STATE OF MICHIGAN

JOHN ENGLER, Governor

DEPARTMENT OF ENVIRONMENTAL QUALITY

"Better Service for a Better Environment"

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RUSSELL J. HARDING, Director

September 20, 2001

Mr. Carl L. Geiger, Chairman
Roscommon County Board of Commissioners
P.O. Box 776
Roscommon, Michigan 48653

Dear Mr. Geiger:

The Department of Environmental Quality (DEQ) received the locally approved update to the Roscommon County Solid Waste Management Plan (Plan) on December 26, 2000. Except for the item indicated below, the Plan is approvable. As outlined in the March 6, 2001 letter to you, from Mr. Stan Idziak, DEQ, Waste Management Division, and as agreed to by letter dated July 20, 2001, from you to Mr. Idziak, the DEQ makes a modification to the Plan as discussed below.

On page III-27, under Siting Criteria and Process, it reads:

> If the proposed facility is a sanitary landfill and the County has 66 months or more of disposal capacity remaining for all solid waste generated in the County, the County may, at its discretion, refuse to allow the facility to be sited. Remaining disposal capacity shall be determined by the County Solid Waste Management Advisory Board (SWMAB) by using the solid waste generation data contained in this plan and the capacity calculations on page IV-1. Furthermore, the SWMAB shall verify the capacity remaining at each of the disposal facilities authorized in this plan at the time an application is received.

The paragraph preceding the above statement states that Roscommon County (County) has well over ten years of capacity, and a siting process for new facilities is not required. Since the Plan does not contain a siting process or criteria, the 66-month trigger to initiate the siting mechanism is not necessary. Therefore, the above statement is deleted from the Plan. Since the Plan does not contain siting criteria and does not identify specific locations for new disposal areas, any new disposal area in the County can only be sited through a Plan amendment. However, the Plan allows the establishment of publicly and/or privately operated Type A and Type B transfer stations anywhere in the County (page III-2).

By approving the Plan with the modification, the DEQ has determined that it complies with the provisions of Part 115, Solid Waste Management, of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended, and the Part 115 administrative rules concerning the required content of solid waste management plans. Specifically, the DEQ has determined that the Plan identifies the enforceable mechanisms that authorize the state, a county, a municipality, or a person to take legal action to guarantee compliance with the Plan, as required by Part 115. The Plan is enforceable, however, only to the extent the County properly implements these enforceable mechanisms under applicable enabling legislation. The Plan itself does not serve as such underlying enabling authority, and the DEQ approval of the Plan neither restricts nor expands County authority to implement these enforceable mechanisms.

The Plan may also contain other provisions that are neither required nor expressly authorized for inclusion in a solid waste management plan. The DEQ approval of the Plan does not extend to any such provisions. Under Part 115, the DEQ has no statutory authority to determine whether such provisions have any force or effect.

The DEQ applauds your efforts and commitment in addressing the solid waste management issues in Roscommon County. If you have any questions, please contact Ms. Rhonda Oyer Zimmerman, Chief, Solid Waste Management Unit, at 517-373-4750.

Sincerely,

Russell J. Harding
Director
517-373-7917

cc: Senator George A. McManus, Jr.
Representative Rick Johnson
Mr. Arthur R. Nash Jr., Deputy Director, DEQ
Mr. Timothy R. Sowton, Legislative Liaison, DEQ
Mr. Jim Sygo, DEQ
Ms. Joan Peck, DEQ
Mr. Philip Roycraft, DEQ - Cadillac
Ms. Rhonda Oyer Zimmerman, DEQ
Mr. Stan Idziak, DEQ
Roscommon County File

Roscommon County
Solid Waste Management Plan Update

December 2000

Approved by the
County Solid Waste Management Planning Committee
February 3, 2000

Approved by the County Board of Commissioners
February 10, 2000

Approved by the Roscommon County Municipalities

Submitted to the
Michigan Department of Environmental Quality

Prepared by the
Roscommon County Solid Waste Management Planning Committee

With the assistance of the
East Central Michigan Planning & Development Regional Commission
3144 Davenport, Suite 200
Saginaw MI 48602

Roscommon County Solid Waste Management Plan Update

PLAN FORMAT

FOR PREPARING

COUNTY SOLID WASTE MANAGEMENT PLANS

AS REQUIRED BY SECTION 11539a OF
PART 115, SOLID WASTE MANAGEMENT, OF
THE NATURAL RESOURCES AND ENVIRONMENTAL PROTECTION ACT
1994 PA 451, AS AMENDED

John Engler, Governor
Russell J. Harding, Director

Michigan Department of Environmental Quality
Waste Management Division

This document is available to download from our Internet site at:
http://www.deq.state.mi.us./wmd/sections/swpshome.html

EQP 5210 (8-97)

Roscommon County Solid Waste Management Plan Update

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1997 PLAN UPDATE COVER PAGE

The Natural Resources and Environmental Protection Act, 1994 PA 451, as amended (NREPA), Part 115, Solid Waste Management, and its Administrative Rules, requires that each County have a Solid Waste Management Plan Update (Plan) approved by the Michigan Department of Environmental Quality (DEQ). Section 11539a requires the DEQ to prepare and make available a standardized format for the preparation of these Plan updates. This document is that format. The Plan should be prepared using this format without alteration. Please refer to the document entitled "Guide to Preparing the Solid Waste Management Plan Update" for assistance in completing this Plan format.

DATE SUBMITTED TO THE DEQ: December 21, 2000

If this Plan includes more than a single County, list all counties participating in this Plan.

The following lists all the municipalities from outside the County who have requested and have been accepted to be included in the Plan, or municipalities within the County that have been approved to be included in the Plan of another County according to Section 11536 of Part 115 of the NREPA. Resolutions from all involved County boards of commissioners approving the inclusion are included in Appendix E.

Municipality	Original Planning County	New Planning County

DESIGNATED PLANNING AGENCY PREPARING THIS PLAN UPDATE:
East Central Michigan Planning & Development Regional Commission (ECMPDR)

CONTACT PERSON: Sue Fortune, Executive Director

ADDRESS: 3144 Davenport Avenue, Suite 200
Saginaw MI 48602

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E-MAIL: (If Applicable)

CENTRAL REPOSITORY LOCATION(S): (1) ECMPDR , 3144 Davenport Ave, Suite 200, Saginaw, Michigan, 48602 (2) Roscommon County Board Office, 112 S. Fourth Street, Roscommon, Michigan 48653.

EXECUTIVE SUMMARY

The following summarizes the solid waste management system selected to manage solid waste within the County. In case of conflicting information between the executive summary and the remaining contents of the Plan update, the information provided in the main body of the Plan update found on the following pages will take precedence over the executive summary.

OVERALL VIEW OF THE COUNTY (attach additional pages as necessary)

Township or Municipality Name	Population	% Land Use		% of Economic Base*				
		Rural	Urban	Ag	For	Ind	Com	Other
Au Sable Twp	338	99%	1%	14.6%	0	0	2.9%	82.5%
Backus Twp	258	98%	2%	1.5%	0	0.03%	5.0%	93.5%
Denton Twp	4,815	90%	10%	0.3%	0	0.2%	13.3%	86.2%
Gerrish Twp	2,875	90%	10%	0.1%	0	0	2.1%	97.8%
Higgins Twp	2,980	92%	8%	4.2%	0	2.4%	24.5%	68.9%
Lake Twp	1,359	95%	5%	5.5%	0	0	6.4%	88.1%
Lyon Twp	1,215	94%	6%	2.3%	0	0.2%	2.5%	94.8%
Markey Twp	2,009	92%	8%	1.4%	0	0	5.9%	92.7%
Nester Twp	238	99%	1%	0	0	0	0	100%
Richfield Twp	3,816	94%	6%	1.4%	0	0	5.6%	93.0%
Roscommon Twp	3,554	94%	6%	2.0%	0	0.01%	23.0%	74.9%
Roscommon Village	978	Included with Higgins Twp.						
ROSCOMMON COUNTY	23,467	95%	5%	1.7%	5.4%	0.2%	8.0%	84.7%

Total Population 23,467

*Ag = Agriculture; For = Forestry; Ind = Industry; Com = Commercial; Oth = All Other Economic Bases
Additional listings, if necessary, are listed on an attached page.

EXECUTIVE SUMMARY

CONCLUSIONS

Roscommon County's current solid waste management system is functioning well, and it provides an effective means for managing the solid waste that is generated in the county. Solid waste collection and transportation services are mainly provided by the private sector and are available to all residents, businesses, and industries in the county. Solid waste that is generated in Roscommon County is currently transported to the Northern Oaks Recycling and Disposal Facility in Clare County, the Whitefeather Landfill in Bay County, and the Waters

Landfill in Crawford County for final disposal, and these arrangements will continue under the updated plan. This plan also authorizes the disposal of solid waste from Roscommon County at the Montmorency-Oscoda Landfill in Montmorency County. These landfills have sufficient capacity to provide for Roscommon County's solid waste disposal needs for the next 10 years and beyond.

Separation and collection of recyclable materials and yard waste for composting takes place in several communities in the County through both curbside collection and drop-off sites. The updated plan encourages the continuation of these programs.

It is the conclusion of this planning process that the current solid waste management system is capable of meeting Roscommon County's needs for solid waste collection, transportation, materials recovery, and disposal. However, the County and its municipalities also desire to continually seek ways to improve the existing management system and its various components.

SELECTED ALTERNATIVES

Roscommon County's current solid waste management system is functioning well, and it provides an effective means of managing the solid waste that is generated within the County. However, this Plan Update also seeks to provide the County and municipalities with a high degree of flexibility for exploring and pursuing system improvements in the future. Therefore, Roscommon County's selected management system combines several aspects of the various alternatives that were considered. An overview of the major components of this system follows.

1. Collection and Transportation of Solid Waste. The existing collection and transportation system will remain in place. Solid waste collection services will continue to be provided to all county residents, businesses, and industries. Currently, these services are provided to residents by private enterprise through municipal contracts with solid waste haulers. Businesses, industries, and institutions presently make individual arrangements with private industry for solid waste collection services. However, it is not this plan's intent to preclude involvement by municipalities from providing solid waste collection services to citizens within their respective jurisdictions. In the future, the County and municipalities are encouraged to explore the potential benefits of forming a county or multi-county solid waste authority (or similar entity) for the provision of some solid waste management services.

2. Disposal of Solid Waste. Licensed Type II landfills in Clare, Bay, Montmorency, and Crawford Counties will continue to meet Roscommon County's solid waste disposal needs for the planning period. However, the County and local government units also wish to retain the option of developing a publicly-owned solid waste disposal facility should such a project prove to be economically feasible and beneficial.

3. Recycling. Under the selected alternative, the current programs are encouraged to continue their operations. All local governments are encouraged to provide recycling opportunities for their residents, either through arrangements for drop-off sites or the provision of curbside collection for recyclables. The County and local units will also continue to explore the potential for cooperative recycling efforts both within the County and with other surrounding counties. Discussions on potential regional recycling projects are currently being held with Antrim, Crawford, Kalkaska, and Otsego Counties.

4. Composting. The plan encourages the continuation of the current municipal composting operations. "Backyard" composting by residents will also continue to be encouraged. All municipalities are encouraged to provide composting opportunities for their residents as needs dictate, either through curbside collection of yard wastes or through local drop-off sites. Again, the plan does not intend to limit the ability of any local government unit to establish a composting site and program. Cooperative arrangements among various government units will be explored under the selected system. Opportunities for regional composting programs in cooperation with surrounding counties will also be investigated.

5. Separation of Household Hazardous Wastes. There is presently no formal hazardous waste collection program in place. The high costs associated with such programs generally preclude the County from directly providing this type of service. The Northern Oaks Recycling and Disposal Facility in Clare County holds an annual Household Hazardous Waste Collection Day at the facility. Roscommon County residents are eligible to participate in this program. However, the County should also work in partnership with the private solid waste industry to explore ways to provide expanded opportunities for separation and collection of household hazardous wastes from residents.

6. Resource Conservation and Waste Reduction. Resource conservation and waste reduction will continue to be encouraged on a voluntary basis by residents, businesses, and industries. The County should investigate ways to expand public information and education in this area.

7. Transfer Facilities. The existing "Type B" transfer facilities will be continued under the selected plan. Additional Type B facilities may be established in the future by local government units, either in cooperation with the private solid waste industry or on their own. Also, a "Type A" transfer facility (one that requires licensing by the DEQ) may also be developed under the selected plan. A Type A facility could be owned and operated publicly, privately, or through some combination. Such a facility may be desirable in the future to make the transfer of solid waste to landfills in other counties more efficient, and it could also serve as a point for collection and separation of recyclable materials.

INTRODUCTION

GOALS AND OBJECTIVES

To comply with Part 115 and its requirements, each Plan must be directed toward goals and objectives based on the purposes stated in Part 115, Sections 11538.(1)(a), 11541.(4) and the State Solid Waste Policy adopted pursuant to this Section, and Administrative Rules 711(b)(i) and (ii). At a minimum, the goals must reflect two major purposes of Solid Waste Management Plans:

(1) To utilize to the maximum extent possible the resources available in Michigan's solid waste stream through source reduction, source separation, and other means of resource recovery and;

(2) to prevent adverse effects on the public health and the environment resulting from improper solid waste collection, transportation, processing, or disposal, so as to protect the quality of the air, the land, and ground and surface waters.

This Solid Waste Management Plan works toward the following goals through actions designed to meet the objectives described under the respective goals which they support:

Goal 1: Develop an efficient, environmentally sound, and cost-effective solid waste management system that is capable of meeting the County's diverse needs for the next 10 years.

Objective 1a: Assign within the County the responsibilities for carrying out the various actions required for implementing the adopted Solid Waste Management Plan.

Objective 1b: Encourage new and innovative materials and energy recovery technologies.

Goal 2: 2. Encourage inter-county cooperation in the development of a solid waste management system.

Objective 2a: Investigate opportunities for multi-county materials recovery programs.

Goal 3: 3. Encourage continued participation by the private sector in all solid waste management activities.

Objective 3a: Arrange for adequate landfill space to meet the County's solid waste disposal needs.

Objective 3b: Encourage the expanded use of private/non-profit organizations for operating and coordinating formal efforts in recycling and resource recovery.

Goal 4 Develop an integrated solid waste management system that includes waste reduction, source separation, recycling, composting, and landfilling as its major components.

Objective 4a: Develop and implement education programs for waste reduction, source separation,, recycling, and integrated solid waste management for County residents.

Objective 4b: Encourage the expanded use of all feasible non-landfill alternatives for solid waste management.

Goal 5: Promote governmental, institutional, commercial, and industrial recycling capabilities.

Objective 5a: Review local government and public institution procurement policies and and encourage the appropriate entities to revise them as necessary to further encourage the use of recycled and recyclable materials.

Objective 5b: Encourage the development and implementation of recycling programs for all feasible materials.

Goal 6: Encourage the creation and expansion of markets for recycled materials, and the use of recyclable and recycled materials by government, business, industry, and the public.

Objective 6a: Review local government and public institution procurement policies and and encourage the appropriate entities to revise them as necessary to further encourage the use of recycled and recyclable materials.

Objective 6b: Encourage appropriate local, state, and federal legislation to provide incentives for waste reduction, source separation, and recycling.

☐ Note: Additional goals and objectives are listed on attached pages.

DATA BASE

Identification of sources of waste generation within the county, total quantity of solid waste generated to be disposed, and sources of the information. (Attach additional pages as necessary)

Solid waste generation estimates for Roscommon County were obtained from the most recent DEQ "Report of Solid Waste Landfilled in Michigan" for the period of October 1, 1997 through September 30, 1998. The report on volumes landfilled showed that 39,009 cubic yards of solid waste generated in Roscommon County were disposed of at licensed Type II landfills. No Type III solid waste disposal was reported. The main facilities presently used for disposal are the Northern Oaks RDF located in Clare County, the Whitefeather Landfill in Bay County, and the Waters Landfill in Crawford County.

Recycling data collected by local programs in the County show that approximately 870 tons of material were collected and marketed during 1998. This quantity also represents roughly 290 cubic yards of material that would have otherwise been placed in landfills. Also, about 11,000 cubic yards of yard wastes, wood wastes, and lake weeds were collected and composted during 1998. This represents additional material that was diverted from landfills.

The current solid waste collection and disposal system appears to be working well, and no major problems are anticipated. There are no special wastes generated in the county that create any unique problems for collection, transportation, or disposal. Landfill capacity in the region is adequate and provides Roscommon County with more than ten years of capacity.

The types of solid waste generated in generated in Roscommon County have been categorized below. Waste volumes have also been projected for five-year and ten-year planning periods.

Waste Type	Current Annual Volume	Five-Year Annual Volume (2004)	Ten-Year Annual Volume (2009)
Residential	30,179 cyds.	34,200 cyds.	36,000 cyds.
Commercial	8,048 cyds.	9,120 cyds.	9,600 cyds.
Industrial	6,036 cyds.	6,840 cyds.	7,200 cyds.
Other*	6,036 cyds.	6,840 cyds.	7,200 cyds.

