improved compost quality at Prairieland; and*
- *Comply with Minnesota Laws on appliance recycling and disposal.*

Existing programs

Appliance retail businesses arrange with a collection service from out of the County to manage returned appliances. The County and towns include major appliances in clean-up days. One major waste hauler provides collection, both curbside (at a charge) and at a drop-off site. The County’s contract with the waste hauler ensures that management of collected appliances complies with all regulations. Currently, no scrap dealers in the County accept and manage old major appliances.

Specific programs to be developed

Martin County plans to continue with the current white goods collection program.

Responsible persons and required staff time

As no new programs are anticipated, County staff time is expected to remain minimal.

Estimated program budget

County education includes educating the public on major appliance recycling and disposal.

3. Used Oil Management

General policy and goals

Minnesota requires retailers of motor oil to either collect used oil or post signs indicating the nearest location where used oil is accepted. Martin County is committed to supporting these used oil collection and management activities.

The Martin County Solid Waste Ordinance states that waste oil shall not be poured, dumped or unlawfully placed on public or private lands, shore lands, roadways, or waters.

Existing programs

Martin County publicizes the used oil drop-off sites and ensures that collection options are available throughout the County. The official county drop-site for used oil is the Martin County Highway Department (located at 1200 Marcus Street, in Fairmont). They will take oil between the hours of 7 a.m. and 3 p.m. Monday through Friday. In addition, the County's comprehensive education activities include a special brochure to help people identify places in each community where oil can be recycled. By law, retailers of oil either accept used oil or post signs notifying residents of the closest used oil collection point.

Specific programs to be developed

Martin County will continue to publicize the used oil collection points and ensure that retailers comply with the regulations regarding posting where the nearest used oil collection point is if the retailer does not accept the oil. The County hopes to work with the existing management system to identify opportunities to address used oil filters.

Responsible persons and required staff time

Since most used oil collection sites are managed by the private firm, County staff involvement is limited to minimal activities at the County drop-off site and during County clean-up days.

Estimated program budget

Martin County's HHW program and clean-up day budget cover collection costs, and the education budget covers the cost of educating the public on used oil recycling.

4. Battery Management

General policy and goals

Martin County has the following objectives with respect to lead-acid and dry cell batteries:

- *Provide convenient collection points for the general public; and,*
- *Keep batteries from being disposed of in a manner that damages the environment and/or creates a health hazard or precludes the opportunity for the product to be recycled.*

Existing programs

The County has a well-established lead-acid battery collection system that provides convenient drop-off locations to the general public. Minnesota law established a \$5 surcharge that is refundable when motor vehicle batteries are returned for recycling. The law requires motor vehicle battery retailers to accept motor vehicle batteries free of charge. When a new battery is purchased, the customers may avoid the surcharge by returning a used motor vehicle battery. This law has resulted

in numerous private sector drop-off points. In addition, the County accepts lead-acid batteries during HHW collection events.

Dry cell batteries (commonly called button batteries) are more difficult to collect and recycle. At present there is no collection opportunity available in the County. No retailer will accept them due to the lack of disposal options.

Specific programs to be developed

Martin County plans to explore options for button battery collection and management.

Responsible persons and required staff time

County staff involvement is limited to HHW collection events.

Estimated program budget

The Martin County education budget includes supporting activities to educate the public on battery recycling and disposal.

Implementation schedule

Battery-related collection and management activities are ongoing. The County will explore options for button battery collections during 2002.

5. Household Hazardous Waste Management

General policy and goals

Minnesota counties are required to incorporate a program for the management of household hazardous waste (HHW) generated within county borders into the Solid Waste Management Plan. The HHW program must include:

- *Broad based public education component;*
- *A strategy for reduction of HHW from waste stream; and*
- *A strategy for separation of HHW from MSW and the collection, storage, and proper management of the waste.*

Successful HHW programs reduce the toxicity of waste delivered to the Prairieland Facility, thus helping to ensure that the facility produces quality compost and that the residuals sent to landfill for disposal are less toxic. Martin County has three primary objectives with respect to HHW programs:

- *Provide education on HHW issues to residents;*
- *Increase separation and management of materials containing lead, mercury and PCB's from the waste stream managed at Prairieland; and*
- *Develop a long-term strategy for HHW that focuses on reducing purchases of products that contribute to the HHW stream, emphasizes the reuse of remaining products, and ensures the proper disposal of these wastes.*

HHW management programs are a partnership between the State and counties, which is supported by the development of a network of regional HHW programs. These programs ensure that permanent collection and handling facilities exist throughout the State and provide assistance for local collection events by individual counties or cities.

