STATE OF MICHIGAN

JOHN ENGLER, Governor

DEPARTMENT OF ENVIRONMENTAL QUALITY

"Better Service for a Better Environment"

HOLLISTER BUILDING PO BOX 30473 LANSING MI 48909-7973

INTERNET: www deq state mi us

RUSSELL J. HARDING, Director

August 7, 2000

Mr. Zachary Cox, Chairman
Kalkaska County Board of Commissioners
Governmental Center
605 North Birch Street
Kalkaska, Michigan 49646-0780

Dear Mr. Cox:

The Department of Environmental Quality (DEQ) received the locally approved update to the Kalkaska County Solid Waste Management Plan (Plan) on March 6, 2000. Except for the items indicated below, the Plan is approvable. As outlined in the May 26, 2000 letter to Mr. Frank Wright, Controller, Kalkaska County (County), from Mr. Stan Idziak, DEQ, Waste Management Division, and as confirmed in a letter dated June 27, 2000, to Mr. Idziak from Mr. James Green, Vice-Chairman, Kalkaska County Board of Commissioners, the DEQ makes certain modifications to the Plan as discussed below.

On page III-32 of the Plan, Import Authorizations: A major concern was the lack of authorization for the County to accept imports of solid waste from other Michigan counties to existing disposal areas in the County. This restriction would have effectively closed down two businesses in the County that solidify and dispose of drilling wastes from sites throughout the state. It is our understanding that was not the County's intention when writing the Plan.

In order to remedy this situation in accordance with the County's actual intent, the statements, Not Applicable and Note to "Not Applicable" on page III-32 are deleted and replaced with this statement: Current licensed disposal areas within the County are authorized to import solid wastes from all other counties in Michigan with no constraint as to quantity.

On page III-36, Table 2-A, Attachments Section: Current Export Volume Authorization of Solid Waste, *Conditions for Current Exports: and in Attachment F: Section III, Table 2-A, Attachments Section, *Conditions for Current Exports: The Plan states:

> Export of Type II and Type III waste will be allowed to the identified counties only if such waste collected for export is collected in compliance with all applicable laws, ordinances, rules and regulations of the Kalkaska County Solid Waste Management System, Ordinance and Intergovernmental Agreements consistent with the Plan's Enforceable Program. Special Industrial Waste shall be exempt from these conditions. All other wastes will be exempt from these conditions only on a temporary basis in the event of a temporary shutdown of any solid waste facilities provided for in the Selected Alternative and then only until such time that those facilities again begin to operate. The export of solid waste out of the state of Michigan shall be allowed as provided by state or federal law.

The term Special Industrial Waste is not defined and is, therefore, too broad to be included in the Plan. In addition, this statement appears to suspend the provisions of the Plan as it applies to solid waste management in the event any solid waste facilities mentioned in the Plan close. Therefore, this statement is deleted from page III-36 and from Attachment F of the Plan.

On pages III-75 and III-76, criteria C through G and criterion H, all require isolation distances of 2,640 feet. We believe the cumulative result of having such a large isolation distance for these criteria is to effectively prevent the siting of a solid waste disposal area in the County. The Plan must contain siting criteria that will allow a developer of a disposal area a reasonable opportunity to site a facility.

In order to correct this situation, these criteria are modified by reducing the isolation distances required for criteria C through G and H from 2,640 feet to 1,320 feet. In addition, criterion H states:

H. No part of the site and respective parcel(s) is located within or less than 2,640 feet from the boundary edge of:

1. Any surface water;
2. Beach contiguous to a lake or stream;
3. Existing public utility easements; and
4. Existing public rights-of-way.

The criteria under numbers 3 and 4 will effectively prohibit any new disposal area from being sited under this plan, since virtually all property on which a disposal area might seek to locate, would abut a public road and would be located near the public utilities necessary to provide service to the property.

Therefore, in order to remedy this problem, items 3 and 4 are deleted from the Plan and this criterion will read:

H. No part of the site and respective parcel(s) is located within or less than 1,320 feet from the boundary edge of:

1. Any surface water; or
2. Beach contiguous to a lake or stream.

On page III-87 of the Plan, Local Ordinances and Regulations Affecting Solid Waste Disposal, 1., A., a.: Certain ancillary construction details; and page III-88, 3., a.: Certain ancillary construction details.

The scope of regulations intended by these statements cannot be determined as the general description used is too vague. Because we are unable to determine the intended scope of local regulation, we cannot evaluate if this authority would impermissibly conflict with or hinder DEQ authority under Part 115, Solid Waste Management, of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended. Consequently, inclusion of this local regulation cannot be approved.

Therefore, both statements are revised to read: a. Certain ancillary construction details, such as landscaping and screening.

With these modifications, the County's updated Plan is hereby approved, and the County now assumes responsibility for the enforcement and implementation of this Plan. Please ensure that a copy of this letter is included with copies of the approved Plan distributed by the County.

By approving the Plan with modifications, the DEQ has determined that it complies with the provisions of 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 the 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 Kalkaska County. If you have any questions, please contact Mr. Seth Phillips, Chief, Solid Waste Management Unit, at 517-373-4750.

Sincerely,

Arthur R. Nash ACTING

Russell J. Harding
Director
517-373-7917

cc: Senator George A. McManus, Jr.
Representative Kenneth L. Bradstreet
Mr. Frank Wright, Controller, Kalkaska County
Mr. Jim Frey, Resource Recycling Systems, Inc.
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
Mr. Seth Phillips, DEQ
Mr. Stan Idziak, DEQ
Kalkaska County File