* "Other" solid waste includes construction & demolition waste, wastewater treatment plant sludge, bulky items, tires, and agricultural waste.

TOTAL QUANTITY OF SOLID WASTE GENERATED:
50,299 ☐ Tons or ☒ Cubic Yards in one year (identify unit of time)

TOTAL QUANTITY OF SOLID WASTE NEEDING DISPOSAL:
39,009 ☐ Tons or ☒ Cubic Yards in one year (identify unit of time)

DATA BASE

Inventory and description of all solid waste disposal areas within the County or to be utilized by the County to meet its disposal needs for the planning period.

The following is a listing of the solid waste disposal areas that Roscommon County currently utilizes to meet its disposal needs. All of these facilities are located in surrounding counties. Detailed descriptions of these disposal areas are included on the following pages.

Type II Landfills (County Location):

Whitefeather Landfill (Bay County)
Northern Oaks Recycling & Disposal Facility (Clare County)
Waters Landfill (Crawford County)

DATA BASE

FACILITY DESCRIPTIONS

Facility Type: Type II Landfill

Facility Name: Whitefeather Landfill

County: Bay Location: Town: 17N Range: 4E Section(s): 2

Map identifying location included in Attachment Section: x Yes No

If facility is an Incinerator or a Transfer Station, list the final disposal site and location for Incinerator ash or Transfer Station wastes:

☐ Public ☒ Private Owner: Republic Services

Operating Status (check)		Waste Types Received (check all that apply)	
☒	open	☒	residential
☐	closed	☒	commercial
☒	licensed	☒	industrial
☐	unlicensed	☒	construction & demolition
☐	construction permit	☒	contaminated soils
☐	open, but closure pending	☒	special wastes *
		☐	other:

* Explanation of special wastes, including a specific list and/or conditions:
Asbestos

Site Size:

Total area of facility property:	752	acres
Total area sited for use:	106	acres
Total area permitted:	56.5	acres
Operating:	24.5	acres
Not excavated:	32	acres
Current capacity:	4,175,153	☐ tons or ☒ yds^3
Estimated lifetime:	18.8	years
Estimated days open per year:	260	days
Estimated yearly disposal volume:	380,000	☐ tons or ☒ yds^3

(if applicable)
Annual energy production:

Landfill gas recovery projects:	NA	megawatts
Waste-to-energy incinerators:	NA	megawatts

FACILITY DESCRIPTIONS

Facility Type: Type II Landfill

Facility Name: Northern Oaks Recycling & Disposal Facility

County: Clare Location: Town: 19N Range: 4W Section(s): 32

Map identifying location included in Attachment Section: ☒ Yes ☐ No

If facility is an Incinerator or a Transfer Station, list the final disposal site and location for Incinerator ash or Transfer Station wastes:

☐Public ☒ Private Owner: Waste Management

Operating Status (check)		Waste Types Received (check all that apply)	
☒	open	☒	residential
☐	closed	☒	commercial
☒	licensed	☒	industrial
☐	unlicensed	☒	construction & demolition
☐	construction permit	☒	contaminated soils
☐	open, but closure pending	☒	special wastes *
		☐	other:

* Explanation of special wastes, including a specific list and/or conditions:
WWTP filter cake, sludge

Site Size:

Total area of facility property:	320	acres
Total area sited for use:	76	acres
Total area permitted:	76	acres
Operating:	19	acres
Not excavated:	57	acres
Current capacity:	8,755,100	☐tons or ☒yds^3
Estimated lifetime:	43	years
Estimated days open per year:	260	days
Estimated yearly disposal volume:	409,000	☐tons or ☒yds^3

(if applicable)
Annual energy production:

Landfill gas recovery projects:	NA	megawatts
Waste-to-energy incinerators:	NA	megawatts

FACILITY DESCRIPTIONS

Facility Type: Type II Landfill

Facility Name: Waters Landfill (City Environmental Services of Waters)

County: Crawford Location: Town: 28N Range: 3E Section(s): 4

Map identifying location included in Attachment Section: X Yes No

If facility is an Incinerator or a Transfer Station, list the final disposal site and location for Incinerator ash or Transfer Station wastes:

☐ Public ☒ Private Owner: Waste Management

Operating Status (check)		Waste Types Received (check all that apply)	
☒	open	☒	residential
☐	closed	☒	commercial
☒	licensed	☒	industrial
☐	unlicensed	☒	construction & demolition
☐	construction permit	☒	contaminated soils
☐	open, but closure pending	☒	special wastes *
		☐	other:

* Explanation of special wastes, including a specific list and/or conditions:

Site Size:

Total area of facility property:	256	acres
Total area sited for use:	252	acres
Total area permitted:	79	acres
Operating:	9.7	acres
Not excavated:	64.87	acres
Current capacity:	5,700,000	☐ tons or ☒ yds^3
Estimated lifetime:	20	years
Estimated days open per year:	313	days
Estimated yearly disposal volume:	200,000	☐ tons or ☒ yds^3

(if applicable)
Annual energy production:

Landfill gas recovery projects:	NA	megawatts
Waste-to-energy incinerators:	NA	megawatts

DATA BASE

SOLID WASTE COLLECTION SERVICES AND TRANSPORTATION INFRASTRUCTURE

The following describes the solid waste collection services and transportation infrastructure that will be utilized within the County to collect and transport solid waste.

The collection and transportation of solid waste that is generated at residences, businesses, and industries in Roscommon County is accomplished exclusively by the private solid waste industry. In all local governments within the County, solid waste collection services are provided under municipal contracts with private industry.

Recycling drop-off sites are available for residents in Denton, Gerrish, and Higgins Townships, and in the Village of Roscommon. Curbside collection of recyclables takes place in Roscommon Township.

Curbside collection of yard waste takes place in Gerrish, Higgins, Markey and Lyon Townships, and in the Village of Roscommon. Composting drop-off sites are also furnished in Denton, Gerrish, Higgins, and Roscommon Townships, and in Roscommon Village.

Current information on solid waste collection services in Roscommon County is summarized in the following table. A key to the information in the table is also attached.

Roscommon County
Solid Waste Collection & Transportation Information

Community	1 Service Provider	2 Service Type		3 Payment Method	4 Additional Services	5 Transfer Station		6 Landfill
Townships		Curbside	Drop-off Site			Type A	Type B	
Au Sable	WMI	X		S			X	Northern Oaks
Backus	WMI	X		S			X	Northern Oaks
Denton	WMI	X		S	RB, RD CS			Northern Oaks
Gerrish	WMI	X		S	RD, YW CS			Northern Oaks Waters
Higgins	WMI	X		G, S	RD (4), YW CS			Northern Oaks
Lake	WMI	X		S				Waters
Lyon	WMI	X		S				Waters
Markey	WMI	X		S				Northern Oaks
Nester	WMI	X		S		X		Northern Oaks
Richfield	WMI	X		S				Northern Oaks
Roscommon	WMI	X		S	RC, CS			Northern Oaks
Village								
Roscommon	WMI	X		G, S	RD, YW CS			Northern Oaks

Solid Waste Collection & Transportation Services
Key to Information in the Table

The following numbers refer to the numbered blocks on the form:

1. **Service Provider**. This entry identifies the firms or other organizations that provide solid waste collection services in the community:

   WMI Waste Management

2. **Service Type**. These columns are marked to indicate whether solid waste is picked up from residences (curbside service) or must be transported to a drop-off site (transfer station or similar arrangement).

3. **Payment Method**. The following codes to indicate the method of payment for services:

   I Individuals billed directly for service
   G Services are paid for from the local government's General Fund
   S A special fee is levied for trash collection, such as a special assessment

4. **Additional Services**. The following codes indicate any additional services that are available.

   RC Curbside collection of separated recyclable materials from residences is provided.
   RB Collection of specified recyclable materials from businesses is provided.
   RD Separated recyclable materials may be dropped off at a designated site in the community.
   YW Separate collection of yard waste is provided to residences.
   CS A site where residents may drop off yard waste for composting is provided in the community.

5. **Transfer Station**. The columns are marked if a transfer station is located in the community.

   Type A transfer stations are generally enclosed facilities where solid waste is mechanically unloaded from commercial collection vehicles. The waste is often compacted for transport to a landfill in large loads.

   Type B transfer stations generally consist of roll-off units or "dumpster" containers where residents may directly deposit their garbage. The containers are picked up or emptied by collection vehicles for transport to a landfill.

6. **Landfill**. This entry indicates the landfill where the solid waste generated in the community is taken for final disposal.

EVALUATION OF DEFICIENCIES AND PROBLEMS

The following is a description of problems or deficiencies in the existing solid waste system.

As part of the plan update process, the Roscommon County Solid Waste Management Planning Committee (SWMPC) considered problems and deficiencies in the current solid waste system. The following is a compilation of the committee's responses on this topic:

1. Lack of competition in the solid waste industry is a concern.

2. Northern Oaks landfill in Clare County is primary disposal site for most of Roscommon County's solid waste. This facility is also owned by Waste Management. There are concerns over the potential for rising disposal charges and limited choices in hauling firms and disposal sites.

3. Because of the concerns identified in #1 and #2 above, some local officials feel that a new publicly available disposal facility should be considered.

4. There are problems in marketing recyclable materials that are collected, such as low market prices and high costs for transporting materials to markets.

5. Better data collection and tracking is needed for recycling efforts.

6. Efforts should be directed toward increasing recycling participation (should aim for 100% participation).

7. Illegal dumping on forest lands and other locations is a problem.

DATA BASE

DEMOGRAPHICS

The following presents the current and projected population densities and centers for five and ten year periods, identification of current and projected centers of solid waste generation including industrial solid waste for five and ten year periods as related to the Selected Solid Waste Management System for the next five and ten year periods. Solid waste generation data is expressed in tons or cubic yards, and if it was extrapolated from yearly data, then it was calculated by using 365 days per year, or another number of days as indicated.

From 1990 to 1997, Roscommon County's population is estimated to have grown by over 17%. This represents an annual growth rate of nearly 2.5%. If this trend continues, the county population will reach 26,765 by 2003 and 30,179 by 2008.

Population estimates for the municipalities within the County are available through 1996. Population growth within the local government units during 1990 through 1996 ranged from 6.2% (Nester Township) to 83.8% (Higgins Township).

Information on recent population trends in Roscommon County, and projections for both population growth and solid waste generation over the next 10 years are shown on the attached pages.

Roscommon County
Current Annual Solid Waste Generation & Disposal

Disposal Facility	Type II Solid Waste (% of total)	Type III Solid Waste
Northern Oaks RDF (Clare)	24,252 cubic yards	0
Whitefeather (Bay)	2,133 cubic yards	0
Waters Landfill (Crawford)	12,624 cubic yards	0
Total	**39,009 cubic yards**	**0**

Source: "Report of Solid Waste Landfilled in Michigan October 1, 1997 — September 30, 1998," Michigan Department of Environmental Quality, Waste Management Division, February 4, 1999.

Roscommon County Population Trends

1990 Census	1996 Estimate	1997 Estimate	% Change 1990 — 1997	Average Change Per Year
19,776	22,831	23,174	17.2%	2.46%

Source: Bureau of the Census, U.S. Department of Commerce, Federal-State Cooperative Program for Population Estimates, Released on March 17, 1998.

Roscommon County
Population and Solid Waste Generation Projections

	1998	2003	2008
County Population	23,737	26,765	30,179
Annual Solid Waste Generation	39,009 cubic yards	44,049 cubic yards	49,740 cubic yards

Projections calculated based on estimated 1997 population of 23,174 and FY 98 solid waste volume of 39,009 cubic yards landfilled. Rate of increase of both population & solid waste landfilled was assumed to be 2.46% per year.

DATA BASE

LAND DEVELOPMENT

The following describes current and projected land development patterns, as related to the Selected Solid Waste Management System, for the next five and ten year periods.

Roscommon County is primarily a rural, forested, and recreational area. Approximately 90% of the county's land area is comprised of forests, water bodies, and wetlands. Public State Forest lands account for about one-half of the land area. Higgins and Houghton Lakes, Lake St. Helen, and the Au Sable and Muskegon Rivers provide abundant recreation opportunities.

Federal, state, and local governments are the largest employers in the county. Retail trade, tourism, services, manufacturing, and petroleum production dominate the private sector. Kirtland Community College is also located in the county.

Land cover data for Roscommon County and its municipalities were tabulated from the Michigan Resource Information System (MIRIS). The major land cover types for the county as a whole are:

- Forested 70%
- Water 10%
- Wetlands 10%
- Open 4%
- Agriculture 1%
- Urban 5%

DATA BASE

SOLID WASTE MANAGEMENT ALTERNATIVES (attach additional pages as necessary)

The following briefly describes all solid waste management systems considered by the County and how each alternative will meet the needs of the County. The manner of evaluation and ranking of each alternative is also described. Details regarding the Selected Alternatives are located in the following section. Details regarding each non-selected alternative are located in Appendix B.

The following alternative systems were discussed and evaluated by the County Solid Waste Management Planning Committee (SWMPC):

Alternative A: Retain the Current Management System
Alternative A represents the "status quo" alternative and is always an option. This assumes the continuation of the current management system (i.e., continued use of the out-of-county landfills) without any major changes. Recycling and composting would be continued as they are currently practiced, without any major expansion efforts.

Advantages:
- Acceptance of current system
- New costs would be minimal
- No new sites or facilities required
- No major institutional or administrative changes

Disadvantages:
- Lack of efforts to improve management system or services to public
- No mechanism to increase materials recovery beyond current levels
- No mechanisms to increase awareness and involvement by government and citizens.

Alternative B: Existing Landfills with Enhanced Recycling & Composting.
Under this option, use of the present landfills outside the county for disposal would be continued. However, attention would focus on the expansion of recycling and composting opportunities within the county.

Under the present system, recycling and composting efforts are primarily being conducted by the private solid waste industry. Alternative B would call for greater involvement by county and local government in promoting and coordinating materials recovery programs.

Advantages:
- Increased levels of materials recovery (recycling & composting)
- Greater public involvement & awareness
- Conservation of landfill space
- Low capital costs — minimal facility requirements

Disadvantages:

- Some funding required for program establishment & activities
- Requires change — always some difficulties with acceptance
- Requires greater coordination efforts

Alternative C: Regional Solid Waste Management System.

This alternative calls for the creation of a regional solid waste management system in cooperation with several surrounding counties. From an institutional standpoint, this option calls for the creation of a formal solid waste management authority or similar entity.

Under this option, the use of the existing, privately-owned landfills within this group of counties would continue. Due to current disposal capacity, this alternative does not call for the development of a new regional landfill. However, the creation of an authority would give the counties greater ability to control the solid waste stream and to direct it to certain facilities, if necessary.

Advantages:

- Regional collection of recyclable materials
- Regional marketing of recyclable materials
- Regional purchasing of recycled products
- Potential regional processing facilities for mixed waste and composting
- Regional franchises for solid waste collection and other services.

Disadvantages:

- Political barriers to intergovernmental cooperation
- Higher costs associated with potential regional processing facilities
- Difficulties in siting any new solid waste facilities

Alternative D: Countywide Solid Waste Authority

A fourth alternative would involve the formation of a countywide solid waste management authority or similar body. Such an authority might assume responsibility for contracting with the private sector for solid waste collection services on behalf of all the municipalities. To expand the concept, an authority could also take on the responsibility for actually providing solid waste collection and other services, such as collection and marketing of recyclable materials on a countywide basis.

Other components of this alternative might be similar to Alternative B, with an emphasis on enhanced materials recovery activities.

Advantages:

- May be able to obtain better price for services through competitive bidding
- May achieve expanded recycling on countywide basis
- Greater coordination & cooperation on solid waste activities

Disadvantages:

- Technical & financial resources required to establish & operate an authority.

- High capital & operating costs if authority goes into the solid waste business.
- May be opposition to perceived competition with the private sector.

Evaluation of Alternative Solid Waste Management Plans
The alternatives were evaluated according to the following factors, as specified in Act 451:

Technical feasibility. Can the alternative be implemented using available technology, or will the needed technology become available in the near future?

Economic feasibility. How much will it cost to implement the alternative? Is the cost greater than the financial capabilities of public and private entities? How will facility development, operation, and maintenance costs be provided?

Access to Land and Transportation Routes. Does the alternative require the acquisition of land? Would facilities be efficiently located? Will the existing transportation system be adequate, or will road improvements be required?

Energy Consumption/Production. Is the alternative energy-efficient for transportation and operation requirements? Would energy be produced in conjunction with any processing or disposal operations? Would any revenue be generated by energy production?

Environmental Impacts. What environmental impacts would result from implementation of the alternative? Would implementation create long-term impacts associated with operation and maintenance of solid waste facilities?

Public Health Effects. Would the alternative create, continue, or mitigate public health hazards associated with improper handling or disposal of solid waste?

Public Acceptability. Is the alternative likely to be accepted by county residents? Will it be politically acceptable to local governments? Will the alternative comply with all applicable laws, especially Act 451?

Evaluation Method
The three alternatives were evaluated through the use of a numerical ranking system. Using this point system, each committee member assigned a numerical score for each of the evaluation factors for each of the three alternatives. For each evaluation factor, the point values assigned by the members were added together to obtain a raw score for each factor. The points assigned for all the evaluation factors were then added to obtain a total score for each alternative plan. This evaluation process was performed for each alternative plan for both the five-year and ten-year planning periods.