Existing programs

Martin County is part of the regional HHW program, centered around a regional HHW management facility located in Mankato. Blue Earth County is the regional HHW program sponsor and operates the Blue Earth County Regional Household Hazardous Waste Facility, which serves eight counties. The major components of the regional program include the following:

- Regional HHW Facility;
- Education; and
- One-day event collections.

Regional HHW Facility

Blue Earth County, working closely with the MPCA, has built a 2,880 square foot regional HHW facility. The HHW facility is designed to accept HHW materials from all residents or counties within the region. This facility is intended to serve three functions:

- Provide a central point for aggregating HHW for proper management;
- Establish a system for reuse of materials; and
- Temporary storage of HHW prior to proper disposal.

Residents of any county in the region can bring HHW directly to the facility. In addition, the HHW facility receives HHW from counties in the region. Martin County utilizes a mobile collection vehicle made specifically for HHW collection. HHW received at the HHW facility is sorted into categories for recycling/reuse, bulking and packaging. Material that is not usable is prepared for disposal. This process is labor intensive and is done by hand, with various materials being sorted into categories in the sorting area of the HHW facility. Materials that need to be lab-packed are sent to the packaging area. Paints, solvents and other liquids needing to be bulked are transferred to the bulking area outside the back door of the HHW facility and placed in 55-gallon barrels. Latex paint that is bulked is brought back into the HHW facility by forklift and stored until the contractor transfers the material for disposal. The drums of flammable materials that have been bulked are moved using a forklift to the specialized, detached flammable storage unit located a short distance away from the HHW facility.

A key element to the HHW facility is the product exchange and material recycling program. Staff personnel from the counties involved in the HHW program will work with area groups, associations and the general public to provide unused or bulked quantities of paint for reuse. A paint mixer and shaker are provided at the HHW facility to process material for reuse.

Education

Successful programs to collect HHW depend on an effective education program. The University of Minnesota Extension Service's educational activities include specific elements to help the public in

identifying, reducing, properly handling, and using safer or less-hazardous alternatives to household hazardous chemicals. Specific education and information pieces include fact sheets, brochures, HHW booths at various County events and education opportunities at one-day event collections. University of Minnesota Extension Service operates a toll-free number for residents to call to get more information on HHW programs.

The MPCA provides basic training for persons participating in the education program so that they are well prepared to carry out the following tasks:

- Identify HHW;
- Identify wastes that are acceptable through the Regional Program;
- Identify commercial and agricultural waste;
- Encourage reuse and recycling;
- Present alternatives to products that can become HHW; and
- Proper hazardous materials handling.

In addition, the MPCA has provided training on proper use of the Telephone Advice Guidance Manual and provided sample education.

One-Day Event Collections

Martin County provides periodic collection for HHW, for later transport to the regional HHW facility in Mankato. These collections are on the first Wednesday of each month, May through October. In addition the County provides several city collections throughout the summer to better accommodate the citizens. The County works closely with the Blue Earth County regional HHW coordinator to plan the timing of these periodic HHW collection days. In addition, the regional HHW facility is open to Martin County citizens every Tuesday, and the second Saturday of each month, from April through October.

As part of its HHW program, the County contracts with Prairieland for trained staff assistance with HHW collection and management activities. Collections are supported by University of Minnesota Extension and Prairieland staff, Sentence-to-Service crews, volunteers from surrounding communities, and the Blue Earth County Regional HHW coordinator. Prior to these periodic events, the County actively works to inform the public of the time, location, and types of materials that will be accepted at the site. This information includes directions for the public on both proper disposal of HHW and the hazards of the various wastes.

Other Collection Events

In addition to the periodic collection events, the County accepts HHW on the first Wednesday afternoon of every month. Residents are encouraged to drop-off HHW at the Prairieland Facility where it is separated prior to be taken to the regional facility.