Kalkaska County Solid Waste Plan Update

As Approved by Board of Commissioners

And Local Units of Government

February 22, 2000

Table of Contents

I-1 EXECUTIVE SUMMARY 1

OVERVIEW OF THE COUNTY 1

THE SOLID WASTE PLANNING PROCESS 1

THE PLAN'S SELECTED ALTERNATIVE 2

AUTHORIZED MANAGEMENT COMPONENT 5

TIMETABLE FOR IMPLEMENTING THE PLAN'S ENFORCEABLE PROGRAM 6

I-2 INTRODUCTION 7

GOALS AND OBJECTIVES 7

II-1 DATA BASE 9

RESIDENTIAL WASTE GENERATION 9

COMMERCIAL/INDUSTRIAL WASTE GENERATION 10

MAJOR WASTE GENERATORS 10

SPECIAL WASTE STREAMS 10

TOTAL WASTE GENERATION 11

TOTAL WASTE DISPOSAL 11

II-2 SOLID WASTE DISPOSAL AREAS 12

II-3 SOLID WASTE FACILITY DESCRIPTIONS 13

II-4 SOLID WASTE COLLECTION SERVICES /TRANSPORTATION INFRASTRUCTURE 21

II-5 EVALUATIONS OF DEFICIENCIES AND PROBLEMS 22

II-6 DEMOGRAPHICS 23

II-7 LAND DEVELOPMENT 23

II-8 SOLID WASTE MANAGEMENT ALTERNATIVES 25

DATA BASE

III-1 THE SELECTED SOLID WASTE MANAGEMENT SYSTEM **27**

III-2 IMPORT AUTHORIZATION **32**

CURRENT IMPORT VOLUME AUTHORIZATION OF SOLID WASTE 32

FUTURE IMPORT VOLUME AUTHORIZATION OF SOLID WASTE 33

III-3 EXPORT AUTHORIZATION **35**

CURRENT EXPORT VOLUME AUTHORIZATION OF SOLID WASTE 37

FUTURE EXPORT VOLUME AUTHORIZATION OF SOLID WASTE 38

III-4 SOLID WASTE DISPOSAL AREAS **39**

III-5 SOLID WASTE COLLECTION SERVICES & TRANSPORTATION **50**

III-6 RESOURCE CONSERVATION EFFORTS: **51**

III-7 WASTE REDUCTION, RECYCLING AND COMPOSTING **51**

VOLUME REDUCTION TECHNIQUES 51

OVERVIEW OF RESOURCE RECOVERY AND RECYCLING PROGRAMS 52

RECYCLING AND COMPOSTING PROGRAMS 52

IDENTIFICATION OF RESOURCE RECOVERY MANAGEMENT ENTITIES: 62

PROJECTED DIVERSION RATES: 63

MARKET AVAILABILITY FOR COLLECTED MATERIALS: 63

EDUCATIONAL AND INFORMATIONAL PROGRAMS: 64

III-8 TIMETABLE FOR SELECTED SYSTEM IMPLEMENTATION **65**

III-9 SITING REVIEW PROCEDURES **66**

AUTHORIZED DISPOSAL AREA TYPES 66

SITING CRITERIA AND PROCESS 67

DEFINITION OF THE FACILITY SITING COMMITTEE 74

MINIMUM STANDARD SITING CRITERIA 75

III-10 SOLID WASTE MANAGEMENT COMPONENTS **80**

NEEDS OF THE CURRENT MANAGEMENT SYSTEM 80

BUILDING ON THE CURRENT MANAGEMENT SYSTEM 80

FURTHER DEVELOPMENT OF THE MANAGEMENT COMPONEN 83

III-11 IDENTIFICATION OF RESPONSIBLE PARTIES **85**

III-12 LOCAL ORDINANCES AND REGULATIONS **87**

III-13 CAPACITY CERTIFICATIONS **89**

APPENDIX A: ADDITIONAL INFORMATION REGARDING THE SELECTED SYSTEM **A-1**

DATA BASE
EVALUATION OF RECYCLING A-1
EVALUATION SUMMARY OF THE SELECTED SYSTEM: A-6
APPENDIX B: NON-SELECTED SYSTEMS B-1
APPENDIX C: PUBLIC PARTICIPATION AND APPROVAL C-1
APPENDIX D: PLAN IMPLEMENTATION STRATEGY D-1
ATTACHMENTS ATT-1
RESOLUTIONS ..... ATT-A
LISTED CAPACITY ..... ATT-B
MAPS ..... ATT-C
INTER-COUNTY AGREEMENTS ..... ATT-D
DETAILED POPULATION DATA ..... ATT-E
SPECIAL CONDITIONS ..... ATT-F
KALKASKA COUNTY NUISANCE ORDINANCE ..... ATT-G

Kalkaska County
Solid Waste Management Plan Update

As Approved by Board of Commissioners

And Local Units of Government

February 22, 2000

AS REQUIRED BY SECTION 11539a OF

PART 115, SOLID WASTE MANAGEMENT SECTION, OF

THE NATURAL RESOURCES AND ENVIRONMENTAL PROTECTION ACT

1994 PA 451, AS AMENDED

THIS PAGE INTENTIONALLY LEFT BLANK

Kalkaska County
Solid Waste Management Plan Update

AS APPROVED BY BOARD OF COMMISSIONERS AND LOCAL UNITS OF GOVERNMENT

February 22, 2000

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

DATE SUBMITTED TO THE DEQ: 3/1/2000

This solid waste management plan includes Kalkaska County. No other counties or municipalities outside the County have been included in this plan.

DESIGNATED PLANNING AGENCY PREPARING THIS PLAN UPDATE: Kalkaska County Board of Commissioners

CONTACT PERSON: Frank Wright (Controller)

ADDRESS: 605 N. Birch
Kalkaska, MI 49646

PHONE: 616-258-3304

FAX: 616-258-3318

E-MAIL: none

CENTRAL REPOSITORY LOCATION(S): Kalkaska County Clerk's Office
605 N. Birch
Kalkaska, MI 49646

THIS PAGE INTENTIONALLY LEFT BLANK

I-1 EXECUTIVE SUMMARY

The following summarizes the solid waste management system selected to manage the 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.

OVERVIEW OF THE COUNTY

The history of Kalkaska County is directly linked to the natural resources found in the region. During the nineteenth century, when Michigan was experiencing its lumbering boom, Kalkaska County attracted individuals who harvested pine and hardwoods. After clear-cutting nearly the entire County, cutover lands were converted into farms, and potatoes and apples became important to the County's economic base. During 1900 and as the lumbering boom began fading, the County population was at its record high with more than 20,000 people. The number declined steadily until 1940. Population in the County began an upward trend beginning in 1970 and has continued to increase every decade since. It is expected to continue increasing into the future.

The County's growing population base attests to the growth of northern migration patterns, especially in and around areas with significant natural resources. Local government, manufacturing, the oil and gas industry, and retail trade and tourism are the major employment sectors in the County. With more than 275 miles of streams and rivers and 85 inland lakes, seasonal tourism and recreational activities provide jobs and contribute to the overall economic well being of the County.

The number of new residents in Kalkaska County has increased significantly since 1970. The largest increase in population happened between 1970 and 1980, when the number of County residents more than doubled from 5,272 to 10,952. This increase represented the largest percent increase of any county in the state. The population increased to 13, 497 in 1990.

Although still heavily dependent on oil and gas production, combined production in that industry has declined 62 percent from 1981 to 1989. Employment in other industries has continued to grow, with a 79 percent increase in wholesale trade, 60 percent in construction and 50 percent in transportation, communications and utilities.

Approximately 77% of the county land use and land cover is in forests. The second greatest land use is in agriculture at 10%. Open space accounts for 7 percent, and urban uses 2.4 percent. Most of the county's forested land is in ownership of the Michigan State Forest system.

THE SOLID WASTE PLANNING PROCESS

The Designated Planning Agency (DPA) and the Solid Waste Planning Committee (SWPC) completed a comprehensive strategic planning process that outlined strengths, weaknesses, opportunities, and threats that are part of the current and potential future solid waste management system that services the County. This analysis was used to create goals and objectives which are provided immediately after this Executive Summary. These goals and the strategic analysis formed the basis for developing the solid waste management strategy and the selected alternative that is described in this Plan as the Plan's Enforceable Program and Process as provided for in Part 115, Section 11533 (1) of the Michigan Natural Resources and Environmental Protection Act (NREPA).

In developing the Plan's Enforceable Program and Process the DPA and SWPC first screened out strategies that were technically or economically unsuitable for the County. The DPA and SWPC then reviewed a set of solid waste management program strategies in the following eight areas that were viewed as technically and economically feasible:

- Clean Community
- Drop-Off Residential Recycling
- Residential Yard Waste Composting
- Material Transfer and Processing
- Recycling Incentives
- Curbside Residential Recycling
- Commercial Recycling
- Disposal

These program strategies were assembled as System Alternatives that varied by level of landfill diversion, capital and operating cost and implementation requirements. At this stage in the strategic planning process, some of the Strategic Alternatives were determined to be unsuitable for the County based on an evaluation of the overall technical and economic feasibility of each approach and its ability to:

- build on the strengths of the local and regional situation,
- address current deficiencies and weaknesses,
- work with organizational approaches that the County is willing to consider,
- be fundable through systems that the County can implement,
- respond to and build community involvement and support,
- be enforceable, and
- set measurable goals that can be tracked to determine progress.

Appendix B of the Plan contains further detail regarding the System Alternatives that were not selected as part of the Plan's Enforceable Program.