Based on the results of the SWMPC's evaluation process, the preferred alternative is a "hybrid" plan that combines several components from all of the alternatives. Further details on the selected system are provided in the following section.

THE SELECTED SOLID WASTE MANAGEMENT SYSTEM

The Selected Solid Waste Management System (Selected System) is a comprehensive approach to managing the County's solid waste and recoverable materials. The Selected System addresses the generation, transfer and disposal of the County's solid waste. It aims to reduce the amount of solid waste sent for final disposal by volume reduction techniques and by various resource conservation and resource recovery programs. It also addresses collection processes and transportation needs that provide the most cost effective, efficient service. Proposed disposal areas locations and capacity to accept solid waste are identified as well as program management, funding, and enforcement roles for local agencies. Detailed information on recycling programs, evaluation, and coordination of the Selected System is included in Appendix A. Following is an overall description of the Selected System:

Roscommon County's current solid waste management system is functioning well, and it provides an effective means of managing the solid waste that is generated within the County. However, this Plan Update also seeks to provide the County and municipalities with a high degree of flexibility for exploring and pursuing system improvements in the future. Therefore, Roscommon County's selected management system combines several aspects of the various alternatives that were considered. An overview of the major components of this system follows.

1. Collection and Transportation of Solid Waste. The existing collection and transportation system will remain in place. Solid waste collection services will continue to be provided to all county residents, businesses, and industries. These services will continue to be provided by private enterprise through municipal contracts with solid waste haulers. However, it is not this plan's intent to preclude involvement by municipalities from providing solid waste collection services to citizens within their respective jurisdictions. In the future, the County and municipalities are encouraged to explore the potential benefits of forming a county or multi-county solid waste authority (or similar entity) for the provision of some solid waste management services.

2. Disposal of Solid Waste. Licensed Type II landfills in Clare, Bay, Montmorency, and Crawford Counties will continue to meet Roscommon County's solid waste disposal needs for the planning period. However, the County and local government units also wish to retain the option of developing a single publicly-owned solid waste disposal facility should such a project prove to be economically feasible and beneficial.

3. Recycling. Under the selected alternative, the current programs are encouraged to continue their operations. All local governments are encouraged to provide recycling opportunities for their residents, either through arrangements for drop-off sites or the provision of curbside collection for recyclables. The County and local units will also continue to explore the potential for cooperative recycling efforts both within the County and with other surrounding counties. Discussions on potential regional recycling projects are currently being held with Antrim, Crawford, Kalkaska, and Otsego Counties.

4. Composting. The plan encourages the continuation of the current municipal composting operations. "Backyard" composting by residents will also continue to be encouraged. All municipalities are encouraged to provide composting opportunities for their residents as needs dictate, either through curbside collection of yard wastes or through local drop-off sites. Again, the plan does not intend to limit the ability of any local government unit to establish a composting site and program. Cooperative arrangements among various government units will be explored under the selected system. Opportunities for regional composting programs in cooperation with surrounding counties will also be investigated.

5. Separation of Household Hazardous Wastes. There is presently no formal hazardous waste collection program in place. The high costs associated with such programs generally preclude the County from directly providing this type of service. The Northern Oaks Recycling and Disposal Facility in Clare County hold an annual Household Hazardous Waste Collection Day at the facility. Roscommon County residents are eligible to participate in this program. However, the County should also work in partnership with the private solid waste industry to explore ways to provide expanded opportunities for separation and collection of household hazardous wastes from residents.

6. Resource Conservation and Waste Reduction. Resource conservation and waste reduction will continue to be encouraged on a voluntary basis by residents, businesses, and industries. The County should investigate ways to expand public information and education in this area.

7. Transfer Facilities. The existing "Type B" transfer facilities will be continued under the selected plan. Additional Type B facilities may be established in the future by local government units, either in cooperation with the private solid waste industry or on their own. Type B facilities may be established under this plan as needed without any further siting review process. Also, a "Type A" transfer facility (one that requires licensing by the DEQ) may also be developed under the selected plan. A Type A facility could be owned and operated publicly, privately, or through some combination. Such a facility may be desirable in the future to make the transfer of solid waste to landfills in other counties more efficient, and it could also serve as a point for collection and separation of recyclable materials. The establishment of a Type A transfer facility will also be consistent with this plan.

IMPORT AUTHORIZATION

If a Licensed solid waste disposal area is currently operating within the County, disposal of solid waste generated by the EXPORTING COUNTY is authorized by the IMPORTING COUNTY up to the AUTHORIZED QUANTITY according to the CONDITIONS AUTHORIZED in Table 1-A.

Table 1-A

CURRENT IMPORT VOLUME AUTHORIZATION OF SOLID WASTE

IMPORTING COUNTY	EXPORTING COUNTY	FACILITY NAME[1]	AUTHORIZED QUANTITY/ DAILY	AUTHORIZED QUANTITY/ ANNUAL	AUTHORIZED CONDITIONS[2]
Roscommon	None	None			

[1] Facilities are only listed if the exporting county is restricted to using specific facilities within the importing county.

[2] Authorization indicated by P = Primary Disposal; C = Contingency Disposal; * = Other conditions exist and detailed explanation is included in the Attachment Section.

If a new solid waste disposal area is constructed and operating in the future in the County, then disposal of solid waste generated by the EXPORTING COUNTY is authorized by the IMPORTING COUNTY up to the AUTHORIZED QUANTITY according to the AUTHORIZED CONDITIONS in Table 1-B.

Table 1-B

FUTURE IMPORT VOLUME AUTHORIZATION OF SOLID WASTE CONTINGENT ON NEW FACILITIES BEING SITED

IMPORTING COUNTY	EXPORTING COUNTY	FACILITY NAME[1]	AUTHORIZED QUANTITY/ DAILY	AUTHORIZED QUANTITY/ ANNUAL	AUTHORIZED CONDITIONS[2]
Roscommon	Clare	____	____	____	P*
Roscommon	Bay	____	____	____	P*
Roscommon	Crawford	____	____	____	P*
Roscommon	Montmorency	____	____	____	P*
Roscommon	Oscoda	____	____	____	P*
____	____	____	____	____	

☐ Additional authorizations and the above information for those authorizations are listed on an attached page.

[1] Facilities are only listed if the exporting county is restricted to using specific facilities within the importing county.

[2] Authorization indicated by P = Primary Disposal; C = Contingency Disposal; * = Other conditions exist and detailed explanation is included in the Attachment Section.

EXPORT AUTHORIZATION

If a Licensed solid waste disposal area is currently operating within another County, disposal of solid waste generated by the EXPORTING COUNTY is authorized up to the AUTHORIZED QUANTITY according to the CONDITIONS AUTHORIZED in Table 2-A if authorized for import in the approved Solid Waste Management Plan of the receiving County.

Table 2-A

CURRENT EXPORT VOLUME AUTHORIZATION OF SOLID WASTE

EXPORTING COUNTY	IMPORTING COUNTY	FACILITY NAME[1]	AUTHORIZED QUANTITY/ DAILY	AUTHORIZED QUANTITY/ ANNUAL	AUTHORIZED CONDITIONS[2]
Roscommon	Clare	Northern Oaks	____	____	P
Roscommon	Bay	Whitefeather	____	____	P
Roscommon	Crawford	Waters LF	____	____	P
Roscommon	Montmorency	Montmorency-Oscoda LF	____	____	P
____	____	____	____	____	
____	____	____	____	____	____

☐ Additional authorizations and the above information for those authorizations are listed on an attached page.

[1] Facilities are only listed if the exporting county is restricted to using specific facilities within the importing county.

[2] Authorization indicated by P = Primary Disposal; C = Contingency Disposal; * = Other conditions exist and detailed explanation is included in the Attachment Section.

If a new solid waste disposal area is constructed and operates in the future in another County, then disposal of solid waste generated by the EXPORTING COUNTY is authorized up to the AUTHORIZED QUANTITY according to the AUTHORIZED CONDITIONS in Table 2-B if authorized for import in the approved Solid Waste Management Plan of the receiving County.

Table 2-B

FUTURE EXPORT VOLUME AUTHORIZATION OF SOLID WASTE CONTINGENT ON NEW FACILITIES BEING SITED

EXPORTING COUNTY	IMPORTING COUNTY	FACILITY NAME[1]	AUTHORIZED QUANTITY/ DAILY	AUTHORIZED QUANTITY/ ANNUAL	AUTHORIZED CONDITIONS[2]
Roscommon	None identified	None planned	____	____	____
____	____	____	____	____	
____	____	____	____	____	
____	____	____	____	____	
____	____	____	____	____	
____	____	____	____	____	____

☐ Additional authorizations and the above information for those authorizations are listed on an attached page.

[1] Facilities are only listed if the exporting county is restricted to using specific facilities within the importing county.

[2] Authorization indicated by P = Primary Disposal; C = Contingency Disposal; * = Other conditions exist and detailed explanation is included in the Attachment Section.

SOLID WASTE DISPOSAL AREAS

The following identifies the names of existing disposal areas which will be utilized to provide the required capacity and management needs for the solid waste generated within the County for the next five years and, if possible, the next ten years. Pages III-7-1 through III-7-5 contain descriptions of the solid waste disposal facilities which are located within the County and the disposal facilities located outside of the County which will be utilized by the County for the planning period. Additional facilities within the County with applicable permits and licenses may be utilized as they are sited by this Plan, or amended into this Plan, and become available for disposal. If this Plan update is amended to identify additional facilities in other counties outside the County, those facilities may only be used if such import is authorized in the receiving County's Plan. Facilities outside of Michigan may also be used if legally available for such use.

Type II Landfill:

Northern Oaks (Clare County)

Whitefeather (Bay County)

Waters (Crawford County)

Montmorency Oscoda (Montmorency County)

Type A Transfer Facility:

None currently -- could be developed under updated plan

Type B Transfer Facility:

Au Sable Township
Backus Township
Nester Township

Type III Landfill:
None

Processing Plant:
None

Incinerator:
None

Waste Piles:
None

Waste-to-Energy Incinerator:
None

Other:

Additional facilities are listed on an attached page. Letters from or agreements with the listed disposal areas owners/operators stating their facility capacity and willingness to accept the County's solid waste are in the AttachmentsSection.

SELECTED SYSTEM

FACILITY DESCRIPTIONS

Facility Type: Type II Landfill
Facility Name: Northern Oaks Recycling & Disposal Facility
County: Clare Location: Town:19N Range:4W Section(s):32

Map identifying location included in Attachment Section: ☒ Yes ☐ No

If facility is an Incinerator or a Transfer Station, list the final disposal site and location for Incinerator ash or Transfer Station wastes :
☐ Public ☒ Private Owner: Waste Management

Operating Status (check)		Waste Types Received (check all that apply)	
☒	open	☒	residential
☐	closed	☒	commercial
☒	licensed	☒	industrial
☐	unlicensed	☒	construction & demolition
☐	construction permit	☒	contaminated soils
☐	open, but closure	☒	special wastes *
☐	pending	☐	other:

* Explanation of special wastes, including a specific list and/or conditions:
WWTP filter cake, sludge

Site Size:

Total area of facility property:	320	acres
Total area sited for use:	76	acres
Total area permitted:	76	acres
Operating:	19	acres
Not excavated:	57	acres
Current capacity:	8,755,100	☐ tons or ☒ yds^3
Estimated lifetime:	43	years
Estimated days open per year:	260	days
Estimated yearly disposal volume:	409,000	☐ tons or ☒ yds^3

(if applicable)
Annual energy production:

Landfill gas recovery projects:	NA	megawatts
Waste-to-energy incinerators:	NA	megawatts

SELECTED SYSTEM

FACILITY DESCRIPTIONS

Facility Type: Type II Landfill
Facility Name: Whitefeather Development Company

County: Bay Location: Town: 17N Range: 4E Section(s): 2

Map identifying location included in Attachment Section: ☒ Yes ☐ No

If facility is an Incinerator or a Transfer Station, list the final disposal site and location for Incinerator ash or Transfer Station wastes :
☐ Public ☒ Private Owner: Republic Services

Operating Status (check)		Waste Types Received (check all that apply)	
☒	open	☒	residential
☐	closed	☒	commercial
☒	licensed	☒	industrial
☐	unlicensed	☒	construction & demolition
☐	construction permit	☒	contaminated soils
☐	open, but closure	☒	special wastes *
☐	pending	☐	other: _

* Explanation of special wastes, including a specific list and/or conditions:
Asbestos

Site Size:

Total area of facility property:	752	acres
Total area sited for use:	106	acres
Total area permitted:	56.5	acres
Operating:	24.5	acres
Not excavated:	32.0	acres
Current capacity:	4,175,153	☐ tons or ☒ yds^3
Estimated lifetime:	18.8	years
Estimated days open per year:	260	days
Estimated yearly disposal volume:	380,000	☐ tons or ☒ yds^3

(if applicable)
Annual energy production:

Landfill gas recovery projects:	NA	megawatts
Waste-to-energy incinerators:	NA	megawatts

SELECTED SYSTEM

FACILITY DESCRIPTIONS

Facility Type: Type II Landfill
Facility Name: Waters Landfill (City Environmental Services of Waters)

County: Crawford Location: Town: 28N Range: 3E Section(s): 4

Map identifying location included in Attachment Section: ☒ Yes ☐ No

If facility is an Incinerator or a Transfer Station, list the final disposal site and location for Incinerator ash or Transfer Station wastes :

☐ Public ☒ Private Owner: Waste Management

Operating Status (check)		Waste Types Received (check all that apply)	
☒	open	☒	residential
☐	closed	☒	commercial
☒	licensed	☒	industrial
☐	unlicensed	☒	construction & demolition
☐	construction permit	☒	contaminated soils
☐	open, but closure	☒	special wastes *
☐	pending	☐	other: _

* Explanation of special wastes, including a specific list and/or conditions:

Site Size:

Total area of facility property:	256	acres
Total area sited for use:	252	acres
Total area permitted:	79	acres
Operating:	9.7	acres
Not excavated:	64.87	acres
Current capacity:	5,700,000	☐ tons or ☒ yds^3
Estimated lifetime:	20	years
Estimated days open per year:	313	days
Estimated yearly disposal volume:	200,000	☐ tons or ☒ yds^3

(if applicable)
Annual energy production:

Landfill gas recovery projects:	NA	megawatts
Waste-to-energy incinerators:	NA	megawatts

SELECTED SYSTEM

FACILITY DESCRIPTIONS

Facility Type: Type II Sanitary Landfill

Facility Name: Montmorency-Oscoda Sanitary Landfill

County: Montmorency Location: Town: 29N Range: 3E Section(s): 6

Map identifying location included in Attachment Section: X Yes ☐ No

If facility is an Incinerator or a Transfer Station, list the final disposal site and location for Incinerator ash or Transfer Station wastes :

X Public ☐ Private Owner: Montmorency & Oscoda Counties

Operating Status (check)		Waste Types Received (check all that apply)	
X	open	X	residential
☐	closed	X	commercial
X	licensed	X	industrial
☐	unlicensed	X	construction & demolition
X	construction permit	☐	contaminated soils
☐	open, but closure	☐	special wastes *
☐	pending	☐	other: _

* Explanation of special wastes, including a specific list and/or conditions:

Site Size:

Total area of facility property:	80	acres
Total area sited for use	80	acres
Total area permitted:	80	acres
Operating:	3-4	acres
Not excavated:	37-40	acres
Current capacity:	3,500,000	☐ tons or X yds^3
Estimated lifetime:	30	years
Estimated days open per year:	310	days
Estimated yearly disposal volume:	145,000	☐ tons or X yds^3

(if applicable)
Annual energy production:

Landfill gas recovery projects:	NA	megawatts
Waste-to-energy incinerators:	NA	megawatts

SOLID WASTE COLLECTION SERVICES AND TRANSPORTATION:

The following describes the solid waste collection services and transportation infrastructure which will be utilized within the County to collect and transport solid waste.

The existing collection and transportation system, as previously described, will initially remain in place. The various solid waste collection and transportation firms doing business in the county may change due to municipal contracts, mergers, and other factors. Also, this plan does not preclude public (government) entities from providing solid waste management services.

RESOURCE CONSERVATION EFFORTS:

The following describes the selected system's proposed conservation efforts to reduce the amount of solid waste generated throughout the County. The annual amount of solid waste currently or proposed to be diverted from landfills and incinerators is estimated for each effort to be used, if possible. Since conservation efforts are provided voluntarily and change with technologies and public awareness, it is not this Plan update's intention to limit the efforts to only what is listed. Instead citizens, businesses, and industries are encouraged to explore the options available to their lifestyles, practices, and processes which will reduce the amount of materials requiring disposal.

Effort Description	Est. Diversion Tons/Yr		
	Current	5th yr	10th yr
Waste reduction education efforts aimed at residents, businesses, & industries	0	3%	6%

☐ Additional efforts and the above information for those efforts are listed on an attached page.