Specific programs to be developed

In addition to existing HHW program elements, Martin County intends to work carefully to further the following objectives.

- *Define an education program that addresses alternative products or procedures to those containing HHW and stresses proper management techniques.*
- *Target materials that contribute to lead, mercury and PCB's in the waste delivered to Prairieland.*
- *Continue to provide HHW collection to ensure residents have ample opportunities to properly dispose of HHW wastes.*

With assistance from Prairieland, the University of Minnesota Extension Service will identify and highlight products that contribute to lead, mercury and PCB's in compost, which will be emphasized in ongoing education efforts.

In addition, the University of Minnesota Extension Service will monitor HHW participation and identify steps to ensure the program reaches all segments of the population, including senior, disabled, low income and non-English speaking residents. Where appropriate, the County will modify or adapt its education pieces to better serve these groups.

Responsible persons

Prairieland staff is responsible for supplying necessary equipment, packing on-site and transporting the HHW to the regional facility. In addition, Prairieland staff assists at the regional facility in fulfillment of the County's obligation to donate a certain number of hours to the regional facility. University of Minnesota Extension Service staff is responsible for advertising, getting volunteers, site arrangements, education on-site at the collections and helping pack HHW.

Estimated program budget

The budget for HHW program activities is about \$25,000. This figure includes the County spending for Prairieland staff time, but does not include any pro-rated salary for education activities provided by University of Minnesota Extension Service.

Implementation schedule

HHW program activities are ongoing. The University of Minnesota Extension Service has already begun to work with Prairieland on identifying priority products.

6. Demolition Debris

General policy and goals

Martin County uses a licensing process, prior to allow any operation, to provide suitable disposal options for demolition debris that will not harm the soil or waters of the area.

Existing programs

Martin County allows permit-by-rule sites for demolition debris. Each permit-by-rule site allows up to 15,000 pounds of demolition debris per site. Other Minnesota counties have found that limiting permit-by-rule demolition debris encourages the private sector to use storage sites where concrete is stored until volumes are large enough to warrant the use of a crusher to reclaim the aggregate.

Current demolition disposal amounts are quite low, and the County does not have access to reliable data with regard to quantities.

Specific programs to be developed

Martin County envisions no changes to its demolition debris management practices.

Responsible persons and required staff time

The Martin County Environmental Services Department is responsible for the licensing of permit-by-rule facilities for demolition debris. The staff time for this activity is minimal.

Estimated program budget

All demolition debris are handled by the private sector, no County funds are used or needed.

Implementation schedule

Permit-by-rule requests are considered on an ongoing basis.

7. Fluorescent bulbs and tubes

General policy and goals

Fluorescent bulbs and tubes are prohibited by law from disposal in municipal solid waste, primarily due to the presence of mercury in the tubes and ballasts. Martin County seeks to provide simple, convenient and affordable collection opportunities for County residents.

Existing programs

Presently, Retrofit Recycling provides collection services directly to volume businesses in the County. Public collections are held, in conjunction with the Fairmont Chamber of Commerce, twice annually for residents and businesses.

Specific programs to be developed

The County intends to continue current education and collection activities.

Responsible persons and required staff time

Fairmont Chamber of Commerce works with the recycler to plan and coordinate the events. The County is responsible for education and promotion efforts.

Estimated program budget

The County spends about \$1,200 per year to support this activity.

Implementation schedule

These activities are ongoing.

8. Waste electronic appliances

General policy and goals

Waste electronic appliances represent a growing segment of the waste stream. Some electronic products are of particular concern for Martin County, especially televisions and computer monitors, which have cathode ray tubes that contain significant amounts of lead, because of the priority attention given to reducing the lead-containing products that are delivered to Prairieland.

Martin County provides simple, convenient and affordable collection opportunities for residents.

Existing programs

The recycling center in Fairmont provides an on-going collection site for electronics for the County. This service also includes curbside collection, on an on-call basis. Electronics are also collected at city and County clean-up day events.

Specific programs to be developed

The University of Minnesota Extension Service intends to highlight electronics in its ongoing education activities, in an effort to ensure that businesses know that electronics are prohibited from disposal and that households know that collection and recycling opportunities are available.