The strategic planning process was carried through to final conclusions regarding the program strategies that would make up the Plan's Selected Alternative and become the foundation for the Plan's Enforceable Program as required by statute. The strategic planning process included surveying of the views of key stakeholders in the planning process, and others considered to be critical to implementation of the plan - primarily local government officials. The Selected Alternative is described briefly below and in the balance of the Plan with further detail provided in Appendix A of the Plan.

THE PLAN'S SELECTED ALTERNATIVE

Phase 1: During Years 1 through 5 of the Planning Period, the County will implement System Alternative 1 as follows:

KALKASKA COUNTY SYSTEM ALTERNATIVE 1
BASIC CLEAN COMMUNITY & DROP-OFF RECYCLING PROGRAM

Key features include routine residential and business waste collection supplemented by a basic clean community initiative with spring/fall cleanups and household hazardous waste collection service. The System would provide improved drop-off recycling services that are more convenient but still only available for limited periods of each day and week. Yard waste services are limited to fall leaf collection and a single drop-off location. Commercial recycling is encouraged but no other support services provided. Recycling processing arrangements are arranged but only for the purpose of servicing the drop-off network. More solid waste disposal options are provided for households especially for seasonal tourist activity and special one-time disposal needs of area residents. Direct haul to regional landfills and to local transfer stations are still the primary methods of waste management.

Following is a more detailed description of the specific program elements that are part of Phase 1 of the Selected Alternative and the Plan's Enforceable Program. Specific details on who will implement the Plan's Enforceable Program are covered in the next section covering the Plan's Authorized Management Program. The timing of implementation of the Plan's Enforceable Program are then provided in the Plan's Timetable for Implementation that follows. The County's Solid Waste Program, implemented jointly by units of government within the county in cooperation with other public agencies and private firms will include the following features:

Kalkaska County Selected System Alternative Phase 1
Detailed System Component Descriptions

Clean Community:

Basic solid waste collection services would be made available to all households and businesses in the County. Illegal dumping and litter would be policed with enforcement of violations. Spring/fall cleanup days would be provided in more urban areas. Household hazardous waste collection services would be provided.

Recycling Incentives:

Basic education and promotion strategies would encourage responsible solid waste management and reduce/reuse/recycle behavior.

Drop-Off Residential Recycling:

A network of 3 drop-off sites for recycling would be located in the County, open at limited times on specific days of each week. Material would be collected in a source separated form to make the material easier to handle.

Curbside Residential Recycling:

No curbside recycling would be expected to be available for residents.

Residential Yard Waste Composting:

Fall leaf collection would be provided in Kalkaska. Backyard composting would be encouraged in the educational materials. One permanent drop-off site for yard waste would be provided for the County.

Commercial Recycling:

Businesses would be encouraged to recycle with their hauler and/or to use one drop-off site set up to better handle the larger volumes that a business would generate. Arrangements would be made with a larger drop-off site perhaps in Antrim or Grand Traverse Counties to handle larger drop-off quantities.

Material Transfer and Processing:

Arrangements would be made to provide recycling processing capabilities as needed to support the drop-off recycling network through collection and processing of source separated recyclable materials. These arrangements would include guarantees that sufficient capacity was available to meet the County's needs over the long term. Arrangements could be made through Grand Traverse or Emmet County.

Disposal:

Existing landfills in the region would be used with direct haul by compacting collection vehicles and use of local waste transfer facilities being the primary methods of transportation to the landfills. If determined to be necessary, waste transfer facilities would be further developed with county sponsorship or an existing transfer station upgraded should direct haul options for landfilling no longer be available, be cost prohibitive, or otherwise be determined to not be in the best interests of Kalkaska County.

During Years 6 through 10 of the Planning Period the Plan's Enforceable Program provides for the implementation of System Alternative 2, detailed further in Part III of this Plan with additional supporting material provided in Appendix A:

KALKASKA COUNTY SYSTEM ALTERNATIVE 2
EXPANDED CLEAN COMMUNITY AND DROP-OFF RECYCLING PROGRAM

Key features include a Clean Community program that operates at highly effective levels. Incentives to recycle boost program performance, increasing tons and lowering unit costs. Expanded recycling drop-off capabilities are made available throughout the County at permanent sites open for longer periods of time each week. Arrangements are made for processing of commingled recyclables, increasing the types of materials that can be recovered and further increasing overall convenience. Direct haul of collected solid waste to regional landfills would remain as the standard practice for the remainder of the county. A network of drop-off facilities for solid waste would be available with this system preferably located at same sites as recycling drop-offs. Waste transfer facilities would be used more should direct haul options for landfilling no longer be available or be cost prohibitive. Participation in a regional landfill development project would also be considered.

Following is a more detailed description of the specific program elements that are part of Phase 2 of the Selected Alternative and the Plan's Enforceable Program. Specific details on who will implement the Plan's Enforceable Program are covered in the next section covering the Plan's Authorized Management Program. The timing of implementation of the Plan's Enforceable Program are then provided in the Plan's Timetable for Implementation that follows. The County's Solid Waste Program, implemented jointly by units of government within the county in cooperation with other public agencies and private firms will include the following features:

Kalkaska County Selected System Alternative Phase 2
Detailed System Component Descriptions

Clean Community:

Comprehensive solid waste collection services would be made available to all households and businesses in the County. Illegal dumping and litter would be policed with enforcement of violations. Spring/fall cleanup days would be provided in more urban areas with scavenging/trading/reuse encouraged and recycling of as many materials left as possible. Household hazardous waste collection services would be provided and expanded to include collection of agricultural pesticides and herbicides. Adopt a "____" programs would be organized with volunteers and business/service group sponsorship for periodic cleaning of roadsides, streambanks, lakeshores, parks and forests.

Recycling Incentives:

Proactive education and promotion strategies would encourage responsible solid waste management and strong reduce/reuse/recycle behavior. Pay As You Throw (PAYT) programs would be widespread throughout the County. Recycling drop-offs would add more materials to encourage overall participation in program by more citizens and businesses.

Drop-Off Residential Recycling:

A permanent network of drop-off sites for recycling would be located in the County, open at convenient hours most days of the week. Material would be collected in a commingled form to make use of the facilities easier. A wide variety of recyclable materials would be collected at each of the drop-off sites. One of the three drop-off sites would be a "flagship" site that accepts a broader range of materials for recycling and includes added educational opportunities. This flagship site would likely be located in Kalkaska.

Curbside Residential Recycling:

Subscription curbside recycling would be available for residents that were willing to make their own arrangements for the service with area haulers.

Residential Yard Waste Composting:

Fall leaf collection would be provided in Kalkaska and other villages/towns or more densely populated areas. Backyard composting would be encouraged through distribution of backyard bins at discount rates. At least one and possibly more permanent drop-off options for yard waste would be provided throughout the County. A permanent yard waste drop-off site would be located at the flagship recycling drop-off.

Commercial Recycling:

Businesses would be encouraged to use the drop-off recycling network for smaller volumes of commingled paper and commingled containers. Arrangements would be made for larger volumes to be delivered to a site capable of handling compacted or loose loads of commercial recyclables. Businesses would be encouraged to contract with their hauler for collection of cardboard and other high volume recyclable materials. Service to a designated "business service district" could possibly be coordinated with neighboring county programs that may be pursuing a similar program.

Material Transfer and Processing:

Arrangements would be made to provide access to a material recovery facility (MRF) to service all recycling collectors in the system. These arrangements would include guarantees that sufficient capacity was available to meet the County's needs over the long term and that the facility would be able to process commingled containers and commingled fibers as well as presorted recyclables like OCC.