WASTE REDUCTION, RECYCLING, & COMPOSTING PROGRAMS:

Volume Reduction Techniques

The following describes the techniques utilized and proposed to be used throughout the County which reduces the volume of solid waste requiring disposal. The annual amount of landfill air space not used as a result of each of these techniques is estimated. Since volume reduction is practiced voluntarily and because technologies change and equipment may need replacing, it is not this Plan update's intention to limit the techniques to only what is listed. Persons within the County are encouraged to utilize the technique that provides the most efficient and practical volume reduction for their needs. Documentation explaining achievements of implemented programs or expected results of proposed programs is attached.

Technique Description	Est. Air Space Conserved Yds^3/Yr		
	Current	5th yr	10th yr
Efforts limited to those practiced by the private sector & municipalities in collecting, transporting, and disposing of solid waste; and collecting & marketing recyclable materials: compacting, baling, shredding, etc.	Unknown		

☐ Additional efforts and the above information for those efforts are listed on an attached page.

Overview of Resource Recovery Programs:

The following describes the type and volume of material in the County's waste stream that may be available for recycling or composting programs. How conditions in the County affect or may affect a recycling or composting program and potential benefits derived from these programs is also discussed. Impediments to recycling or composting programs which exist or which may exist in the future are listed, followed by a discussion regarding reducing or eliminating such impediments.

See discussion on page III-16.

☒ Recycling programs within the County are feasible. Details of existing and planned programs are included on the following pages.

☐ Recycling programs for the County have been evaluated and it has been determined that it is not feasible to conduct any programs because of the following:

☒ Composting programs within the County are feasible. Details of existing and planned programs are included on the following pages.

☐ Composting programs for the County have been evaluated and it has been determined that it is not feasible to conduct any programs because of the following:

See discussion on page III-16

☐ Programs for source separation of potentially hazardous materials are feasible and details are included on the following pages.

☒ Separation of potentially hazardous materials from the County's waste stream has been evaluated and it has been determined that it is not feasible to conduct any separation programs because of the following:

It is not presently feasible for Roscommon County or the municipalities within the County to conduct such programs due to the high costs involved. Residents are encouraged to participate in the annual Household Hazardous Waste Collection Day at the Northern Oaks Landfill in Clare County. Also, the updated plan calls for the County to work with the private sector to explore opportunities for providing these services in Roscommon County in the future.

RECYCLING AND COMPOSTING

The following is a brief analysis of the recycling and composting programs selected for the County in this Plan. Additional information on operation of recycling and composting programs is included in Appendix A. The analysis covers various factors within the County and the impacts of these factors on recycling and composting. Following the written analysis, Tables III-1, III-2, & III-3 list the existing recycling, composting, and source separation of hazardous materials programs that are currently active in the County and which will be continued as part of this Plan. Tables III-4, III-5, & III-6 then list the recycling, composting, and source separation of hazardous materials programs that are proposed in the future for the County. It is not this Plan update's intent to prohibit additional programs or expansions of current programs to be implemented beyond those listed.

The following major public recycling programs are currently in operation in the County:

1. Roscommon-Higgins-Gerrish Recycling Center. This drop-off facility is located in the Roscommon Industrial Park. It serves Higgins and Gerrish Townships, and the Village of Roscommon.
2. Denton Township Recycling & Composting. This drop-off facility is owned and operated by Denton Township.
3. Roscommon Township curbside recycling program.

There are also several municipal composting programs in operation. These are:

1. Roscommon-Higgins-Gerrish. This is a drop-off site that involves the same communities listed above for recycling.
2. Denton Township. Drop-off site.
3. Roscommon Township. Drop-off site.
4. Richfield Township. Curbside collection program.
5. Markey Township. Curbside program.
6. Gerrish Township. Curbside program.
7. Higgins Township. Curbside program.

TABLE III-1

RECYCLING:

Program Name	Service Area[1]	Public or Private	Collection Point[3]	Collection Frequency[4]	Materials Collected[5]	Program Management Responsibilities[2] Development	Operation	Evaluation
Roscommon-Higgins-Gerrish Recycling Center	Roscommon Village, Higgins & Gerrish Twps.	Public	d	3 days/wk	ABCDEF	Committee	Twp	Committee
Roscommon Twp. Recycling	Roscommon Twp.	Public	c	2/month	ABCDEF	Twp	Twp	Twp
Denton Twp. Recycling & Composting	Denton Twp.	Public	d	3 days/wk	ABCDEFK	Twp	Twp	Twp
Markey Twp.	Markey Twp.	Public	d	1 day/mo	ABCDEF	Twp	Twp	Twp

☐ Additional programs and the above information for those programs are listed on an attached page.

[1] Identified by where the program will be offered. If throughout the planning area, then listed by planning area; if only in specific counties, then listed by county; if only in specific municipalities, then listed by its name and respective county.

[2] Identified by 1 = Designated Planning Agency; 2 = County Board of Commissioners; 3 = Department of Public Works; 4 = Environmental Group (Identified on page 23); 5 = Private Owner/Operator; 6 = Other (Identified on page 23).

[3] Identified by c = curbside; d = drop-off; o = onsite; and if other, explained.

[4] Identified by d = daily; w = weekly; b = biweekly; m = monthly; and if seasonal service also indicated by Sp = Spring; Su = Summer; Fa = Fall; Wi = Winter.

[5] Identified by the materials collected by listing of the letter located by that material type. A = Plastics; B = Newspaper; C = Corrugated Containers; D = Other Paper; E = Glass; F = Metals; P = Pallets; J = Construction/Demolition; K = Tires; L1, L2 etc. = as identified on page 24.

SELECTED SYSTEM

TABLE III-2

COMPOSTING:

Program Name	Service Area[1]	Public or Private	Collection Point[3]	Collection Frequency[4]	Materials Collected[5]	Program Management Responsibilities[2] Development	Operation	Evaluation
Roscommon-Higgins-	Roscommon Village,	Public	d	3 days/wk	G L W	Committee	Village	Committee
-Gerrish Composting	Higgins & Gerrish Twps							
Roscommon Twp Composting	Roscommon Twp.	Public	d	3 days/wk	G L W	Twp	Twp	Twp
Denton Twp	Denton Twp.	Public	d	3 days/wk	G L W	Twp	Twp	Twp
Richfield Twp	Richfield Twp	Public	c		G L	Twp	Twp	Twp
Markey Twp	Markey Twp	Public	c	3/yr	G L	Twp	Twp	Twp
Lyon Twp	Lyon Twp	Public	c	3/yr	G L	Twp	Twp	Twp
Gerrish Twp	Gerrish Twp	Public	c	2/mo Apr-Nov	G L	Twp	Twp	Twp
Higgins Twp	Higgins Twp	Public	c	1/yr	G L	Twp	Twp	Twp

☐ Additional programs and the above information for those programs are listed on an attached page.

[1] Identified by where the program will be offered. If throughout the planning area, then listed by planning area; if only in specific counties, then listed by county; if only in specific municipalities, then listed by its name and respective county.

[2] Identified by 1 = Designated Planning Agency; 2 = County Board of Commissioners; 3 = Department of Public Works; 4 = Environmental Group (Identified on page 23); 5 = Private Owner/Operator; 6 = Other (Identified on page 23).

[3] Identified by c = curbside; d = drop-off; o = onsite; and if other, explained.

[4] Identified by d = daily; w = weekly; b = biweekly; m = monthly; and if seasonal service also indicated by Sp = Spring; Su = Summer; Fa = Fall; Wi = Winter.

[5] Identified by the materials collected by listing of the letter located by that material type. G = Grass Clippings; L = Leaves; F = Food; W = Wood; P = Paper; S = Municipal Sewage Sludge; A = Animal Waste/Bedding; M = Municipal Solid Waste; L1, L2 etc. = as identified on page 24.

TABLE III-3

SOURCE SEPARATION OF POTENTIALLY HAZARDOUS MATERIALS:

Since improper disposal of nonregulated hazardous materials has the potential to create risks to the environment and human health, the following programs have been implemented to remove these materials from the County's solid waste stream.

Program Name	Service Area[1]	Public or Private	Collection Point[3]	Collection Frequency[4]	Materials Collected[5]	Program Management Responsibilities[2] Development	Operation	Evaluation
NONE								

☐ Additional programs and the above information for those programs are listed on an attached page.

[1] Identified by where the program will be offered. If throughout the planning area, then listed by planning area; if only in specific counties, then listed by county; if only in specific municipalities, then listed by its name and respective county.

[2] Identified by 1 = Designated Planning Agency; 2 = County Board of Commissioners; 3 = Department of Public Works; 4 = Environmental Group (Identified on page 23); 5 = Private Owner/Operator; 6 = Other (Identified on page 23).

[3] Identified by c = curbside; d = drop-off; o = onsite; and if other, explained.

[4] Identified by d = daily; w = weekly; b = biweekly; m = monthly; and if seasonal service also indicated by Sp = Spring; Su = Summer; Fa = Fall; Wi = Winter.

[5] Identified by the materials collected by listing of the letter located by that material type. AR = Aerosol Cans; A = Automotive Products except Used Oil, Oil Filters & Antifreeze; AN = Antifreeze; B1 = Lead Acid Batteries; B2 = Household Batteries; C = Cleaners and Polishers; H = Hobby and Art Supplies; OF = Used Oil Filters; P = Paints and Solvents; PS = Pesticides and Herbicides; PH = Personal and Health Care Products; U = Used Oil; OT = Other Materials and identified.

TABLE III-4

PROPOSED RECYCLING:

Program Name (if known)	Service Area[1]	Public or Private	Collection Point[3]	Collection Frequency[4]	Materials Collected[5]	Program Management Responsibilities[2] Development	Operation	Evaluation
No new programs proposed								

☐ Additional programs and the above information for those programs are listed on an attached page.

[1] Identified by where the program will be offered. If throughout the planning area, then listed by planning area; if only in specific counties, then listed by county; if only in specific municipalities, then listed by its name and respective county.

[2] Identified by 1 = Designated Planning Agency; 2 = County Board of Commissioners; 3 = Department of Public Works; 4 = Environmental Group (Identified on page 23); 5 = Private Owner/Operator; 6 = Other (Identified on page 23).

[3] Identified by c = curbside; d = drop-off; o = onsite; and if other, explained.

[4] Identified by d = daily; w = weekly; b = biweekly; m = monthly; and if seasonal service also indicated by Sp = Spring; Su = Summer; Fa = Fall; Wi = Winter.

[5] Identified by the materials collected by listing of the letter located by that material type. A = Plastics; B = Newspaper; C = Corrugated Containers; D = Other Paper; E = Glass; F = Metals; P = Pallets; J = Construction/Demolition; K = Tires; L1, L2 etc. = as identified on page 24.

TABLE III-5

PROPOSED COMPOSTING:

Program Name, (if known)	Service Area[1]	Public or Private	Collection Point[3]	Collection Frequency[4]	Materials Collected[5]	Program Management Responsibilities[2] Development	Operation	Evaluation
No new programs proposed								

☐ Additional programs and the above information for those programs are listed on an attached page.

[1] Identified by where the program will be offered. If throughout the planning area, then listed by planning area; if only in specific counties, then listed by county; if only in specific municipalities, then listed by its name and respective county.

[2] Identified by 1 = Designated Planning Agency; 2 = County Board of Commissioners; 3 = Department of Public Works; 4 = Environmental Group (Identified on page 23); 5 = Private Owner/Operator; 6 = Other (Identified on page 23).

[3] Identified by c = curbside; d = drop-off; o = onsite; and if other, explained.

[4] Identified by d = daily; w = weekly; b = biweekly; m = monthly; and if seasonal service also indicated by Sp = Spring; Su = Summer; Fa = Fall; Wi = Winter.

[5] Identified by the materials collected by listing of the letter located by that material type. G = Grass Clippings; L = Leaves; F = Food; W = Wood; P = Paper; S = Municipal Sewage Sludge; A = Animal Waste/Bedding; M = Municipal Solid Waste; L1, L2 etc. = as identified on page 24.

TABLE III-6

PROPOSED SOURCE SEPARATION OF POTENTIALLY HAZARDOUS MATERIALS:

Program Name, (if known)	Service Area[1]	Public or Private	Collection Point[3]	Collection Frequency[4]	Materials Collected[5]	Program Management Responsibilities[2] Development	Operation	Evaluation
NONE		____	____	____	____	____	____	____
		____	____	____	____	____	____	____
		____	____	____	____	____	____	____

☐ Additional programs and the above information for those programs are listed on an attached page.

[1] Identified by where the program will be offered. If throughout the planning area, then listed by planning area; if only in specific counties, then listed by county; if only in specific municipalities, then listed by its name and respective county.

[2] Identified by 1 = Designated Planning Agency; 2 = County Board of Commissioners; 3 = Department of Public Works; 4 = Environmental Group (Identified on page 23); 5 = Private Owner/Operator; 6 = Other (Identified on page 23).

[3] Identified by c = curbside; d = drop-off; o = onsite; and if other, explained.

[4] Identified by d = daily; w = weekly; b = biweekly; m = monthly; and if seasonal service also indicated by Sp = Spring; Su = Summer; Fa = Fall; Wi = Winter.

[5] Identified by the materials collected by listing of the letter located by that material type. AR = Aerosol Cans; A = Automotive Products except Used Oil, Oil Filters & Antifreeze; AN = Antifreeze; B1 = Lead Acid Batteries; B2 = Household Batteries; C = Cleaners and Polishers; H = Hobby and Art Supplies; OF = Used Oil Filters; P = Paints and Solvents; PS = Pesticides and Herbicides; PH = Personal and Health Care Products; U = Used Oil; OT = Other Materials and identified.

IDENTIFICATION OF RESOURCE RECOVERY MANAGEMENT ENTITIES:

The following identifies those public and private parties, and the resource recovery or recycling programs for which they have management responsibilities.

Environmental Groups:

None identified with management responsibilities.

Other:

The County Solid Waste Management Advisory Board will be responsible for educational & promotional activities for resource recovery (recycling & composting) programs. The private solid waste management industry and the municipalities within the county for furnishing recycling & composting options to county residents, businesses, and industries.

PROJECTED DIVERSION RATES:

The following estimates the annual amount of solid waste which is expected to be diverted from landfills and incinerators as a result of the current resource recovery programs and in five and ten years.

Collected Material:	Projected Annual Tons Diverted:			Collected Material:	Projected Annual Tons Diverted:		
	Current	5th Yr	10th Yr		Current	5th Yr	10th Yr
A. TOTAL PLASTICS:	31	34	38	G. GRASS AND LEAVES:	3,675	4,594	5,742
B. NEWSPAPER:	268	295	324	H. TOTAL WOOD WASTE:	____	____	
C. CORRUGATED CONTAINERS:	35	39	42	I. CONSTRUCTION AND DEMOLITION:	____	____	
D. TOTAL OTHER PAPER:	70	77	85	J. FOOD AND FOOD PROCESSING:	____	____	
E. TOTAL GLASS:	112	123	136	K. TIRES:	9.5	10.5	11.5
F. OTHER MATERIALS:				L. TOTAL METALS:	68	75	82
F1.							
F3.____	____	____					
F2____	____	____	____	F4 ____	____	____	

MARKET AVAILABILITY FOR COLLECTED MATERIALS:

The following identifies how much volume that existing markets are able to utilize of the recovered materials which were diverted from the County's solid waste stream.

Collected Material:	In-State Markets	Out-of-State Markets	Collected Material	In-State Markets	Out-of-State Markets
A. TOTAL PLASTICS:	100%	____	G. GRASS AND LEAVES:	____	
B. NEWSPAPER:	100%	____	H. TOTAL WOOD WASTE:	____	
C. CORRUGATED CONTAINERS:	100%	____	I. CONSTRUCTION AND DEMOLITION:	____	
D. TOTAL OTHER PAPER:	100%	____	J. FOOD AND FOOD PROCESSING	____	
E. TOTAL GLASS:	100%	____	K. TIRES:	____	
F. OTHER MATERIALS:			L. TOTAL METALS:		
F1.____	____	____	F3.____	100%	
F2.____	____	____	F4.____	____	

EDUCATIONAL AND INFORMATIONAL PROGRAMS:

It is often necessary to provide educational and informational programs regarding the various components of a solid waste management system before and during its implementation. These programs are offered to avoid miscommunication which results in improper handling of solid waste and to provide assistance to the various entities who participate in such programs as waste reduction and waste recovery. Following is a listing of the programs offered or proposed to be offered in this County.

Program Topic[1]	Delivery Medium[2]	Targeted Audience[3]	Program Provider[4]
1, 2, 3, 4, 5	classroom	s (primary)	Recycling Coordinator
1, 2, 3, 4, 5	phone contact	p	Recycling Coordinator

County Recycling Coordinator is an employee of USDA Conservation District. County Board makes annual appropriation for recycling education activities. Coordinator makes presentations on request and provides resource recovery information and referrals through phone contact with the public.

[1] Identified by 1 = recycling; 2 = composting; 3 = household hazardous waste; 4 = resource conservation; 5 = volume reduction; 6 = other which is explained.

[2] Identified by w = workshop; r = radio; t = television; n = newspaper; o = organizational newsletters; f = flyers; e = exhibits and locations listed; and ot = other which is explained.