Responsible persons and required staff time

Contract recycler is responsible for on-site and curbside collection. Cities are responsible for city clean-up events. County activities related to the clean-up days also address electronics.

Estimated program budget

The County budget for this activity is about \$1,500 per year.

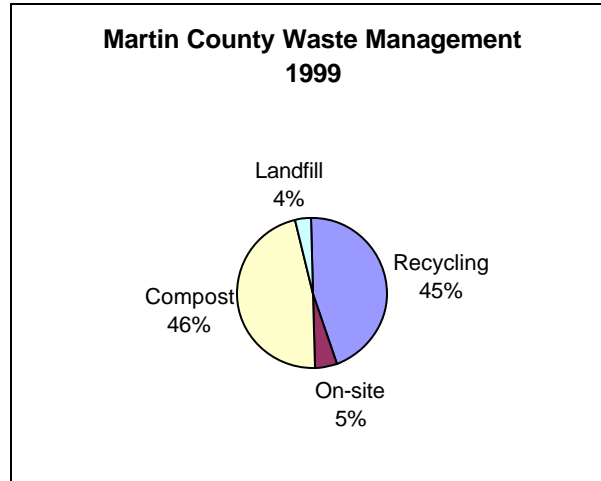
Implementation schedule

These activities are ongoing.

D. Environmental Risk Mitigation and Enforcement Programs

1. On-site and illegal disposal

On-site disposal of solid waste is a modest portion of the total waste discarded in Martin County, comprising five percent of the total waste generated in the County in 1999.



Minnesota rules require counties to develop plans and programs for mitigating the environmental risks associated with on-site and illegal disposal. A program to reduce on-site disposal should seek to combine a number of factors: make service convenient and affordable, enforce policies and procedures consistently, and provide education about the environmental hazards of on-site disposal.

Further, in 1998 the Prairieland Board’s advisory committee developed strategies to achieve a goal designed to reduce on-site disposal.

GOAL: Build participation of rural residents in the system.

- A. Remove barriers for self-haulers at Prairieland by making it convenient and cost effective to drop off waste at the facility.
- B. Provide opportunities and incentives for rural residents to use the household hazardous waste, recycling, and processing facilities through information and access.

The County solid waste management service fee extends to rural residents. By providing a better disposal service option to rural residents, the County is seeking to provide greater equity to rural residents, who do not have access to the same convenient collection options available to city residents. To address this issue, Martin County considered a range of steps to address this issue.

- Expand disposal options, through either staffed or non-staffed drop-off sites.
- Require waste collection throughout the County, including rural areas.
- Implement an aggressive education program to inform residents about the need to shift away from on-site disposal.
- Use enforcement tools to further discourage on-site disposal practices.

In considering its approach to this issue, the County reviewed other county approaches for rural collection service. Houston County, for example, operates five, staffed drop-off centers, open two days a week, at which a rural resident could bring any item acceptable for recycling, HHW or solid waste collection. Beltrami County had a network of non-staffed drop-off sites, but problems with upkeep of those sites led the County to explore other methods. Chisago County embarked on an extensive education and outreach effort that sought to encourage rural residents to voluntarily move away from on-site disposal, which the County reports to have had a significant impact on encouraging rural residents to move away from use of burn barrels.

Martin County has recycling drop-off sites located throughout the County. Expansion of those sites is one alternative for a non-staffed approach. However, qualitative program information from other rural collection efforts suggests that the lowest-cost option may not be the most effective or appropriate, as non-staffed sites can be messy and improper sorting can undermine recycling efforts.

Martin County intends to initiate a public outreach process with its rural residents to gather input on which of the various options available to the County appears to be most advantageous given the criteria listed below.

- Convenience and service
- Potential to increase recycling and abatement
- Capital and operating costs
- Impact on illegal dumping
- Complementary fit with rest of waste management system
- Option for public or private operation of rural collection services

Based on public input, the County intends to make a decision regarding rural collection in a time frame that offers the possibility to include the service as part of the contract negotiations with waste haulers for solid waste and recycling collection.