Disposal:

Existing landfills in the region would be used with direct haul by compacting collection vehicles and use of local transfer stations being the primary methods of transportation to the landfills. A network of drop-off facilities for solid waste would be available with this system preferably located at same sites as recycling drop-offs. If determined to be necessary, waste transfer facilities would be developed with county sponsorship or an existing transfer station upgraded should direct haul options for landfilling no longer be available, be cost prohibitive, or otherwise be determined to not be in the best interests of Kalkaska County. The county would also consider participation in development of a regional landfill facility or authority should other disposal options be determined to not be in the best interests of Kalkaska County.

AUTHORIZED MANAGEMENT COMPONENT

The Selected Alternative as described above is established by this Plan as the Plan's Enforceable Program defining the Kalkaska County Solid Waste Management System, implemented jointly by units of government within the county in cooperation with other public agencies and private firms. The Plan's Enforceable Program includes a "Management Component" that defines details of who will take responsibility for implementation and how that will be accomplished. This Authorized Management Component is described briefly below and further detailed in Part III of the Plan under a section with the same name.

The Authorized Management Component builds on the County's current organizational and management structure. Further development of this organizational and management structure as part of the Plan's Authorized Management Component is provided for as part of the Plan's Enforceable Program. These developments may take a number of forms and will only be initiated after an evaluation of the best steps that can be taken to build on the strengths of the current system already in place. These steps will be detailed in an "implementation action plan" that the Plan's implementation agency will coordinate development of in order to provide for necessary details required to carry out the Plan's Enforceable Program. These action steps are expected to follow some, if not all, of the following description of an enhanced management system that will provide for a method of funding and organizing development of the Selected Alternative.

- User fees will continue to be the backbone of the Plan's Management Component funding system, as they are right now.

- *Use of P.A. 138, similar generator fee collection system, or other* funding mechanism will be initiated as soon as possible.

- The county will further establish the role of a designated implementation agency with necessary staffing/administrative capability to reach project goals.

- An oversight committee will be created that has the endorsement of the key stakeholders and that provides a mechanism for community input into the system.

- A legal/ordinance framework will be developed as the Plan's Enforcement Mechanism to establish necessary controls required for funding the system and for delegating authority and responsibility between governmental units and system participants in order to assure the implementation of the Selected Alternative.

- Contracts between the various participants in the system will be created that will specify services, exchange of resources, etc.

- Other supporting mechanisms will be used to organize and direct resources towards implementing the Selected Alternative and achieving Plan goals.

TIMETABLE - IMPLEMENTING THE PLAN'S ENFORCEABLE PROGRAM

The Plan's Enforceable Program includes an implementation timeline for the Plan's Authorized Management Component and Selected Alternative. The following table summarizes key milestones for implementing the Plan's Enforceable Program and is further detailed in Part III of the Plan under a section with the same name.

Management Components	Timeline
1) Designate Solid Waste Plan Implementation Agency	1999
2) Designate Implementation Oversight Committee	1999
3) Develop/Adopt Implementation Action Plan	1999
4) Draft/Adopt Intergovernmental Agreements/Ordinance/Rules/Regs	1999
5) Preliminary Program Specifications for Planned Programs	1999
6) Establish Budgets for Planned Programs	1999
7) Finalize Funding Structure and Enforcement Mechanisms	1999
8) Contract for Recycling Processing Capacity	1999/2000
9) Initiate all Outreach/Education Programs	1999/2000
10) Procure all Other System Improvements	1999/2000
11) Final Implementation of Funding Mechanisms	1999/2000
12) Continued Evaluation of Role of Transfer Facility	2000-2008
13) Modify Role of Transfer Facility if Needed	2000-2008
14) Preliminary Program Specifications for Planned Ph II Programs	2002-2003
15) Establish Budgets for Planned Phase II Programs	2002-2003
16) Finalize Any Upgrades to Funding Structure and Mechanisms	2002-2003
17) Initiate all Phase II outreach/education programs	2003-2008
18) Procure all other Phase II system improvements	2003-2008
19) Data Tracking to Assess Program Performance	Annual/Ongoing
20) Update Implementation Action Plan	Annual/Ongoing

I-2 INTRODUCTION

To comply with Part 115 and its requirements, the Kalkaska County Solid Waste Plan establishes an Enforceable Program and Process that is directed toward goals and objectives based on the purposes stated in Part 115, Section 11538.(1)(a), 11541 (4) and the State Solid Waste Policy adopted pursuant to this Section, and Administrative Rules 711 (b)(i) and (ii)

GOALS AND OBJECTIVES

Goals and Objectives for the Kalkaska County Plan's Enforceable Program and Process as adopted by the Solid Waste Planning Committee follow:

(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 the 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 1.0 Establish and maintain a high quality environment by developing and implementing the planned solid waste management system which provides for the protection of public health and the natural environment through conserving natural resources.

Objective 1.1	Develop a solid waste management plan which provides adequate guidance for both short term and long term concerns.
Objective 1.2	Ensure that solid waste management methods comply with water and air quality standards.
Objective 1.3	Develop and enforce regulations governing odor, noise, and appearance of solid waste collection, recovery, disposal and storage facilities.
Objective 1.4	Eliminate illegal dumping of waste in unauthorized areas and increase enforcement of existing anti-litter regulations.
Objective 1.5	Encourage and support practices for volume reduction of solid waste.
Objective 1.6	Participate in or provide means for the proper disposal of household hazardous wastes and other items such as tires and white metals.
Objective 1.7	Include consideration for wastes generated by agricultural and manufacturing interests which may require special handling and disposal.

Goal 2.0 Build an educated public where citizens are informed and understand solid waste management issues and concerns.

Objective 2.1	Establish or participate in a solid waste management educational delivery system to make information available to all students in the educational system.
Objective 2.2	Establish or designate an office where the public can direct questions about solid waste management and obtain educational materials.
Objective 2.3	Notify citizens about various opportunities for solid waste management such as recycling, household hazardous waste collections, and special concerns.
Objective 2.4	Involve and encourage citizen participation in all aspects of solid waste management, including education on costs of solid waste management facilities and alternatives for funding them.

Goal 3.0 Maintain, support, and expand recycling programs and facilities to decrease the dependence on landfills for solid waste disposal.

Objective 3.1	Encourage local research and experimental efforts in volume reduction and recycling by private, governmental and civil groups.
Objective 3.2	Support inter-county (regional) cooperation in the research and development of recycling and resource recovery programs and facilities.
Objective 3.3	Promote development of local industries which use recycled materials.
Objective 3.4	Encourage source separation of recyclables by providing drop-off sites.
Objective 3.5	Provide incentives for use of recycled goods in governmental units and private industry.
Objective 3.6	Encourage reduction of non-recyclable materials in packaging.
Objective 3.7	Encourage solid waste management information sharing from private, public and civil groups.

Goal 4.0 Develop a financially sustainable solid waste management program

Objective 4.1	Encourage development of multi-county disposal/recycling facilities which maximize energy and materials recovery while minimizing costs
Objective 4.2	Develop recycling programs which overall provide a savings over disposal when evaluated under full cost accounting guidelines.
Objective 4.3	Develop and implement funding mechanisms that have the necessary legislative basis required to guarantee development and ongoing operation of all programs and facilities deemed necessary as part of the Plan's Selected Alternative.
Objective 4.4	Provide, as part of the Plan's Selected Alternative, for necessary processing and disposal capacity as needed in order to assure that adequate competition exists for delivering solid waste collection services at affordable rates for the residents and businesses in the County.
Objective 4.5	Establish solid waste fees that provide an incentive for waste reduction.