[3] Identified by p = general public; b = business; i = industry; s = students with grade levels listed. In addition if the program is limited to a geographic area, then that county, city, village, etc. is listed.

[4] Identified by EX = MSU Extension; EG = Environmental Group (Identify name); OO = Private Owner/Operator (Identify name); HD = Health Department (Identify name); DPA = Designated Planning Agency; CU = College/University (Identify name); LS = Local School (Identify name); ISD = Intermediate School District (Identify name); O = Other which is explained.

☐ Additional efforts and the above information for those efforts are listed in Appendix E.

TIMETABLE FOR SELECTED SYSTEM IMPLEMENTATION

This timetable is a guideline to implement components of the Selected System. The Timeline gives a range of time in which the component will be implemented such as "1995-1999" or "On-going." Timelines may be adjusted later, if necessary.

TABLE III-7

Management Components	Timeline
Resource Conservation & Waste Reduction	Ongoing
Collection & transportation	Ongoing
Recycling	Ongoing
Composting	Ongoing
Landfilling	Ongoing
Recycling Education	Ongoing
Alternative institutional structures (authority or other entity)	Initiate late 1999; ongoing thereafter

SITING REVIEW PROCEDURES

AUTHORIZED DISPOSAL AREA TYPES

The following solid waste disposal area types may not be sited by this Plan. Any proposal to construct a facility listed herein shall be deemed inconsistent with this Plan.

SITING CRITERIA AND PROCESS

The following process describes the criteria and procedures to be used to site solid waste disposal facilities and determine consistency with this Plan. (attach additional pages if necessary)

Roscommon County has well over 10 years of disposal capacity at various facilities identified in this plan. Therefore, a siting process for new facilities is not required. Any new facility proposed in the County must meet all state law requirements, particularly Act 451.

If the proposed facility is a sanitary landfill and the County has 66 months or more of disposal capacity remaining for all solid waste generated in the County, the County may, at its discretion, refuse to allow the facility to be sited. Remaining disposal capacity shall be determined by the County Solid Waste Management Advisory Board (SWMAB) by using the solid waste generation data contained in this plan and the capacity calculations on page IV-1. Furthermore, the SWMAB shall verify the capacity remaining at each of the disposal facilities authorized in this plan at the time an application is received.

Under the updated plan, the County and its municipalities intend to retain the option of developing a publicly owned disposal facility, should such a facility be in the County's best interest.

Return to Letter

SOLID WASTE MANAGEMENT COMPONENTS[1]

The following identifies the management responsibilities and institutional arrangements necessary for the implementation of the Selected Waste Management System. Also included is a description of the technical, administrative, financial and legal capabilities of each identified existing structure of persons, municipalities, counties and state and federal agencies responsible for solid waste management including planning, implementation, and enforcement.

SEE THE ATTACHED PAGES

[1] Components or subcomponents may be added to this table.

Existing Management Capabilities

A. Ongoing Planning, Coordination, and Plan Implementation

Countywide solid waste management planning and coordination is an ongoing process. Act 451 requires that the Solid Waste Plan is updated every five years and that plan implementation must be ensured through the assignment of management responsibilities.

The East Central Michigan Planning and Development Regional Commission (ECMPDR) has been assigned the responsibility of overseeing the plan update. ECMPDR, as the designated solid waste management planning agency, has coordinated the plan update process with the Solid Waste Management Planning Committee.

Coordination and cooperation among the municipalities in Roscommon County, and between the public and private sectors are major elements of successful plan implementation. The Solid Waste Management Planning Committee has outlined a way to achieve this coordination. However, the duties of this committee are officially completed once the updated plan receives final approval. No other existing organization is available to serve this function.

B. Collection and Transportation of Solid Waste

The private solid waste management industry currently provides solid waste collection and transportation services to all parts of Roscommon County, either through municipal contracts or individual subscriptions with homes and businesses. No public agency in the county presently operates a solid waste collection and transportation system. The private sector can continue to provide these services economically and efficiently as long as disposal facilities are available within a reasonable distance.

C. Construction, Operation, and Maintenance of Solid Waste Facilities

With the exception of Type B transfer facilities, the construction and operation of solid waste facilities in compliance with Act 451 is a costly undertaking that cannot typically be accomplished by a single rural municipality. Rural municipalities, such as townships, have the financial capabilities to develop Type B transfer facilities. However, the operation and maintenance of these facilities is most typically performed by the private solid waste industry.

There is currently no county agency with the administrative and technical capabilities to operate a solid waste disposal facility. The County Board of Public Works has the legal authority to own and operate a solid waste facility in accordance with this plan and applicable laws. However, the County Board of Public Works is not currently authorized to take on this responsibility.

The private sector has the capabilities to construct and operate a solid waste disposal facility. However, there are presently no formal plans or agreements to develop or operate new disposal facilities in Roscommon County.

D. Financial Capabilities

The municipalities and residents of Roscommon County have the capability to finance the collection and transportation of solid waste by entering into contracts with private haulers. Roscommon County is currently the only public agency with the capability to construct and operate a solid waste disposal facility, such as a sanitary landfill. The construction of a disposal facility is a costly undertaking that cannot typically be financed by an individual rural municipality. However, a solid waste authority or similar entity composed of several municipalities within the county or several neighboring counties might also have the capabilities to construct and operate a solid waste disposal facility.

E. Regulation and Enforcement

Regulations for construction and operation of solid waste facilities are defined by state legislation, particularly Act 451. The Michigan Department of Environmental Quality is the enforcement body for compliance with Act 451 within the county. For specific enforcement of the various provisions of the County Solid Waste Management Plan, the Roscommon County Board of Commissioners is empowered to identify violations of this plan and to bring suit against violators as required.

Recommended Management System

The updated plan recommends the establishment of a single advisory body at the county level to oversee plan implementation, in coordination with the County Board of Commissioners. This body would address various tasks and make recommendations within the areas specified in the plan. The advisory body will represent the same groups as specified for planning committees in Act 451. However, to distinguish the role of the advisory board from that of the planning committee, the body will be called the Roscommon County Solid Waste Management Advisory Board (SWMAB). The Advisory Board should be appointed by the County Board of Commissioners within three months after DEQ approval of this plan update.

The Advisory Board may require staff assistance to carry out its duties, and the county may assign staff for this purpose. Alternatively, the county may contract with the regional solid waste planning agency (the current DPA) or other qualified personnel to assist the SWMAB as needed.

Other entities with management responsibilities for carrying out the plan's various provisions are identified on the following pages.

IDENTIFICATION OF RESPONSIBLE PARTIES

Document which entities within the County will have management responsibilities over the following areas of the Plan.

Resource Conservation:

Source or Waste Reduction – All citizens, businesses, and industries. Educational & promotional efforts led by Recycling Committee.

Product Reuse - All citizens, businesses, and industries. Educational & promotional efforts led by Recycling Committee.

Reduced Material Volume - All citizens, businesses, and industries. Educational & promotional efforts led by Recycling Committee.

Increased Product Lifetime - All citizens, businesses, and industries. Educational & promotional efforts led by Recycling Committee.

Decreased Consumption - All citizens, businesses, and industries. Educational & promotional efforts led by Recycling Committee.

Resource Recovery Programs:

Composting – Private solid waste industry, municipalities, residents.

Recycling – Recycling Committee (promotion & education), municipalities, businesses, industries, residents, private solid waste industry.

Energy Production – Not included in plan.

Volume Reduction Techniques: Private solid waste industry (collection, disposal, & recycling operations). Public sector (recycling & composting operations). Also residents, businesses, and industries through voluntary efforts.

SELECTED SYSTEM

Collection Processes: Private solid waste industry & municipalities.

Transportation: Private solid waste industry and public sector.

Disposal Areas:

Processing Plants –Not included in plan

Incineration –Not included in plan

Transfer Stations – Type B: private solid waste industry & municipalities. Type A: private solid waste industry or public sector.

Sanitary Landfills – Private solid waste industry and public sector.

Ultimate Disposal Area Uses: Disposal area owners/operators (public & private) with input from host municipalities.

Local Responsibility for Plan Update Monitoring & Enforcement: SWMAB (plan implementation monitoring); County Board of Commissioners (plan enforcement); Michigan DEQ (Act 451 enforcement).

Educational and Informational Programs: Recycling Coordinator & Recycling Committee

Documentation of acceptance of responsibilities is contained in Appendix D.

LOCAL ORDINANCES AND REGULATIONS AFFECTING SOLID WASTE DISPOSAL

This Plan update's relationship to local ordinances and regulations within the County is described in the option(s) marked below:

1. Section 11538.(8) and rule 710 (3) of Part 115 prohibits enforcement of all County and local ordinances and regulations pertaining to solid waste disposal areas unless explicitly included in an approved Solid Waste Management Plan. Local regulations and ordinances intended to be part of this Plan must be specified below and the manner in which they will be applied described.

☐ 2. This Plan recognizes and incorporates as enforceable the following specific provisions based on existing zoning ordinances:

A. Geographic area/Unit of government:

Type of disposal area affected:

Ordinance or other legal basis:

Requirement/restriction:

B. Geographic area/Unit of government:

Type of disposal area affected:

Ordinance or other legal basis:

Requirement/restriction:

C. Geographic area/Unit of government:

Type of disposal area affected:

Ordinance or other legal basis:

Requirement/restriction:

D. Geographic area/Unit of government:

Type of disposal area affected:

Ordinance or other legal basis:

Requirement/restriction:

E. Geographic area/Unit of government:

Type of disposal area affected:

Ordinance or other legal basis:

Requirement/restriction:

☒ 3. This Plan authorizes adoption and implementation of local regulations governing the following subjects by the indicated units of government without further authorization from or amendment to the Plan.

Regulations concerning the following topics may be adopted by the County and all local government units.

☐ Additional listings are on attached pages.

1. Solid waste facility design elements: greenbelts, landscaping, screening, and fencing.
2. Hours of solid waste facility operation.
3. Control of noise, litter, dust, odors, and pest species at a solid waste facility.
4. Operating records and reports for a solid waste facility.
5. Site security for a solid waste facility.
6. Monitoring of wastes accepted and prohibited at a solid waste facility.
7. Waste disposal surcharges for the operation of a solid waste facility.
8. Local ordinances requiring separation of materials for recycling and composting.
9. Local ordinances that prohibit open burning of yard wastes.

CAPACITY CERTIFICATIONS

Every County with less than ten years of capacity identified in their Plan is required to annually prepare and submit to the DEQ an analysis and certification of solid waste disposal capacity validly available to the County. This certification is required to be prepared and approved by the County Board of Commissioners.

☒ This County has more than ten years capacity identified in this Plan and an annual certification process is not included in this Plan.

☐ Ten years of disposal capacity has not been identified in this Plan. The County will annually submit capacity certifications to the DEQ by June 30 of each year on the form provided by DEQ. The County's process for determination of annual capacity and submission of the County's capacity certification is as follows:

CAPACITY CALCULATIONS

The following summarizes the listed capacity for the various facilities that Gladwin County will use to meet its disposal capacity requirements.

Facility	Capacity (cubic yards	Life Expectancy
Northern Oaks (Clare County)	8,755,100	43 years
Whitefeather (Bay County)	4,175,153	18 years
Waters (Crawford County)	5,700,000	20 years
Montmorency-Oscoda (Montmorency County)	3,500,000	30 years
TOTAL	**22,130,253**	

Over the next ten years (2000 – 2009), Roscommon County is projected to generate a total volume of 455,000 cubic yards of solid waste. This figure is based on current disposal volumes and projected county growth. The figure has not been adjusted for any additional diversion that may occur due to increases in materials recovery volumes. For final disposal volumes, a compaction ratio of 2:1 has been assumed. On this basis, Roscommon County will require about 228,000 cubic yards of landfill capacity for the next 10 years. This represents about one percent (1%) of the total capacity shown above. All of the listed landfills have included Roscommon County's solid waste generation in their projected disposal volumes and life expectancies.

Based on the listed capacity available at the three landfills shown above, Roscommon County has access to sufficient disposal capacity for over 100 years.

APPENDIX

ADDITIONAL INFORMATION

REGARDING THE

SELECTED

SYSTEM

Roscommon County Solid Waste Management Plan Update

EVALUATION OF RECYCLING

The following provides additional information regarding implementation and evaluations of various components of the Selected System.

An overview of current recycling programs in Roscommon County has been presented in the "Overview of Resource Recovery Programs" section in the main body of the plan document on page III-17.

As previously described, several communities operate recycling drop-off sites. These sites are available to the public on a part-time basis, ranging from 3 days per week to one day per month. Materials collected include plastics, various grades of paper, glass, metals, and tires.

Several municipal composting programs also operate in the county. These include both drop-off sites and curbside collection programs. The curbside collections generally take place from one to three times per year. However, Gerrish Township operates its collection twice a month during April through November. Composting in Roscommon County also occurs as home composting due to the rural nature of the area.

Resource recovery education efforts are also conducted in Roscommon County. The County funds a Recycling Coordinator position and a Recycling Committee with the main objective of conducting educational and promotional activities for recycling.

The current resource recovery programs in Roscommon County are functioning well, and they provide all residents with an opportunity to participate. There are no major obstacles or impediments known to exist at the local level. Participation rates among residents continue to improve. Educational efforts will be continued under the updated plan, and improved as opportunities arise. Negative factors that affect the current recycling programs are the volatility of the markets for recyclable materials, and the present low market prices. However, these factors are beyond the County's control.

DETAILED FEATURES OF RECYCLING AND COMPOSTING PROGRAMS:

List below the types and volumes of material available for recycling or composting.

A detailed waste stream assessment has never been conducted for Roscommon County. The quantities of various materials that are available for recovery have been estimated based on the solid waste components identified for similar rural areas and current solid waste generation estimates for the County. The following estimates are based on total annual solid waste generation of about 16,766 tons.

Material	% of Waste Stream	Annual Quantity (Tons)
Paper (all types)	15%	2,515
Plastics	9%	1,509
Glass	5%	838
Ferrous metals	7%	1,174
Aluminum	0.8%	134
Yard waste	4%	671

The following briefly describes the processes used or to be used to select the equipment and locations of the recycling and composting programs included in the Selected System. Difficulties encountered during past selection processes are also summarized along with how those problems were addressed:

Equipment Selection

Existing Programs:
RECYCLING: Equipment is currently selected by municipalities and the private solid waste industry as their needs dictate. No major problems have been encountered in the selection of this equipment.
COMPOSTING: Current equipment selection is addressed by the private solid waste industry in providing yard waste collection services in various communities. Municipalities that provide some form of yard waste collection generally utilize normal public works equipment such as portable chippers for brush. No specific problems with equipment selection have been reported and no major new equipment needs have been identified.

Proposed Programs:
No new programs or equipment needs have been identified.

Site Availability & Selection

Existing Programs:
RECYCLING: Programs will continue to operate at their existing sites. No specific site needs have been identified. However, any municipality that wishes to establish a recycling drop-off site for use by residents is encouraged to do so.
COMPOSTING: No specific site needs have been identified. The municipalites and the private solid waste industry that collect yard waste have made adquate arrangements for composting areas. The private industry sites are usually adjacent to the existing landfill sites. Municipalities that collect yard waste & brush generally utilize vacant publicly-owned sites for placement of material.

Proposed Programs:
No new programs or siting needs have been identifed.

Composting Operating Parameters:

The following identifies some of the operating parameters which are to be used or are planned to be used to monitor the composting programs.
These parameters are not monitored at the existing municipal composting operations.

Existing Programs:

Program Name:	pH Range	Heat Range	Other Parameter	Measurement Unit
_____	_____	_____	_____	
_____	_____	_____	_____	
_____	_____	_____	_____	
_____	_____	_____	_____	
_____	_____	_____	_____	
_____	_____	_____	_____	
_____	_____	_____	_____	
_____	_____	_____	_____	

Proposed Programs:

Program Name	pH Range	Heat Range	Other Parameter	Measurement Unit
_____	_____	_____	_____	
_____	_____	_____	_____	
_____	_____	_____	_____	
_____	_____	_____	_____	
_____	_____	_____	_____	
_____	_____	_____	_____	
_____	_____	_____	_____	

COORDINATION EFFORTS:

Solid Waste Management Plans need to be developed and implemented with due regard for both local conditions and the state and federal regulatory framework for protecting public health and the quality of the air, water, and land. The following states the ways in which coordination will be achieved to minimize potential conflicts with other programs and, if possible, to enhance those programs.

It may be necessary to enter into various types of agreements between public and private sectors to be able to implement the various components of this solid waste management system. The known existing arrangements are described below which are considered necessary to successfully implement this system within the County. In addition, proposed arrangements are recommended which address any discrepancies that the existing arrangements may have created or overlooked. Since arrangements may exist between two or more private parties that are not public knowledge, this section may not be comprehensive of all the arrangements within the County. Additionally, it may be necessary to cancel or enter into new or revised arrangements as conditions change during the planning period. The entities responsible for developing, approving, and enforcing these arrangements are also noted.

1. The municipalities within Roscommon County may enter into agreements (i.e., contracts) with other entities, both public and private, for solid waste management services, including the collection and transportation of solid waste, recyclable materials, and yard waste.