2. Public Collection of Solid Waste

A county or city can act to become the provider of MSW collection and management services within its jurisdiction and either provide such services through public employees using publicly owned vehicles or by contracting with private haulers to collect and manage MSW on their behalf. Chapters 145A and 400 of Minnesota Statutes provide specific authority to counties to provide solid waste collection and management services. Recent court decisions have determined that once a local government acts to become the provider of MSW collection and management services, the local government becomes potentially liable for the MSW under state and federal Superfund laws, and the local government becomes a “market participant” exempt from Commerce Clause requirements. Because of this, if the local government chooses to contract for collection services, it has the ability in its contract(s) with private haulers to direct where and how the MSW will be managed.

Public collection has several potential advantages over the County’s current approach, which is to license all haulers that apply and qualify for licenses. Public collection can reduce the number of collection vehicles traversing on roads in the County, which reduces impacts on such roads, reduces noise impacts, and improves traffic safety. Further, public collection can better allocate

the costs of solid waste management by allowing the local government to apportion costs among waste generators based upon volume of waste generated. It also allows the local government to direct different waste types to the most appropriate management facility for such wastes.

Martin County will explore the potential for implementing public collection and becoming a market participant for MSW collection and management services. Based on the interest of protecting public health, safety, welfare and the environment, the County will examine alternative methods for public collection. Those alternatives include contracting with waste haulers, and public provision of waste collection services by obtaining and operating MSW collection equipment.

3. Solid Waste Ordinance

Ordinance status

Martin County's solid waste ordinance provides guidance on licensing, fees, disposal options for solid waste, enforcement and violations. The County has recently reviewed and updated the ordinance, in order to contribute to County waste reduction and recycling goals, and to support the preferred system for managing solid waste.

Implementation and enforcement issues

The current ordinance has not created any implementation or enforcement issues. Unless future state or federal legislation should change or create a need for an ordinance amendment, the County does not anticipate changes in the near future.

Planned amendments

There are no planned amendments to the Solid Waste Ordinances in the next five years.

Responsible persons and required staff time

As there are no planned amendments to the Solid Waste Ordinance, there is no planned staff time for work on the ordinances.

E. Planning and Administration

1. Annual Plan Review and Five-year Update

Plan development time line

Martin County began the plan update process in late 2000, identifying the scope of planning issues and developing a process for completion. The County intends to complete its work on the plan and to submit the update to the OEA in June 2001, and anticipates approval of the plan by the OEA Director in July 2001. Under current planning requirements, the County will review progress annually and plan to begin the next update cycle in Fall 2005.

Plan development process

The County and Prairieland have worked extensively on solid waste issues over the past several years, making system improvements to the Prairieland facility and County policies and programs. This work has created a strong foundation for the County to complete this plan update.

Martin County collaborated with Faribault County and Prairieland in this plan update. This collaboration was important in identifying key planning issues, ensuring compatible programs, and giving the public stakeholders a meaningful opportunity to participate in review and final completion of the plan update.

The County sought public input on an informal draft of the plan, as well as formally through the public notice process. Numerous discussions and meetings were held to ensure that participation opportunities were readily available.

Responsible persons

Martin County Environmental Services Department and the County's branch of the University of Minnesota Extension Service will share responsibility for implementing County programs for solid waste management. The County's Extension Service will take lead responsibility for identifying and addressing issues related to the plan.

Estimated staff time

Martin County's efforts for the next plan update will be minimal until Fall 2005, at which point County staff may be expected to spend up to 10 hours per week to identify important planning issues and to work with the County Board to determine a process for the next plan update.

Annual review

The staff annual review of the Solid Waste Management Plan is estimated to take 40 hours per year. The review allows the staff to assess progress and identify new program opportunities to better meet County goals.

2. Contingency to Primary Management System

In the event that the Prairieland facility is no longer able to receive solid waste, the Prairieland contracts with waste haulers will address contingency issues. Generally, haulers will deliver waste to area landfills in the event that Prairieland is not accepting waste. The specific terms for this contingency will be specified in the hauler contracts.

3. Solid Waste Facility Siting

Existing facilities are able to meet County needs and should continue to do so over the planning period. Therefore, a solid waste facility siting process is not necessary.