Goal 5.0 Provide for a solid waste management implementation program to serve the County's solid waste management needs.

Objective 5.1	Define the solid waste management responsibilities of the various units of government and the private sector.
Objective 5.2	Identify opportunities for efficient and effective coordination between operations and solid waste facilities serving the various communities within the County and the Region.
Objective 5.3	Develop and implement ordinances, intergovernmental agreements and supporting administrative rules as required to guarantee development and ongoing operation of all programs and facilities deemed necessary as part of the Plan's Selected Alternative.

Goal 6.0 Develop contingency plans for collection, transportation and disposal of solid waste to be utilized in the event that any portion of the primary system of use becomes unavailable.

Objective 6.1	Identify specific backup sites for all facilities included in the Plan's Selected Alternative.
Objective 6.2	Sign inter-county agreements as needed for contingencies.

II-1 DATA BASE

This section identifies sources of waste generation within the county, total quantity of solid waste generated to be disposed, and sources of the information

The following database is derived from the listed sources:

- 1995 County Business Patterns
- Northwest Michigan Council of Governments population statistics
- Interviews with local officials
- Kalkaska County Master Plan

RESIDENTIAL WASTE GENERATION

Residential solid waste data was calculated by the consultant, Resource Recycling Systems, Inc. using the rate of 2.6 pounds of solid waste generated per person per day (urban and resort areas) and 2.0 pounds per person per day for rural areas. These numbers were then modified to reflect seasonal population adjustments and overall population growth estimates for the next ten years. Finally, actual reported disposal and waste reduction data were used to adjust generation rates. These generation calculations are then presented as "centers of solid waste generation" in the chart below as required by the Plan Format. A more detailed description of how estimates were calculated may be found in Attachment E.

Table II-1 Residential Waste Generation by Municipality

Municipality	1998 Tons	2003 Tons	2008 Tons
Bear Lake township	324	363	388
Blue Lake township	174	184	185
Boardman township	546	611	656
Clearwater township	994	1113	1194
Cold Springs township	707	792	849
Excelsior township	362	405	434
Garfield township	302	339	363
Kalkaska village	1221	1323	1372
Kalkaska township	1175	1316	1411
Oliver township	147	165	176
Orange township	449	504	540
Rapid River township	345	364	368
Springfield township	408	435	443
Kalkaska County Total	7,155	7,912	8,380

COMMERCIAL/INDUSTRIAL WASTE GENERATION

Commercial waste generation was determined by multiplying estimated pounds per employee per day for specific Standard Industrial Codes (SIC) by the actual employment numbers in Kalkaska County. Pounds per employee per day figures were generated by Resource Recycling Systems based on previous SIC code-specific surveys and studies of various counties in the Unites States. Employment numbers were obtained for the year 1995 from U.S. Census data on County Business Patterns. Waste generation numbers were then modified based on actual reported waste generation by a phone survey of major generators within the County. The number of work days per year is assumed to be 260. The resulting waste generation calculations are presented below as "centers of generation" for commercial and industrial SIC groups, as required by the Plan Format.

Table II-2 Commercial/Industrial Waste Generation

SIC	SIC Description	## of employees (1995)*	lbs/ person/ day	Tons/ year (1995)
0700-0999	Agriculture, Forestry, Fishing	2	5	1
1000-1499	Mining	471	4	245
1500-1999	Construction	240	23	708
2000-3999	Manufacturing	1098	19	2712
4000-4999	Transportation/Public Utilities	394	5	256
5000-5199	Wholesale trade	190	12	296
5200-5999	Retail trade	844	12	1317
6000-6999	Finance, Insurance, Real Estate	79	16	164
7000-7999	Services	633	8	658
99--	Unclassified establishments	47	6	37
		3,998	**17.69**	**9,196**
		Total	*Average*	*Total*

**from 1995 County Business Patterns Data*

MAJOR WASTE GENERATORS

Kalkaska County continues to experience growth in the business sector. Overall, the county does not anticipate major problems associated with managing the commercial and industrial solid waste generated within its borders. Table II-3 provides a list of major business and industrial waste generators in the County.

Table II-3 Major Waste Generators

Generator	Location	Type
Alken-Ziegler	Kalkaska	Manufacturer
Eagle-Pitcher / Fabricon	Kalkaska	Manufacturer
Codeing Products	Kalkaska	Manufacturer
Kalkaska Screw	Kalkaska	Manufacturer
Shell Oil	Kalkaska	Distribution Center
Wayne Wire	Kalkaska	Manufacturer
Craft House	Kalkaska	Manufacturer

SPECIAL WASTE STREAMS

Other special wastes in Kalkaska County include drilling muds, which are dewatered and processed by two local company at licensed processing areas but disposed in Type II landfills. Much of this waste is actually generated in other counties, but since it is processed in Kalkaska County, the volume going to local landfills is technically counted in the DEQ annual landfill reports as Kalkaska waste. Note that the volume of drilling muds for 1997 was estimated by subtracting estimated residential, commercial and industrial waste from the total waste disposed as shown in the DEQ landfill reports, It should be noted that this number will fluctuate quite a bit from year to year, depending on rate of drilling activities in northern Michigan.

Table II-4 Special Waste Streams

Source	Material	Tons per year generated	Tons needing disposal
Village of Kalkaska	Sewage sludge	not quantified	0
Northern A-1 & Well Tech	drilling muds	27,000	27,000*

**estimated based on 1997 Michigan DEQ landfill reports*

TOTAL WASTE GENERATION

Waste generation is shown in Tables II-5 below. Waste generation data was calculated using waste projection models (pounds per person per day for residential, and pounds per employee per day for commercial/industrial). Adjustments were made for seasonal population fluctuations and differences between rural and urban areas. Waste generation was projected into the future based on projected population growth patterns.

Table II-5: Total Waste Generated (Tons per year)

Sector	1998 Tons Generated	2003 Tons Generated	2008 Tons Generated
Residential	7,155	7,912	8,380
Commercial	6,802	7,331	7,913
Industrial	2,845	3,066	3,310
Special*	27,000	28,350	29,700
Total Annual Tons	**43,802**	**46,659**	**49,303**

**estimated quantity of drilling muds which are processed but not entirely generated within the county; future annual generation was estimated to increase at 1% per year for purposes of this planning model*

TOTAL WASTE DISPOSAL

Total waste generation for 1997 was projected and compared to actual landfill disposal data for Kalkaska County waste. Projected generation was not comparable to actual reported disposal plus reported recovery (recycling and composting) totals, probably due to large amounts of drilling mud waste. Recovery (recycling and composting) was projected for the future and subtracted from total generation projections for the 2003 and 2008 planning years in order to obtain disposal estimates. Future recovery was based on expected growth for existing programs and achievement of stated County recovery goals, resulting in total disposed projections contained in tables II-6 below.

Table II-6: Total Disposal (tons per year)

Sector	1998 Tons Disposed	2003 Tons Disposed	2008 Tons Disposed
Residential	7,075	7,356	7,539
Commercial/Industrial	9,557	9,358	9,540
Special	27,000	28,350	29,700
Total Annual Tons	**43,632**	**45,064**	**46,779**

II-2 SOLID WASTE DISPOSAL AREAS

The following includes an inventory and descriptions 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.

- Northern A-1 Services Transfer Station/US Liquids
- Plum Valley Transfer Station
- Ken's PS Type III Landfill/Waste Management, Inc.
- Glen's Landfill/Waste Management, Inc.
- Cedar Ridge Landfill/Waste Management, Inc
- CES Waters Landfill/Waste Management, Inc.