2. The Roscommon County Board of Commissioners may negotiate written inter-county agreements with the counties specified in the "Import and Export Authorization Tables" (Tables 1A, 1B, 2A, and 2B) in this plan.

3. This updated plan calls for the creation of a Solid Waste Management Advisory Board (SWMAB) to oversee and generally coordinate the implementation of the plan. As such, the SWMAB will work in cooperation with County government, local government units, the private solid waste industry, businesses, industries, institutions, and the general public to facilitate the various actions required to carry out the updated Solid Waste Management Plan.

COSTS & FUNDING:

The following estimates the necessary management, capital, and operational and maintenance requirements for each applicable component of the solid waste management system. In addition, potential funding sources have been identified to support those components.

System Component[1]	Estimated Costs	Potential Funding Sources
Resource Conservation Efforts	Unknown	Voluntary efforts by private enterprise: businesses, industries & institutions
Resource Recovery Programs	Unknown	Private industry, municipalities, customer fees
Volume Reduction Techniques	Unknown	Private enterprise
Collection Processes	Unknown	Private enterprise & customer fees
Transportation	$1,050,000 annually (1998) for coll. & transp. under municipal contracts	Private enterprise & customer fees
Disposal Areas	Unknown	Private enterprise & customer fees
Future Disposal Area Uses	Unknown	Private enterprise & host counties
Management Arrangements	Unknown – minor cost	Roscommon County Board of Commissioners
Educational & Informational Programs	$12,000 to $15,000 annually for recycling education programs	Roscommon County Board of Commissioners

[1] These components and their subcomponents may vary with each system.

EVALUATION SUMMARY OF THE SELECTED SYSTEM:

The solid waste management system has been evaluated for anticipated positive and negative impacts on the public health, economics, environmental conditions, siting considerations, existing disposal areas, and energy consumption and production which would occur as a result of implementing this Selected System. In addition, the Selected System was evaluated to determine if it would be technically and economically feasible, whether the public would accept this Selected System, and the effectiveness of the educational and informational programs. Impacts to the resource recovery programs created by the solid waste collection system, local support groups, institutional arrangements, and the population in the County in addition to market availability for the collected materials and the transportation network were also considered. Impediments to implementing the solid waste management system are identified and proposed activities which will help overcome those problems are also addressed to assure successful programs. The Selected System was also evaluated as to how it relates to the Michigan Solid Waste Policy's goals. The following summarizes the findings of this evaluation and the basis for selecting this system:

The selected system is technically and economically feasible. All of the major components, including collection, transportation, disposal, recycling, and composting are proven technologies that are currently in place and have been accepted by the public. The selected plan is essentially a continuation of the current management system.

The following discussion describes the anitcipated positive and negative impacts on public health, economics, environmental conditions, siting considerations, existing disposal areas, and energy consumption and production.

PUBLIC HEALTH

The selected plan relies mainly on the available landfills located in other counties for final disposal of solid waste. Landfills that are properly sited, constructed, and operated will have minimal effects on groundwater and the environment.

Recycling and composting may reduce public health impacts by removing materials from the waste stream that would otherwise go to a disposal facility.

The proper collection and transportation of solid waste reduces the potential for negative health impacts.

ECONOMICS

Landfilling is stll the most economical method of solid waste disposal. However, landfilling could be costly if a landfill is improperly designed or operated, resulting in surface or groundwater pollution. The selected plan relies on landfills located in surrounding counties that are in full compliance with Act 451 and other applicable laws. Properly designed and operated landfills will minimize the risk of pollution. However, landfilling will also result in the disposal of materials that could be recycled or reused at a lower cost than the manufacture of new materials.

It is this plan's intent that the County may explore and implement all feasible options in the future for financing resource recovery programs, including educational programs. This includes the authority to impose waste disposal surcharges, as recently (October 1998) determined by the Michigan Court of Appeals.

The recycling component of the selected system also has positive economic impacts by generating revenues from the sale of materials. However, these revenues are typically subject to wide market fluctuations, and they are not expected to entirely offset the costs of operation.

Solid waste collection through an open market system provides competitive pricing and economies of scale. Transfer stations can provide cost savings by making collection routes more efficient and reducing the transportation costs incurred by collection vehicles.

ENVIRONMENTAL CONDITIONS

The selected system will have minimal environmental impacts because it does not call for the siting of any major new solid waste facilities.

Recycling and composting facilities help to reduce reliance on landfills and, consequently, they also help to reduce the environmental consequences of landfills. However, recycling and composting facilites can also cause nuisance conditions if they are not properly designed and maintained. Also, composting facilities can have odor problems if they are not properly operated.

SITING CONSIDERATIONS

The selected system will have minimal impacts on siting because no new facilities are proposed. Landfills are extremely difficult to site because of public opposition and the need to identify an environmentally sound location that will meet all Act 451 requirements. Roscommon County has access to sufficient capacity for the next 10 years and beyond. However, the county and municipalities will retain the option of developing a publicly-owned disposal facility should the need arise.

EXISTING DISPOSAL AREAS

The selected plan relies on the existing landfills in Clare, Bay, Crawford, and Montmorency Counties to provide disposal capacity for the next 10 years. These facilities have sufficient capacity provided that they remain open and their costs remain reasonable.

ENERGY CONSUMPTION AND PRODUCTION

The selected plan relies on landfills located outside Roscommon County for the disposal of the County's solid waste. The current system results in greater energy consumption than if solid waste only had to be transported to a disposal facility located in Roscommon County.

The transportation of recyclable materials and yard waste also consumes energy. However, materials recovery can also save energy by reusing certain items, or substituting recycled materials for newly manufactured components.

Sanitary landfills represent a loss of energy resources due to the burial of materials that could be otherwise recovered and utilized. However, methane gas can be recovered from landfills which is

then used as an energy source. No methane recovery currently takes place at the landfills identified in this plan, although methane recovery could take place in the future.

ADVANTAGES AND DISADVANTAGES OF THE SELECTED SYSTEM:

Each solid waste management system has pros and cons relating to its implementation within the County. Following is an outline of the major advantages and disadvantages for this Selected System.

ADVANTAGES:

1. Major components already in place.
2. System is accepted by the public.
3. Minimal costs.
4. No new sites or facilities required immediately.
5. No major institutional changes required immediately.
6. Plan provides flexibility to explore countywide & regional recycling options.
7. Plan provides flexibility to develop publicly-owned disposal facility if needed.

DISADVANTAGES:

1. Currently no strong incentive to increase materials recovery much beyond current levels.
2. If regional materials recovery is pursued, there are obstacles to achieving political and public support and consensus.

NON-SELECTED

SYSTEMS

Before selecting the solid waste management system contained within this Plan update, the County developed and considered other alternative systems. The details of the non-selected systems are available for review in the County's repository. The following section provides a brief description of these non-selected systems and an explanation why they were not selected. Complete one evaluation summary for each non-selected alternative system.

It is important to note that none of the following alternatives were completely rejected. Instead, the Planning Committee drew from each of the alternative systems to formulate a hybrid system that combines components from each option.

ALTERNATIVE B: ENHANCED MATERIALS RECOVERY
Under this option, use of the present landfill as the primary means of disposal would continue. However, attention would focus on the expansion of recycling and composting opportunities within the County.

ALTERNATIVE C: REGIONAL SOLID WASTE MANAGEMENT SYSTEM
This alternative called for the creation of a regional solid waste management system in cooperation with several surrounding counties. This option would involve the creation of a formal solid waste management authority or similar entity.

ALTERNATIVE D: COUNTYWIDE AUTHORITY
This alternative called for the formation of a countywide solid waste management authority or similar entity. Such an authority might assume the responsibility for contracting for solid waste collection services on behalf of the county municipalities. An authority could also take on the responsibility for directly providing solid waste collection and other services, such as collection and marketing of recyclable materials. This alternative is very similar to Alternative C and, consequently, it has been evaluated along with Alternative C in the following discussion.

NON-SELECTED SYSTEMS

Alternative B

SYSTEM COMPONENTS:

The following briefly describes the various components of the non-selected system.

RESOURCE CONSERVATION EFFORTS:

Voluntary measures by consumers, businesses, and industries.

VOLUME REDUCTION TECHNIQUES:

Use of volume reduction equipment by private solid waste industry & materials recovery programs: compactors, balers, shredders.

RESOURCE RECOVERY PROGRAMS:

1. Expanded curbside recycling in municipalities
2. Yard waste collection by private industry & municipalities.
3. Home composting by residents.

COLLECTION PROCESSES:

Collection mainly by private solid waste industry under municipal contracts & individual subscriptions.

TRANSPORTATION:

Transportation mainly by private solid waste industry.

DISPOSAL AREAS:

Landfills located outside of Roscommon County

INSTITUTIONAL ARRANGEMENTS:

1. Arrangements for solid waste collection & transportation under municipal contracts and individual subscriptions with residents & businesses.
2. Inter-county agreements between Roscommon County and counties where available landfills are located.

EDUCATIONAL AND INFORMATIONAL PROGRAMS:

Countywide education programs conducted by County Recycling Coordinator & Committee.

CAPITAL, OPERATIONAL, AND MAINTENANCE COSTS:

Specific costs are unknown. Operating costs would be greater than the existing system due to cost for increased collection and transportation of recyclable materials.

EVALUATION SUMMARY OF NON-SELECTED SYSTEM:

The non-selected system was evaluated to determine its potential of impacting human health, economics, environmental, transportation, siting and energy resources of the County. In addition, it was reviewed for technical feasibility, and whether it would have public support. Following is a brief summary of that evaluation along with an explanation why this system was not chosen to be implemented.

The technical and economic feasibility of implementing this alternative (enhanced materials recovery) were judged to be less desirable than the selected system. Also, this alternative would consume more energy due to expanded collection and transportation of recyclable materials.

Also, opportunities for materials recovery are widely available under the selected system. There is no documented demand for additional services in this regard. Under the selected system, local governments are free to establish resource recovery programs in any manner they feel best suits the needs of their residents. This arrangement was judged to be preferable to mandating recovery programs under Alternative B.

NON-SELECTED SYSTEMS

ADVANTAGES AND DISADVANTAGES OF THE NON-SELECTED SYSTEM:

Each solid waste management system has pros and cons relating to its implementation within the County. Following is a summary of the major advantages and disadvantages for this non-selected system.

ADVANTAGES:

1. Increased levels of materials recovery

2. Greater conservation of landfill space through diversion.

3. Low capital costs due to minimal facility requirements.

DISADVANTAGES:

1. Higher operating costs for expanded collection & transportation of recyclable materials

2. Municipalities would need to accept expanded responsibilities for contracting for solid waste services.

3. Municipalities & residents would need to accept higher costs for expanded recycling collection, either curbside or through establishment of additional drop-off sites.

NON-SELECTED SYSTEMS
Alternatives C & D

SYSTEM COMPONENTS:

The following briefly describes the various components of the non-selected system.

RESOURCE CONSERVATION EFFORTS:
Voluntary measures by consumers, businesses, and industries.

VOLUME REDUCTION TECHNIQUES:
Use of volume reduction equipment by private solid waste industry & materials recovery programs: compactors, balers, shredders.

RESOURCE RECOVERY PROGRAMS:
1. Potential development of regional MRF and composting facility.
2. Regional marketing of recyclable materials and compost

COLLECTION PROCESSES:
Collection mainly by private solid waste industry under contracts with regional solid waste authority or similar entity.

TRANSPORTATION:
Transportation mainly by private solid waste industry.

DISPOSAL AREAS:
Landfills located in other counties

INSTITUTIONAL ARRANGEMENTS:

1. Establishment of formal multi-county or countywide solid waste management authority or similar entity.
2. Agreements between authority & counties or municipalities for solid waste services.
3. Agreements between municipalities and counties and/or directly with authority for solid waste services.
4. Agreements between authority and private solid waste industry for collection, transportation, and other solid waste services.

NON-SELECTED SYSTEMS

EDUCATIONAL AND INFORMATIONAL PROGRAMS:
Programs carried out by multi-county authority

CAPITAL, OPERATIONAL, AND MAINTENANCE COSTS:

1. High initial start-up costs for establishment of authority; administration & staffing.
2. Potential high capital costs for regional materials recovery & composting facilities.

EVALUATION SUMMARY OF NON-SELECTED SYSTEM:

The non-selected system was evaluated to determine its potential of impacting human health, economics, environmental, transportation, siting and energy resources of the County. In addition, it was reviewed for technical feasibility, and whether it would have public support. Following is a brief summary of that evaluation along with an explanation why this system was not chosen to be implemented.

ALTERNATIVES C & D
Again, the evaluation of this alternative was similar to the selected system in many respects. However, there were also some significant differences. The following discussion describes the positive and negative impacts on public health, economics, environmental conditions, siting considerations, existing disposal areas, and energy consumption and production, as they differ from the selected system:

1. This alternative would be expected to have somewhat greater public health benefits than the selected system by further reducing reliance on landfills through a higher level of materials recovery. Proper collection of solid waste would be better served by contracting for collection services on a regional basis.

2. This option would generate greater revenues from recycled materials by collecting a larger quantity of materials. Also, it may be possible to achieve cost savings on solid waste services by obtaining competitive bids on a regional basis. However, higher costs would be associated with the initial formation of an authority, and with the development of regional resource recovery facilities. Feasibility studies would need to be conducted for such facilities, and their proposed capital and operating costs are not presently known.

3.. Like the selected system, no new disposal areas would need to be sited under this alternative. The existing landfills that presently serve the counties participating in the authority would continue to be used. However, as previously noted, large-scale regional materials recovery and waste processing facilities are considered to be part of this alternative. Such facilities could face public opposition and be difficult to site.

4. Energy would also be consumed under this alternative to collect and transport solid waste,

recyclable materials, and yard waste. However, there would presumably be greater energy savings through a greater level of materials recovery. Depending on the locations of materials recovery and processing facilities, there may be greater fuel consumption to transport materials than under the selected system.

Alternatives C and D were not selected as the county's primary management systems for the following major reasons:
1. A major potential problem associated with the alternative is the complexity of creating a regional solid waste authority. There will need to be strong support for this concept. Local governments might perceive the creation of a solid waste authority as a loss of home rule authority. Also, the formation of an authority might be perceived as creating another level of government ("bureaucracy") and would meet with public opposition. The private solid waste industry would probably also oppose the formation of an authority as excessively restrictive or unfairly competitive. Without strong support by elected officials, the public, and private industry, a proposed solid waste authority will not succeed.

2. There are numerous technical, economic, and political uncertainties to make a regional system possible to implement immediately. However, the concept does hold potential, and it should be explored further as the updated solid waste management plan is implemented.

ADVANTAGES AND DISADVANTAGES OF THE NON-SELECTED SYSTEM:

Each solid waste management system has pros and cons relating to its implementation within the County. Following is a summary of the major advantages and disadvantages for this non-selected system.

ADVANTAGES:

1. Economies of scale through regional or countywide collection & marketing of recyclable materials.

2. Economies of scale through regional or countywide purchasing of recycled products.

3. Potential cost savings through regional or countywide contracts for solid waste services.

DISADVANTAGES:

1. Political barriers to establishing solid waste authority.

2. Higher costs for regional processing facilities.

3. Public opposition to siting any new solid waste facilities.

PUBLIC PARTICIPATION

AND APPROVAL

The following summarizes the processes which were used in the development and local approval of the Plan including a summary of public participation in those processes, documentation of each of the required approval steps, and a description of the appointment of the solid waste management planning committee along with the members of that committee.

Several mechanisms were used to encourage involvement by local governments and the public in the Solid Waste Management Plan update process. These are summarized below:

1. Time for public comment was reserved on the agenda for each meeting of the Planning Committee.

2. Notices of each Planning Committee meeting were distributed to all municipalities in the County in advance of each meeting.

3. A general notice was published as required that announced the general availability of the draft plan when it was released for public review for a three-month period.

4. The draft plan was distributed to all municipalities in the County and adjacent counties for review.

5. A general notice announcing the public hearing on the draft plan was published at least 30 days prior to the hearing.

6. A public hearing was held on the draft plan to provide all interested persons an opportunity to voice questions or concerns regarding the updated plan.

PUBLIC INVOLVEMENT PROCESS: A description of the process used, including dates of public meetings, copies of public notices, documentation of approval from solid waste planning committee, County board of commissioners, and municipalities.

The public involvement process is described on the preceding page. The Solid Waste Management Planning Committee met on the following dates:

October 21, 1998
November 19, 1998
January 17, 1999
February 21, 1999
April 18, 1999
May 27, 1999
June 27, 1999
July 29, 1999
September 30, 1999
December 2, 1999
February 3, 2000.

PLAN APPROVALS:
The updated County Solid Waste Management Plan was approved by the County Solid Waste Management Planning Committee on February 3, 2000.

The updated Solid Waste Management Plan was approved by the Roscommon County Board of Commissioners on February 10, 2000.

The updated Solid Waste Management Plan was submitted to the municipalities within Roscommon County on February 10, 2000.

The updated Solid Waste Management Plan was approved by 67% of the municipalities in the County on September 13, 2000.