4. Public Participation and Citizen's Advisory Committee

Methods and documentation

Martin County seeks active public participation in solid waste management efforts, and undertakes specific steps to engage the public in planning and implementing programs, including:

- Outreach educational efforts, presentations and activities through schools, community groups, and other organized groups;
- Printed material (articles, advertisements), radio shows and advertisements and television spots; and
- The County actively involves the Chamber of Commerce for the cities and towns in the areas to address the issues of solid waste and to encourage volunteers to assist officials in all of the activities.

University of Minnesota Extension Service staff maintains records of all public participation efforts and keeps updated files on all public outreach activities. Annual reports further document efforts to inform the public on solid waste issues and to gain input on program development.

Documentation location

County staff maintains all information related to Martin County solid waste management policies and programs, public outreach and input, and related documentation. This information is available to the public for review upon request.

On-going participation

Martin County and Prairieland Board have made substantial efforts during the past several years to engage the public and build strong support for the current solid waste management system. The County and Prairieland intend to continue to work together to maintain public involvement in the solid waste programs. The strategy for public participation continues to emphasize proactive public communication and input in the overall goals of the waste management program. The outreach efforts have been conducted to date have established a foundation of cooperation to develop between the Prairieland Solid Waste Board and both Faribault County and Martin Counties.

5. Solid Waste Staff

Existing staff

Martin County and Prairieland both contribute to implementing the programs outlined by the County. The basic division of responsibilities is outlined below.

Martin County Environmental Services Director – The County’s Environmental Services Director is responsible for the legal and regulatory functions related to solid waste management.

University of Minnesota Extension Service – Extension Service staff plays the primary role for the County in all waste education and abatement activities, coordinates communication with Prairieland staff, and works with the Environmental Services Director.

Prairieland Facility staff – Staff from the Prairieland facility are responsible for all solid waste processing efforts, securing arrangements with haulers for solid waste delivery, and monitoring waste disposal practices. In addition, Prairieland staff contribute to education and waste abatement activities, in cooperation with University of Minnesota Extension Service staff, and provide support for the household hazardous waste program.

Staffing needs

Current staffing levels have been able to meet the County’s needs with regard to solid waste management. However, increased availability of staff for waste education and abatement outreach could contribute to further gains in waste abatement.

County collection days, litter clean-up days and city improvement days are possible through the support of volunteers who have been willing to give time and energy to ensure the various program's success.

6. Itemized Solid Waste Budget

A ten-year budget projection for Martin County is included at the end of this chapter.

Financial assumptions

The financial assumptions for the Martin County budget were the following:

1. SCORE funds for the counties would remain constant.
2. MPCA funds for the HHW program would remain constant.
3. Revenues from the County’s Solid Waste Management Service Fee remain stable.

7. Solid Waste Program Funding

Funding policies and goals

Martin County and the Prairieland Board are committed to equitable and efficient funding for all solid waste programs. In addition, the County is committed to ensuring that solid waste costs are

visible to waste generators, and provide incentives to reduce waste generation and fully participate in the solid waste management system.

Existing funding mechanisms

Martin County funding mechanisms for solid waste management are designed to provide stable funding for solid waste management activities, encourage waste reduction and recycling, and ensure that the generators participate in the County's preferred waste management system. The funding mechanisms listed below contribute to meeting these objectives for financing solid waste management activities.

Solid Waste Management Service Fee – The County has developed a solid waste management service fee to support operations at the Prairieland facility. The service fee, by ordinance, has two options. The first option, a property-based fee, is the one currently in use by the County. The second option is a hauler-collected service fee, based on waste collections.

SCORE and HHW grant funds – These State grants are intended to support County programs for waste abatement and household hazardous waste. Each program specifies local matching requirements, direction on appropriate uses, and annual reporting on activities.

Prairieland facility tip fees – While not directly related to Martin County revenues, the Prairieland facility tip fees fund resource recovery and disposal activities for Martin County solid waste. Other funding mechanisms for the Prairieland Facility include the sale of compost and recyclables from the facility. These revenues represent one percent of the revenue sources at the facility.

Amounts and sources of funding

A ten-year budget for Martin County's solid waste management activities is included at the end of this chapter.

8. Goal Volume Table

The Goal Volume Table follows at the end of this chapter. This table provides a complete numerical profile of the County's solid waste management system, projected forward for the next ten years. Total waste generation, recycling, HHW and problem materials, and on-site management are all included in the table.