Facilities that are licensed disposal areas for processing of drilling muds only include:

- Northern A-1 Services/US Liquids
- Welltech Eastern, Inc. dba Kal Con Environmental

Facility descriptions follow.

II-3 SOLID WASTE FACILITY DESCRIPTIONS

FACILITY DESCRIPTIONS

Facility Type: **Type A Transfer Station**

Facility Name: **Kalkaska/Antrim Transfer Station (Northern A-1 Services)**

County: Kalkaska Location: Town T27N Range R7W 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: Glen's Landfill or CES Waters Landfill

____ Public x ____ Private Owner: U.S. Liquids

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
	construction permit	x	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:	not applicable(NA)	acres
Total area sited for use:	NA	acres
Total area permitted:		acres
Operating:		acres
Not excavated:		acres
Current capacity:		
Estimated lifetime:		years
Estimated days open per year:	312	days
Estimated yearly disposal volume:	NA	

(if applicable)
Annual energy production:

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

DATA BASE

FACILITY DESCRIPTIONS

Facility Type: **Type A Transfer Station**

Facility Name: **Plum Valley Transfer Station**

County: Kalkaska Location: Town T28N Range R7W Section(s) 10

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: CES Waters Landfill

____ Public x ____ Private Owner: William Kiel

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
	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:	not applicable(NA)	acres
Total area sited for use:	NA	acres
Total area permitted:		acres
Operating:		acres
Not excavated:		acres
Current capacity:		
Estimated lifetime:		years
Estimated days open per year:	NA	days
Estimated yearly disposal volume:	NA	

(if applicable)

Annual energy production:

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

DATA BASE

FACILITY DESCRIPTIONS

Facility Type: **Type III Landfill**

Facility Name: **Ken's Landfill**

County: Grand Traverse Location: Town T27N Range R11W Section(s) NE1/4 of 7

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 x ____ Private Owner: Waste Management, Inc.

Operating Status (check)		Waste Types Received (check all that apply)	
x	open	____	residential
____	closed	____	commercial
x	licensed	____	industrial
____	unlicensed	x	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:	16.8	acres
Total area sited for use:	13.5	acres
Total area permitted:	13.5	acres
Operating:	6.0	acres
Not excavated:	1.0	acres

Current capacity:	150,000 cubic yards	
Estimated lifetime:	2.0	years
Estimated days open per year:	240	days
Estimated yearly disposal volume:	70,000 cubic yards	

(if applicable)
Annual energy production:

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

DATA BASE

FACILITY DESCRIPTIONS

Facility Type: **Type II Landfill**

Facility Name: **Glen's Sanitary Landfill**

County: Leelanau Location: Town T28N Range 13W Section(s) 35

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, Inc.

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	x	contaminated soils
	open, but closure pending	x	special wastes *
			other: ____

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

Asbestos (non-friable)

Site Size:

Total area of facility property:	460	acres
Total area sited for use:	133	acres
Total area permitted:	133	acres
Operating:	14.8	acres
Not excavated:	89.3	acres

Current capacity:	22,000,000 cubic yards	
Estimated lifetime:	60	years
Estimated days open per year:	264	days
Estimated yearly disposal volume:	300,000 gate cubic yards	

(if applicable)

Annual energy production:

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

DATA BASE

FACILITY DESCRIPTIONS

Facility Type: **Type II Landfill**

Facility Name: **Cedar Ridge Landfill**

County: Charlevoix Location: Town T33N Range R7W Section(s) 19

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 x Private Owner: Waste Management, Inc.

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
	construction permit	x	contaminated soils
	open, but closure pending	x	special wastes *
			other: ____

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

Foundry sand and flyash from East Jordan Iron Works.

Site Size:

Total area of facility property:	120	acres
Total area sited for use:	40	acres
Total area permitted:	40	acres
Operating:	21	acres
Not excavated:	0	acres

Current capacity:	approx. 370,000 bank cubic yards	
Estimated lifetime:	2.5	years
Estimated days open per year:	260	days
Estimated yearly disposal volume:	311,000 gate cubic yards	

(if applicable)
Annual energy production:

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

DATA BASE

FACILITY DESCRIPTIONS

Facility Type: **Type II Landfill**

Facility Name: **City Environmental Svcs., Inc. of Waters (Crawford-Otsego Landfill)**

County: Crawford Location: Town T28N Range R8E 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 x Private Owner: Waste Management, Inc.

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	x	contaminated soils
	open, but closure pending	x	special wastes *
			other: ____

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

not avail.

Site Size:

Total area of facility property:	252.20	acres
Total area sited for use:	252.20	acres
Total area permitted:	79.07	acres
Operating:	9.7	acres
Not excavated:	64.87	acres

Current capacity:	8.2 million cy	
Estimated lifetime:	>20	years
Estimated days open per year:	313	days
Estimated yearly disposal volume:	320,000 gate cubic yards	

(if applicable)

Annual energy production:

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

DATA BASE

FACILITY DESCRIPTIONS

Facility Type: **Processing Facility**

Facility Name: **Northern A-1 Services Drilling Mud Processing Facility**

County: Kalkaska Location: Town T27N Range R7W Section(s) 4

Map identifying location included in Attachment Section: ____ Yes x No

If facility is an Incinerator or a Transfer Station, list the final disposal site and location for Incinerator ash or Transfer Station wastes: Glen's Landfill or CES Waters Landfill

____ Public x Private Owner: U.S. Liquids

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

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

Drilling muds only

Site Size:

Total area of facility property:	not applicable(NA)	acres
Total area sited for use:	NA	acres
Total area permitted:	____	acres
Operating:	____	acres
Not excavated:	____	acres

Current capacity:	____	
Estimated lifetime:	____	years
Estimated days open per year:	312	days
Estimated yearly disposal volume:	NA	

(if applicable)

Annual energy production:

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

DATA BASE

FACILITY DESCRIPTIONS

Facility Type: **Processing Facility**

Facility Name: **Welltech Eastern, Inc. dba Kal Con Environmental Services**

County: Kalkaska Location: Town T27N Range R7W Section(s) 29

Map identifying location included in Attachment Section: ____ Yes x No

If facility is an Incinerator or a Transfer Station, list the final disposal site and location for Incinerator ash or Transfer Station wastes: Glen's Landfill or CES Waters Landfill

____ Public x Private Owner: Welltech Eastern, Inc. dba Kal Con Environmental

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

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

Drilling muds only

Site Size:

Total area of facility property:	not applicable(NA)	acres
Total area sited for use:	NA	acres
Total area permitted:	____	acres
Operating:	____	acres
Not excavated:	____	acres

Current capacity:	____	
Estimated lifetime:	____	years
Estimated days open per year:	____	days
Estimated yearly disposal volume:	NA	

(if applicable)

Annual energy production:

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

II-4 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.

SOLID WASTE COLLECTION SERVICES

Service Provider	Service Type	Service Area	Disposal Facility
Waste Management, Inc.	Residential, Commercial, Industrial	County-wide	Glen's Landfill, CES Waters
Plum Valley	Residential	Plum Valley Township	CES Waters
Northern Quality	Residential	County-wide	CES Waters
A&K Disposal	Residential	County-wide	CES Waters
Well Tech	Construction/Demolition	County-wide	CES Waters
Northern A-1 Serv.	Industrial	County-wide	CES Waters

RECYCLING COLLECTION SERVICES

Service Provider	Service Type	Service Area	Processing Facility
Waste Management	Commercial corrugated routes	County-wide	Emmet Transfer

YARD WASTE COLLECTION SERVICES

Service Provider	Service Type	Service Area	Processing Facility
A&K Disposal	Fee for residential service	Subscribers only	Land application
Village of Kalkaska	Seasonal drop-off	Village residents	Land application
South Boardman Township	Brush chipping	Township residents	None

II-5 EVALUATION OF DEFICIENCIES AND PROBLEMS

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

Recent changes in ownership of local solid waste hauling companies have impacted Kalkaska County in a number of ways. Some residents in extremely rural areas have reported difficulty getting service and in general, most residents have recently experienced a steep price increase for basic service. Lack of competitive pricing for these services is an emerging problem.