The updated Solid Waste Management Plan was submitted to the Michigan Department of Environmental Quality on December 21, 2000.

The updated Solid Waste Management Plan was approved by the Michigan Department of Environmental Quality on _____, 2000.

PLANNING COMMITTEE APPOINTMENT PROCEDURE:

The County Board of Commissioners developed a list of potential candidates for the Planning Committee, including some individuals who had been involved in the preparation of the County's previous Solid Waste Plan under Act 641. After reviewing the list of candidates, the County Board appointed the 14 member Planning Committee in October 1998. Additional appointments were made as necessary over the course of the plan update to fill vacancies.

PLANNING COMMITTEE

Committee member names and the company, group, or governmental entity represented from throughout the County are listed below.

Four representatives of the solid waste management industry:

1. Richard Leszcz, Waste Management
2. Wayne Follenius, Waste Management
3. Fred Still, Superb Disposal
4. Lyle Canfield, G & L Roll Off Service

One representative from an industrial waste generator:

1. Eric Weber, Lear Corporation

Two representatives from environmental interest groups from organizations that are active within the County:

1. Kristine Mol, Roscommon County Recycling Committee
2. Ned Wickes, Higgins Lake Foundation

One representative from County government. All government representatives shall be elected officials or a designee of an elected official.

1. Sheridan Cole, Roscommon County Drain Commissioner (County Board Designee)

One representative from township government:

1. Diane Randall, Roscommon Township Supervisor

One representative from city government:

1. Michael Mitchell, Village of Roscommon Manager (Village Council designee)

One representative from the regional solid waste planning agency:

1. Sue Fortune, East Central Michigan Planning & Development Regional Commission

Three representatives from the general public who reside within the County:

1. Richard Pastula
2. Brett Yardley
3. Jim Clendening

ROSCOMMON COUNTY BOARD OF COMMISSIONERS

112 S. Fourth Street, Suite C
P.O. Box 776
Roscommon, MI 48653

Phone: (517) 275-8021
FAX: (517) 275-5675
E-mail: commissioners@voyager.net

February 7, 2001

DEQ - WMD
Mr. Stan Idziak
P.O. Box 30241
Lansing, MI 48909-7741

RE: ROSCOMMON COUNTY SOLID WASTE PLAN UPDATE

Dear Mr. Idziak:

We are sending you the following information:

1. Roscommon County Herald-News Proof of Publication
2. Houghton Lake Resorter Proof of Publication
3. September 30, 1999 Solid Waste Committee Agenda for Public Hearing
4. February 3, 2000 Solid Waste Committee Agenda
5. February 3, 2000 Solid Waste Committee Minutes
6. Excerpt from the Roscommon County Board of Commissioners February 10, 2000 Minutes

This should complete the information you need to complete your work on our Solid Waste Plan. However, if I may be of further assistance to you, please feel free to call me at (517) 275-8021.

Very truly yours,

Joyce E Morris

Mrs. Joyce E. Morris
Executive Secretary
ROSCOMMON COUNTY
BOARD OF COMMISSIONERS

cc: Doug Bell

DISTRICT #1	DISTRICT #2	DISTRICT #3	DISTRICT #4	DISTRICT #5
Carl L. Geiger, Chairman	Larry D. Mead	William R. McCaleb	Marc J. Milburn	Roman Pacella, Vice-Chairman
carlgeiger@roscommoncounty.net	larrymead@roscommoncounty.net	billmccaleb@roscommoncounty.net	marcjmilburn@roscommoncounty.net	romanpacella@roscommoncounty.net

ROSCOMMON COUNTY BOARD OF COMMISSIONERS

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Phone: (517) 275-8021
FAX: (517) 275-5675
E-mail: commissioners@voyager.net

February 7, 2001

VIA FACSIMILE

Mr. Stan Idziak
DEPARTMENT OF ENVIRONMENTAL QUALITY

RE: ROSCOMMON COUNTY SOLID WASTE PLAN UPDATE

Dear Mr. Idziak:

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Very truly yours,

Joyce E. Morris

Mrs. Joyce E. Morris
Executive Secretary
ROSCOMMON COUNTY
BOARD OF COMMISSIONERS

cc: Doug Bell

DISTRICT #1	DISTRICT #2	DISTRICT #3	DISTRICT #4	DISTRICT #5
Carl L. Geiger, Chairman	Larry D. Mead	William R. McCaleb	Marc J. Milburn	Roman Pacella, Vice-Chairman
carlgeiger@roscommoncounty.net	larrymead@roscommoncounty.net	billmccaleb@roscommoncounty.net	marcjmilburn@roscommoncounty.net	romanpacella@roscommoncounty.net

AFFIDAVIT OF PUBLICATION

STATE OF MICHIGAN,
COUNTY OF ROSCOMMON } ss

NOTICE OF PUBLIC HEARING

ROSCOMMON COUNTY SOLID WASTE MANAGEMENT PLAN UPDATE

The Roscommon County Solid Waste Management Planning Committee will hold a public hearing on the proposed update of the Roscommon County Solid Waste Management Plan. The public hearing will be held as follows:

Date: Thursday, September 30, 1999
Time: 7:00 p.m.
Place: County Board Meeting Room
County Building Annex
112 S. Fourth Street
Roscommon, Michigan 48653

The purpose of the hearing is to accept public comments on the proposed solid Waste Management Plan update. Both written and verbal comments will be accepted at the hearing.

The plan is available for inspection and copying at cost at the Roscommon County Board of Commissioners Office, County Building Annex, 112 S. Fourth Street, Roscommon, Michigan 48653, during regular business hours. The plan has also been sent to each township in the County and the Village of Roscommon.

Written comments on the proposed plan update will be accepted through the close of business on November 15, 1999. Written comments on the draft plan should be sent to the Solid Waste Planning Committee in care of the County Board Office, P.O. Box 776, Roscommon MI 48653. Please submit written comments so that they are received no later than November 15, 1999.

Your views on the updated Roscommon County Solid Waste Management Plan are welcomed and encouraged.

Robert E. Perlberg, being duly sworn, says: I am the publisher of The Roscommon County Herald-News, a newspaper printed and circulated in said county; that the annexed is a printed copy of a notice which was published in said paper on the following dates, to wit:

Sept. 5 A.D. 20XX 1999 A.D. 20_____

_____ A.D. 20_____ A.D. 20_____

Robert E. Perlberg

Subscribed and sworn to before me this 7th

day of September A.D. 20XX 1999

Beth A. Molands

Notary Public, Roscommon County, Michigan
My commission expires January 23, 2004

1

(2)

Roscommon County Solid Waste Management Plan Update

The Roscommon County Solid Waste Management Planning Committee will hold a public hearing on the proposed update of the Roscommon County Solid Waste Management Plan. The public hearing will be held as follows:

***Date*: Thursday, September 30, 1999**
***Time*: 7:00 p.m.**
***Place*: County Board Meeting Room**
County Building Annex
112 S. Fourth Street
Roscommon, Michigan 48653

The purpose of the hearing is to accept public comments on the proposed Solid Waste Management Plan update. Both written and verbal comments will be accepted at the hearing.

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Your views on the updated Roscommon County Solid Waste Management Plan are welcomed and encouraged.

JBLICATION

Resorter
County
48
Houghton Lake, MI 48629
517-366-5341

STATE OF MICHIGAN,
County of Roscommon } ss.

.....Jo Ann Jaruzel....., being duly sworn, says, I am the ...Office Manager.....

of THE HOUGHTON LAKE RESORTER, a newspaper published and circulated in said County. The annexed is a printed copy of a notice which was published in said newspaper on the following dates:

September 2nd,

A.D. 1999, that he/she is the agent of the printers of said newspaper, and knows well the facts stated herein.

Jo Ann Jaruzel
Jo Ann Jaruzel

Subscribed and sworn to before me this:

.....2nd..... day of .....September..... A.D. 1999

Shirley A. Laginess
Shirley A. Laginess
Notary Public, Roscommon County, Michigan

My Commission Expires November 20, 2002

Printer's Bill

.....7½"..... Folio ..... 1 ..... Times; Total Cost $48.25

(3)

East Central Michigan Planning & Development Regional Commission
Designated Solid Waste Management Planning Agency for Roscommon County
3535 State Street Saginaw MI 48602 **Telephone 517-797-0800**

Notice of Public Meeting

Roscommon County Solid Waste Management Planning Committee

Date: Thursday, September 30, 1999

Time: **7:00 p.m.**

Place:
Roscommon County Building Annex
112 South Fourth Street, Suite C
Roscommon, Michigan 48653

Agenda

1. CALL TO ORDER
2. APPROVAL OF MINUTES
3. APPROVAL OF AGENDA
4. PUBLIC HEARING ON THE DRAFT COUNTY SOLID WASTE MANAGEMENT PLAN UPDATE
   A. Overview of the Solid Waste Plan Update (Doug Bell, ECMPDR)
   B. Open Public Hearing
   C. Review written comments received on the draft plan.
   D. Accept verbal comments on the draft plan from those in attendance.
   E. Close public hearing.
5. SET DATE OF NEXT MEETING
6. ADJOURNMENT

Planning Committee Members: Please note that this meeting has been scheduled for 7:00 in the evening.

RECEIVED
SEP 24 1999

posted 10:00 9/29/99

East Central Michigan Planning & Development Regional Commission
Designated Solid Waste Management Planning Agency for Roscommon County
3144 Davenport, Suire 200 Saginaw MI 48602 **Telephone 517-797-0800**

Notice of Public Meeting

Roscommon County Solid Waste Management Planning Committee

Date: Thursday, February 3, 2000

Time: 2:00 p.m.

Place:
Roscommon County Building Annex
112 South Fourth Street, Suite C
Roscommon, Michigan 48653

Agenda

1. Call to Order
2. Approval of Agenda
3. Communications
4. Review Changes to Draft Plan (Revised draft mailed to committee members)
5. Approval of Plan Update & Recommendation to County Board
6. Public Comment
7. Set Date of Next Meeting (if necessary)
8. Adjournment

(5)

ROSCOMMON COUNTY
SOLID WASTE MANAGEMENT
PLANNING COMMITTEE
MINUTES

February 3, 2000

Present: Roy Spangler, Kris Mol, Ned Wickes, Bill McCaleb, Dick Pastula, Doug Bell, Richard Leszcz, Bret Yardley Carl Geiger, Sheridan D. Cole, D. Gene Drader, Ken Carlson, Lyle Canfield, Diane F. Randall, Donna J. Pflum

The meeting was called to order by Carl Geiger at 2:05 p.m.

It was determined that a quorum is present.

Doug Bell explained the final changes to the documents and responded to questions about the Plan. The committee by consensus thanked Mr. Bell for the work done on the County 641 Solid Waste Management Plan.

It was moved by Sheridan Cole and seconded by Kris Mol to approve the Plan and bound it to the County Board of Commissioners. Motion passed unanimously.

There being no further business, the meeting was adjourned at 2:55 p.m.

Respectfully Submitted,

Joyce Morris
Recording Secretary

on the Chamber of Commerce ...

(6.)

9. Moved by Ancel, seconded by Pacella to authorize chairman to sign contract with Houghton Lake Chamber of Commerce. On roll call: Ayes: Geiger, Mead, McCaleb, Ancel, Pacella. Nays: None. Motion carried.

10. Moved by Pacella, seconded by Mead to approve the Roscommon Township Association's appointees Joe Faino (Denton Twp.) and Jim Lippert (Gerrish Twp.) to the Central Dispatch Authority Board effective January 1, 2000 til 12/31/02. On roll call: Ayes: Geiger, Mead, McCaleb, Ancel, Pacella. Nays: None. Motion carried.

11. Moved by Pacella, seconded by McCaleb to authorize payment of invoice #35615 to Gosling Czubak for landfill sampling from 11/21/99 through 1/9/00 in the amount of $443.25. On roll call: Ayes: Geiger, Mead, McCaleb, Ancel, Pacella. Nays: None. Motion carried.

12. Moved by Pacella, seconded by Mead to approve renewal of the two Tower Lease Agreements with WUPS Radio Station at $250 a month for each Agreement and authorize Chairman to sign same. On roll call: Ayes: Geiger, Mead, McCaleb, Ancel, Pacella. Nays: None. Motion carried.

13. Moved by Mead, seconded by Ancel to approve payment to James Anderson, CPA, for consultation services regarding Gypsy Moth in the amount of $570.00. On roll call: Ayes: Geiger, Mead, McCaleb, Ancel, Pacella. Nays: None. Motion carried.

14. Moved by McCaleb, seconded by Ancel to authorize chairman to sign the MSHDA Amendment to Grant #MSC-1999-0335-HO to increase the budget amount to $400,000. On roll call: Ayes: Geiger, Mead, McCaleb, Ancel, Pacella. Nays: None. Motion carried.

15. Moved by McCaleb, seconded by Pacella to authorize payment of $2,798 to East Central Michigan Planning and Development Regional Commission for the first of two payments on their 2000 appropriation. On roll call: Ayes: Geiger, Mead, McCaleb, Ancel, Pacella. Nays: None. Motion carried.

16. Moved by McCaleb, seconded by Ancel to approve the Roscommon County Solid Waste Management Plan Update and request the Townships and Village to adopt a resolution in favor of the Plan. On roll call: Ayes: Geiger, Mead, McCaleb, Ancel, Pacella. Nays: None. Motion carried.

Roscommon Co. Bd. of Comm
Feb. 10, 2000 Minutes

WASTE MANAGEMENT DIVISION
FEB 0 8 2001
RECEIVED

Resolution for Action on the
Roscommon County Solid Waste Management Plan Update by
Local Units of Government

WHEREAS, Roscommon County has prepared an updated Solid Waste Management Plan in accordance with Part 115 of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended; and

WHEREAS, The Roscommon County Board of Commissioners has now approved the plan as prepared and submitted by the County Solid Waste Management Planning Committee; and

WHEREAS, The Township (*Township/Village*) of Richfield (*Name of Local Unit*)

has reviewed the updated Solid Waste Plan and its recommendations;

NOW, THEREFORE, BE IT RESOLVED that the Board (*Board/Council*) of this

municipality hereby Approves (*Approves/Disapproves*)

the Roscommon County Solid Waste Management Plan Update in accordance with Act 451, as amended.

Resolution declared adopted at a regular meeting of the Board (*Board/Council*)

of Richfield (*Name of Local Unit*) held on March 21 (*Date*), 2000.

Florence Osborn
Florence Osborn
Chief Elected Official

Bonnie L. Schmitt
Bonnie L. Schmitt
Clerk

RECEIVED

MAR 27 2000

Resolution for Action on the Roscommon County Solid Waste Management Plan Update by Local Units of Government

WHEREAS, Roscommon County has prepared an updated Solid Waste Management Plan in accordance with Part 115 of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended; and

WHEREAS, The Roscommon County Board of Commissioners has now approved the plan as prepared and submitted by the County Solid Waste Management Planning Committee; and

WHEREAS, The Township (*Township/Village*) of Gerrish (*Name of Local Unit*)

has reviewed the updated Solid Waste Plan and its recommendations;

NOW, THEREFORE, BE IT RESOLVED that the Board (*Board/Council*) of this

municipality hereby approves (*Approves/Disapproves*)

the Roscommon County Solid Waste Management Plan Update in accordance with Act 451, as amended.

Resolution declared adopted at a regular meeting of the Board (*Board/Council*)

of Gerrish Township (*Name of Local Unit*) held on March 14 (*Date*), 2000.

Supervisor

Clerk

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Resolution for Action on the
Roscommon County Solid Waste Management Plan Update by
Local Units of Government

WHEREAS, Roscommon County has prepared an updated Solid Waste Management Plan in accordance with Part 115 of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended; and

WHEREAS, The Roscommon County Board of Commissioners has now approved the plan as prepared and submitted by the County Solid Waste Management Planning Committee; and

WHEREAS, The Township (*Township/Village*) of Higgins (*Name of Local Unit*)

has reviewed the updated Solid Waste Plan and its recommendations;

NOW, THEREFORE, BE IT RESOLVED that the Board (*Board/Council*) of this

municipality hereby Approves (*Approves/Disapproves*)

the Roscommon County Solid Waste Management Plan Update in accordance with Act 451, as amended.

Resolution declared adopted at a regular meeting of the Board (*Board/Council*)

of Higgins Township (*Name of Local Unit*) held on April 3, (*Date*), 2000.

RONALD NAGY
Chief Elected Official

TERRY A. MORLEY
Clerk

Resolution for Action on the
Roscommon County Solid Waste Management Plan Update by
Local Units of Government

WHEREAS, Roscommon County has prepared an updated Solid Waste Management Plan in accordance with Part 115 of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended; and

WHEREAS, The Roscommon County Board of Commissioners has now approved the plan as prepared and submitted by the County Solid Waste Management Planning Committee; and

WHEREAS, The Township of Lake
(Township/Village) *(Name of Local Unit)*

has reviewed the updated Solid Waste Plan and its recommendations;

NOW, THEREFORE, BE IT RESOLVED that the Lake Twp Board of this
(Board/Council)

municipality hereby Approves
(Approves/Disapproves)

the Roscommon County Solid Waste Management Plan Update in accordance with Act 451, as amended.