A few smaller haulers (A&K and NQ) have survived and do offer residents with a choice of collection services. However, these smaller haulers do not have guarantees for access to available disposal facilities operated by their larger competitor(s) and have no guarantee of stable and predictable prices for disposal at those facilities. This makes it difficult for small haulers to effectively bid on collection contracts and limits their capability to provide low cost affordable pricing for services delivered to residents and businesses in the County.

Lack of landfill disposal options is also an issue since most major facilities serving the region are all owned by the same company. This company is also in the hauling business, which places a large economic "barrier to entry" for any potential competitors that might begin servicing the county from adjacent regions.

Availability of recycling processing capacity and recycling services has also been found to be lacking. Northern A-1 continues to operate the Kalkaska/Antrim Transfer Station and does some recycling as part of that operation, but is no longer providing recycling services for newspaper, cans, and glass as it has in the past. Some businesses do still receive corrugated pick-up from Waste Management. Overall, lack of stable, affordable and good quality recycling opportunities for residents and businesses has been identified as the most significant deficiency in the current system.

Lack of coordination capabilities for the county's solid waste management system is another major reason that the quality of recycling and solid waste collection and disposal services have declined in recent years.

II-6 DEMOGRAPHICS

The following section 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.

POPULATION

The number of new residents in Kalkaska County has increased significantly since 1970. The largest increase in population happened between 1970 and 1980 when the number of County residents more than doubled from 5,272 to 10,952. This increase represented the largest percent increase of any county in the state. The population increased to around 13,000 in 1990.

Although still heavily dependent on oil and gas production, combined production in that industry has declined 62 percent from 1981 to 1989. Employment in other industries has continued to grow, with a 79 percent increase in wholesale trade, 60 percent in construction and 50 percent in transportation, communications and utilities.

Municipality	1990 population	98 population	2003 population	2008 population
Bear Lake township	639	792	862	939
Blue Lake township	378	426	437	448
Boardman township	1076	1336	1454	1584
Clearwater township	1959	2432	2647	2884
Cold Springs township	1073	1331	1449	1578
Excelsior township	714	885	963	1048
Garfield township	596	740	805	877
Kalkaska village	1952	2298	2420	2551
Balance of Kalkaska township	2317	2876	3129	3409
Oliver township	291	361	392	427
Orange township	885	1100	1197	1305
Rapid River township	746	843	866	889
Springfield township	871	862	798	750
Kalkaska County Total	***13,497***	***16,282***	***17,418***	***18,690***

II-7 LAND DEVELOPMENT

The history of Kalkaska County is directly linked to the natural resources found in the region. During the nineteenth century, when Michigan was experiencing its lumbering boom, Kalkaska County attracted individuals who harvested pine and hardwoods. After clear-cutting nearly the entire County, cutover lands were converted into farms, and potatoes and apples became important to the County's economic base. During 1900 and as the lumbering boom began fading, the County population was at its record high with more than 20,000 people. The number declined steadily until 1940. Population in the County began an upward trend beginning in 1970 and has continued to increase every decade since. It is expected to continue increasing into the future.

The County's growing population base attests to the growth of northern migration patterns, especially in and around areas with significant natural resources. Local government, manufacturing, the oil and gas industry, and retail trade and tourism are the major employment sectors in the County. With more than 275 miles of streams and rivers and 85 inland lakes, seasonal tourism and recreational activities provide jobs and contribute to the overall economic well being of the County.

Approximately 77% of the county land use and land cover in is forests. The second greatest land use is in agriculture at 10%. Open space accounts for 7 percent, and urban uses 2.4 percent. Most of the county's forested land is in ownership of the Michigan State Forest system.

II-8 SOLID WASTE MANAGEMENT ALTERNATIVES

The Designated Planning Agency (DPA) and the Solid Waste Planning Committee (SWPC) completed a comprehensive strategic planning process that outlined strengths, weaknesses, opportunities, and threats that are part of the current and potential future solid waste management system that services the County. This analysis was used to create goals and objectives which are provided immediately after this Executive Summary. These goals and the strategic analysis formed the basis for developing the solid waste management strategy and the selected alternative that is described in this Plan as the Plan's Enforceable Program and Process as provided for in Part 115, Section 11533 (1) of the Michigan Natural Resources and Environmental Protection Act (NREPA).

In developing the Plan's Enforceable Program and Process the DPA and SWPC first screened out strategies that were technically or economically unsuitable for the County. The DPA and SWPC then reviewed a set of solid waste management program strategies in the following eight areas that were viewed as technically and economically feasible:

- Clean Community
- Drop-Off Residential Recycling
- Residential Yard Waste Composting
- Material Transfer and Processing
- Recycling Incentives
- Curbside Residential Recycling
- Commercial Recycling
- Disposal

These program strategies were assembled as six potential System Alternatives that varied by level of landfill diversion, capital and operating cost and implementation requirements:

A: Basic Waste Collection and Disposal Program
B: Level 1 Basic Clean Community and Drop-Off Recycling Program
C: Level 2 Expanded Clean Community and Drop-Off Recycling Program
D: Level 3 Expanded Clean Community and Curbside Recycling Program
E: Level 4 Expanded Clean Community and Comprehensive Recycling Program
F: Level 5 Advanced Recovery System

Each of the six options were then examined based on their key features, advantages, disadvantages, overall performance and cost impact and applicability for the county. These features were evaluated and ranked as they applied to Kalkaska County.

At this stage in the strategic planning process, some of the Strategic Alternatives were determined to be unsuitable for the County based on the evaluation and ranking of the overall technical and economic feasibility of each approach and its ability to:

- build on the strengths of the local and regional situation,
- address current deficiencies and weaknesses,
- work with organizational approaches that the County is willing to consider,
- be fundable through systems that the County can implement,
- respond to and build community involvement and support,
- be enforceable, and
- set measurable goals that can be tracked to determine progress

System Alternative "A" was determined to be economically feasible yet inadequate to reach the adopted Plan's Goals and Objectives which incorporate the hierarchy of "reduce, reuse, recycle" consistent with the state solid waste plan and which targeted some diversion of solid waste from landfill disposal during the planning period. System Alternatives "D", "E" and "F" were determined to be unachievable during the 10 year planning time frame given the technical and economic constraints of the existing solid waste management system and the current level of organization of system participants. Two of the strategic alternatives ("B" and "C") were further developed as Kalkaska County System Alternative 1 and Kalkaska County System Alternative 2, as described below, for further consideration in the strategic planning process.

DATA BASE

KALKASKA COUNTY SYSTEM ALTERNATIVE 1:

Basic Clean Community and Drop-Off Recycling Program is adapted from System Option B Key features include routine residential and business waste collection supplemented by a basic clean community initiative with spring/fall cleanups and household hazardous waste collection service. The System would provide improved drop-off recycling services that are more convenient but still only available for limited periods of each day and week. Yard waste services are limited to fall leaf collection and a single drop-off location. Commercial recycling is encouraged but no other support services provided. Recycling processing arrangements are arranged but only for the purpose of servicing the drop-off network. More solid waste disposal options are provided for households especially for seasonal tourist activity and special one-time disposal needs of area residents. Direct haul to regional landfills and to local transfer stations are still the primary methods of waste management.