Resolution declared adopted at a regular meeting of the Lake Twp Board
(Board/Council)
of Lake Twp / Roscommon City held on June 20, 2000.
(Name of Local Unit) *(Date)*

Joe Kiersey Supervisor
Chief Elected Official

Thomas P. Lachowski
Clerk

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JUL 20 2000

Resolution for Action on the
Roscommon County Solid Waste Management Plan Update by
Local Units of Government

WHEREAS, Roscommon County has prepared an updated Solid Waste Management Plan in accordance with Part 115 of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended; and

WHEREAS, The Roscommon County Board of Commissioners has now approved the plan as prepared and submitted by the County Solid Waste Management Planning Committee; and

WHEREAS, The TOWNSHIP (*Township/Village*) of AUSABLE (*Name of Local Unit*)

has reviewed the updated Solid Waste Plan and its recommendations;

NOW, THEREFORE, BE IT RESOLVED that the Board (*Board/Council*) of this

municipality hereby APPROVES (*Approves/~~Disapproves~~*)

the Roscommon County Solid Waste Management Plan Update in accordance with Act 451, as amended.

Resolution declared adopted at a regular meeting of the Board (*Board/Council*)

of AUSABLE TOWNSHIP (*Name of Local Unit*) held on 06-13 (*Date*), 2000.

Chief Elected Official

Clerk

Resolution for Action on the
Roscommon County Solid Waste Management Plan Update by
Local Units of Government

WHEREAS, Roscommon County has prepared an updated Solid Waste Management Plan in accordance with Part 115 of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended; and

WHEREAS, The Roscommon County Board of Commissioners has now approved the plan as prepared and submitted by the County Solid Waste Management Planning Committee; and

WHEREAS, The Township (*Township/Village*) of Lyon (*Name of Local Unit*)

has reviewed the updated Solid Waste Plan and its recommendations;

NOW, THEREFORE, BE IT RESOLVED that the Board (*Board/Council*) of this

municipality hereby Approves (*Approves/Disapproves*)

the Roscommon County Solid Waste Management Plan Update in accordance with Act 451, as amended.

Resolution declared adopted at a regular meeting of the Board (*Board/Council*)

of Lyon (*Name of Local Unit*) held on April 19 (*Date*), 2000.

Chief Elected Official

Clerk

With inclusions subject to corrections on omitted Lyon Twp. issues not addressing compost site, bulk pickup and recycling.

Resolution for Action on the
Roscommon County Solid Waste Management Plan Update by
Local Units of Government

WHEREAS, Roscommon County has prepared an updated Solid Waste Management Plan in accordance with Part 115 of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended; and

WHEREAS, The Roscommon County Board of Commissioners has now approved the plan as prepared and submitted by the County Solid Waste Management Planning Committee; and

WHEREAS, The Township of Backus
(Township/Village) *(Name of Local Unit)*

has reviewed the updated Solid Waste Plan and its recommendations;

NOW, THEREFORE, BE IT RESOLVED that the Board of this
(Board/Council)

municipality hereby approves
(Approves/Disapproves)

the Roscommon County Solid Waste Management Plan Update in accordance with Act 451, as amended.

Resolution declared adopted at a regular meeting of the Board
(Board/Council)
of Backus held on 03-06-, 2000.
(Name of Local Unit) *(Date)*

Mary Rapke — Chief Elected Official

Louise M. Nagy — Clerk

MARKEY TOWNSHIP

Township Offices **Sanitary Drain Office**
4974 E. Houghton Lake Dr.
Houghton Lake, Michigan 48629

(517)366-9614 FAX (517)366-8631

Markey Township Approval Of
Roscommon County Solid Waste Management Plan Update

WHEREAS, Roscommon County has prepared an updated Solid Waste Management Plan in accordance with Part 115 of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended; and

WHEREAS, The Roscommon County Board of Commissioners has now approved the plan as prepared and submitted by the County Solid Waste Management Planning Committee; and

WHEREAS, The Township of Markey has reviewed the updated Solid Waste Plan and its recommendations;

NOW, THEREFORE, BE IT RESOLVED that the Board of Markey Township hereby approves the Roscommon County Solid Waste Management Plan Update in accordance with Act 451, as amended.

The Resolution was offered by Drader, seconded by Gardner. On roll call: Aye Votes: Gardner, Champeau, Meibeyer, Drader. Absent: Kortge. Nay votes: None. The Resolution is declared adopted at a regular meeting of the Markey Township Board held on March 13, 2000.

Louis G. Champeau
Markey Township Supervisor

Shirley A. Meibeyer
Markey Township Clerk

Resolution for Action on the
Roscommon County Solid Waste Management Plan Update by
Local Units of Government

WHEREAS, Roscommon County has prepared an updated Solid Waste Management Plan in accordance with Part 115 of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended; and

WHEREAS, The Roscommon County Board of Commissioners has now approved the plan as prepared and submitted by the County Solid Waste Management Planning Committee; and

WHEREAS, The Township (*Township/Village*) of Denton (*Name of Local Unit*)

has reviewed the updated Solid Waste Plan and its recommendations;

NOW, THEREFORE, BE IT RESOLVED that the Board (*Board/Council*) of this

municipality hereby Approves (*Approves/Disapproves*)

the Roscommon County Solid Waste Management Plan Update in accordance with Act 451, as amended.

Resolution declared adopted at a regular meeting of the Board (*Board/Council*)

of Denton Township (*Name of Local Unit*) held on March 1 (*Date*), 2000.

Joseph B. Faino
Chief Elected Official

Carol A. Asher
Clerk

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MAR - 7 2000

RESOLUTION #3-7-2000

Resolution for Action on the
Roscommon County Solid Waste Management Plan Update by
Local Units of Government

WHEREAS, Roscommon County has prepared an updated Solid Waste Management Plan in accordance with Part 115 of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended; and

WHEREAS, The Roscommon County Board of Commissioners has now approved the plan as prepared and submitted by the County Solid Waste Management Planning Committee; and

WHEREAS, The TOWNSHIP *(Township/Village)* of ROSCOMMON *(Name of Local Unit)*

has reviewed the updated Solid Waste Plan and its recommendations;

NOW, THEREFORE, BE IT RESOLVED that the BOARD *(Board/Council)* of this

municipality hereby APPROVES *(Approves/Disapproves)*

the Roscommon County Solid Waste Management Plan Update in accordance with Act 451, as amended.

Resolution declared adopted at a regular meeting of the Township Board *(Board/Council)*

of Roscommon Township *(Name of Local Unit)* held on March 7 *(Date)*, 2000.

Diane F. Randall
Diane F. Randall
Chief Elected Official

Melinda K. Hines
Melinda K. Hines
Clerk

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Resolution for Action on the
Roscommon County Solid Waste Management Plan Update by
Local Units of Government

WHEREAS, Roscommon County has prepared an updated Solid Waste Management Plan in accordance with Part 115 of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended; and

WHEREAS, The Roscommon County Board of Commissioners has now approved the plan as prepared and submitted by the County Solid Waste Management Planning Committee; and

WHEREAS, The Village (*Township/Village*) of Roscommon (*Name of Local Unit*)

has reviewed the updated Solid Waste Plan and its recommendations;

NOW, THEREFORE, BE IT RESOLVED that the Council (*Board/Council*) of this

municipality hereby Approves (*Approves/Disapproves*)

the Roscommon County Solid Waste Management Plan Update in accordance with Act 451, as amended.

Resolution declared adopted at a regular meeting of the Council (*Board/Council*)

of Village of Roscommon (*Name of Local Unit*) held on February 24, 2000. (*Date*)

Richard L. Maki
Chief Elected Official

Mary D. Krauss
Clerk

Resolution for Action on the
Roscommon County Solid Waste Management Plan Update by
Local Units of Government

WHEREAS, Roscommon County has prepared an updated Solid Waste Management Plan in accordance with Part 115 of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended; and

WHEREAS, The Roscommon County Board of Commissioners has now approved the plan as prepared and submitted by the County Solid Waste Management Planning Committee; and

WHEREAS, The Township of Nester
(Township/~~Village~~) *(Name of Local Unit)*

has reviewed the updated Solid Waste Plan and its recommendations;

NOW, THEREFORE, BE IT RESOLVED that the Board of this
(Board/~~Council~~)

municipality hereby Approves
(Approves/~~Disapproves~~)

the Roscommon County Solid Waste Management Plan Update in accordance with Act 451, as amended.

Resolution declared adopted at a regular meeting of the Board
(Board/~~Council~~)

of Nestertownship held on 3-2-2000, 2000.
(Name of Local Unit) *(Date)*

James Murray
Chief Elected Official

Carolyn Corlew
Clerk

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ATTACHMENTS

Listed Capacity

Documentation from landfills that the County has access to their listed capacity.

Letters from various landfill operators will be attached as they are received.

NORTHERN OAKS RECYCLING AND DISPOSAL FACILITY
A WASTE MANAGEMENT COMPANY

P.O. Box 813
513 N. County Farm Road
Harrison, Michigan 48625
(517) 539-6111

September 27, 2000

Mr. Douglas A. Bell, AICP
Community Planning Consultant
214 East State Street
Clare, Michigan 48617

Dear Mr. Bell:

Pursuant to your request for information this shall serve that Northern Oaks Recycling and Disposal Facility has sufficient capacity to receive waste from Arenac, Gladwin, Ogemaw, Roscommon and Iosco Counties for the next 10 years.

If you require further information please do not hesitate to contact me.

Respectfully,

Richard Leszcz
Manager

WASTE MANAGEMENT

11375 Sherman Rd.
Frederic, MI 49733
(517) 732-3553
(517) 732-1398 Fax

October 9, 2000

Mr. Douglas Bell
Community Planning Consultant
214 East State Street
Clare, MI 48617

RE: Arenac, Gladwin, Ogemaw, Roscommon, and Iosco Counties Solid Waste Plan Updates

The following is in response to your request for documentation regarding the disposal of the above listed counties waste at the Waters Landfill in Crawford County.

Solid waste that is generated in the above listed counties can be accepted for disposal at Waters Landfill. Disposal capacity for the above listed counties will be available in accordance with the Crawford County Solid Waste Plan.

If you have any questions, please call me at (517) 732-3553

Sincerely,

Debora L Johnston

Debora Johnston
Site Engineeer

Cc: Crawford County
Maple Forest Township

ROGER D. FRYE, CHAIRMAN
DENNIS KAUFFMAN, VICE- CHAIRMAN
RAYMOND WEGMEYER, SEC./TREAS.
RICHARD E. HERMANSON
MICHAEL HUNT
TOM MULLANEY
SANDY CUNNINGHAM, EXEC. SECRETARY

MONTMORENCY OSCODA ALPENA Solid Waste Management AUTHORITY
P. O. Box 789, Atlanta, MI 49709
(517) 785-2066 Phone
(517) 785-4183 Fax

October 2, 2000

Mr. Douglas A. Bell, AICP
Project Consultant
214 East State Street
Clare, MI 48617

Dear Mr. Bell:

In response to your September 27th correspondence, please be advised that it is the intention of the Montmorency-Oscoda-Alpena Solid Waste Management Authority Board to accept waste generated in the County's as listed with export authorization in the Montmorency-Oscoda Solid Waste Management Plan, which includes Ogemaw, Roscommon, and Iosco County's.

However, on 6/16/00, the Board directed that all County's with export authorization be advised that we are not in a position to guarantee disposal capacity to any County with the exception of Montmorency, Oscoda and Alpena County's, as Member-County's of the Montmorency-Oscoda-Alpena Solid Waste Management Authority Board.

We will continue to accept refuse from the County's with export authorization, however, we must reserve the right to limit the quantity accepted.

If you require additional information, please contact this office.

Sincerely,

Sandy Cunningham

Sandy Cunningham
Executive Secretary

cc: Landfill Authority Board

REPUBLIC WASTE SERVICES

36850 Van Born Rd.
P.O. Box 68
Wayne, MI 48184
734-641-3555
734-729-8890 Fax

November 30, 2000

Mr. Douglas Bell
Community Planning Consultant
214 East State Street
Clare, Michigan 48617

RE: Acceptance for Disposal & Assurance of Landfill Capacity

Dear Mr. Bell,

Republic Services of Michigan hereby acknowledges receipt of your letter dated September 27, 2000, wherein the following Counties of Arenac, Gladwin, Ogemaw, Roscommon, and Iosco, request capacity assurance to meet the needs of their respective County's updated solid waste management plan for the next ten years.

Republic will commit and accept up to 100 percent of the daily and annual volume generated within Arenac, Gladwin, Ogemaw, Roscommon and Iosco Counties at the following Republic owned and operated facilities: the Whitefeather Landfill, located in Bay County, the Elk Run Landfill, located in Presque Isle County, and the Brent Run Landfill in Genesee County. We will commit this capacity for the ten-year planning period commencing upon the date of approval of the updated plan by the MDEQ.

Republic looks forward to assisting these counties in planning for their long-term disposal needs. Please feel free to contact us if there is any other means in which we can provide assistance.

Respectfully,

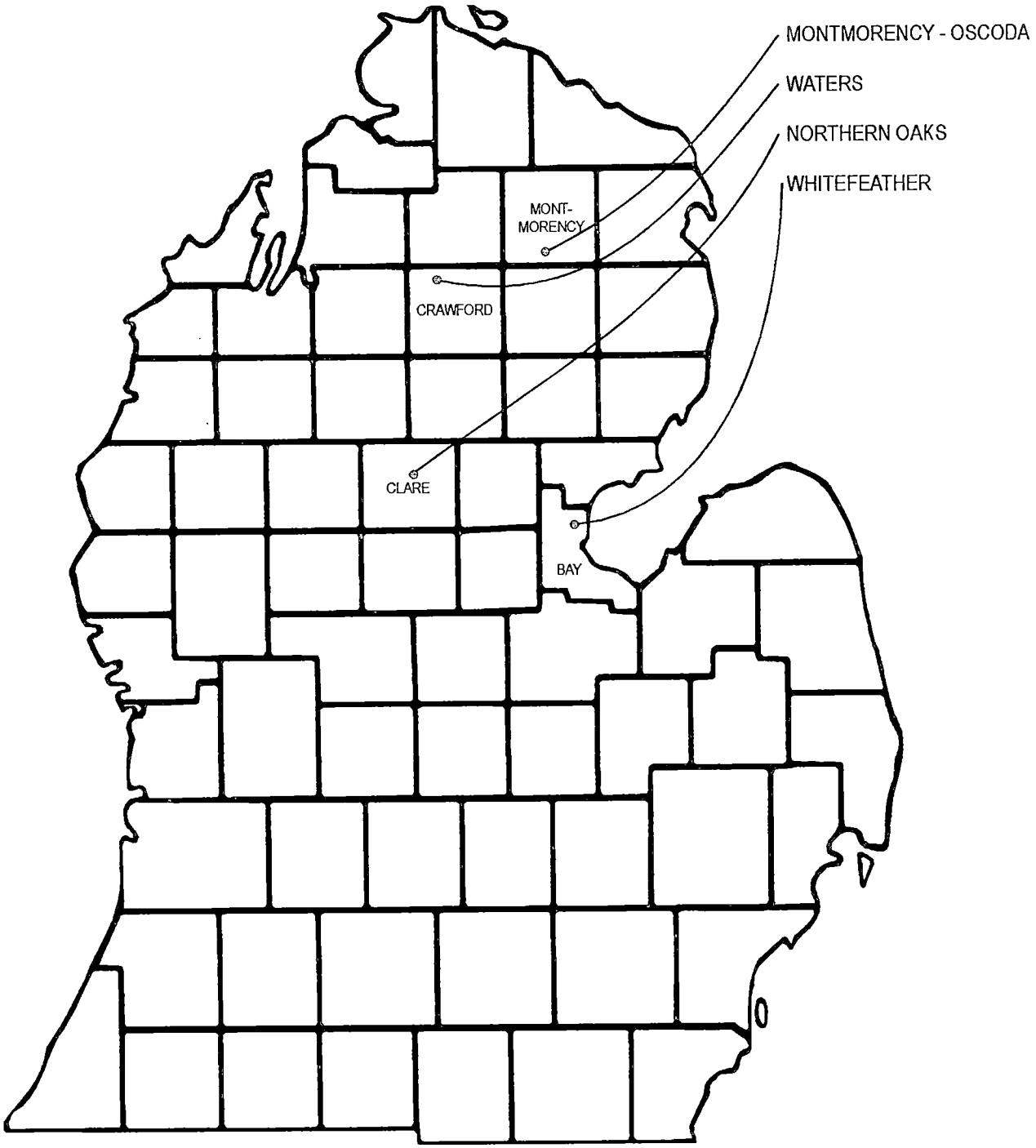
Stephanie Glyssøn
Director of Governmental Affairs

Cc: Matt Neely, Republic Waste

ATTACHMENTS

Maps

Maps showing locations of solid waste disposal facilities used by the County.



Landfill Locations

ATTACHMENTS

Inter-County Agreements

Copies of Inter-County agreements with other Counties (if any).

Special Conditions

Special conditions affecting import or export of solid waste.