KALKASKA COUNTY SYSTEM ALTERNATIVE 2

Expanded Clean Community and Drop-Off Recycling Program is adapted from System Option C. Key features include a Clean Community program that operates at highly effective levels. Incentives to recycle boost program performance, increasing tons and lowering unit costs. Expanded recycling drop-off capabilities are made available throughout the County at permanent sites open for longer periods of time each week. Arrangements are made for processing of commingled recyclables, increasing the types of materials that can be recovered and further increasing overall convenience. Direct haul of collected solid waste to regional landfills would remain as the standard practice for the remainder of the county. A network of drop-off facilities for solid waste would be available with this system preferably located at same sites as recycling drop-offs. Waste transfer facilities would be used more should direct haul options for landfilling no longer be available or be cost prohibitive. Participation in a regional landfill development project would also be considered.

THE PLAN'S SELECTED ALTERNATIVE

The strategic planning process was carried through to final conclusions regarding the program strategies that would make up the Plan's Selected Alternative and become the foundation for the Plan's Enforceable Program as required by statute. The strategic planning process included final evaluation and ranking against the criteria as well as surveying of the views of key stakeholders in the planning process, and others considered to be critical to implementation of the plan - primarily local government officials.

The DPA and SWPC concluded that implementing "Kalkaska County System Alternative 1" in a year 1 through 5 Phase 1 leading to a year 6 through 10 Phase 2 development of "Kalkaska County System Alternative 2" was the optimum choice as the Selected Alternative for the Plan's Enforceable Program. This Selected Alternative is described in the balance of the Plan with further detail provided in Appendix A of the Plan. Appendix B of the Plan contains further detail regarding the System Alternatives that were not selected as part of the Plan's Enforceable Program.

III-1 THE SELECTED SOLID WASTE MANAGEMENT SYSTEM

The Selected Solid Waste Management System (Selected System) is a comprehensive approach to managing Kalkaska 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 to area residents and businesses. Proposed disposal area 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 B. Following is an overall description of the Selected System.

Through the Strategic Planning Process described in the previous section the County has selected a system alternative that is a combination of Alternative 1 and Alternative 2, modified to tailor the program specifics to the County's needs and phased in to allow system development to take place for the complete 10 year planning period. These are now major components of the Plan's Enforceable Program as further described below.

Following is a more detailed description of the specific program elements that are part of the Selected Alternative and the Plan's Enforceable Program and Process provided for in Part 115, Section 11533 (1) of NREPA. Specific details on who will implement the Plan's Enforceable Program are covered in the next section covering the Plan's Authorized Management Program. The timing of implementation of the Plan's Enforceable Program are then provided in the Plan's Timetable for Implementation that follows. The Plan's Enforceable Program, also to be known as the Kalkaska County Solid Waste Management Program, implemented jointly by units of government within the county in cooperation with other public agencies and private firms will include features as follows:

Phase 1: During Years 1 through 5 of the Planning Period, the County will implement System Alternative 1 as follows:

KALKASKA COUNTY SYSTEM ALTERNATIVE 1
BASIC CLEAN COMMUNITY & DROP-OFF RECYCLING PROGRAM

Key features include routine residential and business waste collection supplemented by a basic clean community initiative with spring/fall cleanups and household hazardous waste collection service. The System would provide improved drop-off recycling services that are more convenient but still only available for limited periods of each day and week. Yard waste services are limited to fall leaf collection and a single drop-off location. Commercial recycling is encouraged but no other support services provided. Recycling processing arrangements are arranged but only for the purpose of servicing the drop-off network. More solid waste disposal options are provided for households especially for seasonal tourist activity and special one-time disposal needs of area residents. Direct haul to regional landfills and to local transfer stations are still the primary methods of waste management.

Following is a more detailed description of the specific program elements that are part of Phase 1 of the Selected Alternative and the Plan's Enforceable Program. Specific details on who will implement the Plan's Enforceable Program are covered in the next section covering the Plan's Authorized Management Program. The timing of implementation of the Plan's Enforceable Program are then provided in the Plan's Timetable for Implementation that follows. The County's Solid Waste Program, implemented jointly by units of government within the county in cooperation with other public agencies and private firms will include the following features:

Kalkaska County Selected System Alternative Phase 1
Detailed System Component Descriptions

Clean Community:

Basic solid waste collection services would be made available to all households and businesses in the County. Illegal dumping and litter would be policed with enforcement of violations. Spring/fall cleanup days would be provided in more urban areas. Household hazardous waste collection services would be provided.

Recycling Incentives:

Basic education and promotion strategies would encourage responsible solid waste management and reduce/reuse/recycle behavior.

Drop-Off Residential Recycling:

A network of 3 drop-off sites for recycling would be located in the County, open at limited times on specific days of each week. Material would be collected in a source separated form to make the material easier to handle.

Curbside Residential Recycling:

No curbside recycling would be expected to be available for residents.

Residential Yard Waste Composting:

Fall leaf collection would be provided in Kalkaska. Backyard composting would be encouraged in the educational materials. One permanent drop-off site for yard waste would be provided for the County.

Commercial Recycling:

Businesses would be encouraged to recycle with their hauler and/or to use one drop-off site set up to better handle the larger volumes that a business would generate. Arrangements would be made with a larger drop-off site perhaps in Antrim or Grand Traverse Counties to handle larger drop-off quantities.

Material Transfer and Processing:

Arrangements would be made to provide recycling processing capabilities as needed to support the drop-off recycling network through collection and processing of source separated recyclable materials. These arrangements would include guarantees that sufficient capacity was available to meet the County's needs over the long term. Arrangements could be made through Grand Traverse or Emmet County.

Disposal:

Existing landfills in the region would be used with direct haul by compacting collection vehicles and use of local waste transfer facilities being the primary methods of transportation to the landfills. If determined to be necessary, waste transfer facilities would be further developed with county sponsorship or an existing transfer station upgraded should direct haul options for landfilling no longer be available, be cost prohibitive, or otherwise be determined to not be in the best interests of Kalkaska County.

During Years 6 through 10 of the Planning Period the Plan's Enforceable Program provides for the implementation of System Alternative 2, detailed further in Part III of this Plan with additional supporting material provided in Appendix A:

KALKASKA COUNTY SYSTEM ALTERNATIVE 2
EXPANDED CLEAN COMMUNITY AND DROP-OFF RECYCLING PROGRAM

Key features include a Clean Community program that operates at highly effective levels. Incentives to recycle boost program performance, increasing tons and lowering unit costs Expanded recycling drop-off capabilities are made available throughout the County at permanent sites open for longer periods of time each week. Arrangements are made for processing of commingled recyclables, increasing the types of materials that can be recovered and further increasing overall convenience. Direct haul of collected solid waste to regional landfills would remain as the standard practice for the remainder of the county. A network of drop-off facilities for solid waste would be available with this system preferably located at same sites as recycling drop-offs. Waste transfer facilities would be used more should direct haul options for landfilling no longer be available or be cost prohibitive. Participation in a regional landfill development project would also be considered.

Following is a more detailed description of the specific program elements that are part of Phase 2 of the Selected Alternative and the Plan's Enforceable Program. Specific details on who will implement the Plan's Enforceable Program are covered in the next section covering the Plan's Authorized Management Program. The timing of implementation of the Plan's Enforceable Program are then provided in the Plan's Timetable for Implementation that follows. The County's Solid Waste Program, implemented jointly by units of government within the county in cooperation with other public agencies and private firms will include the following features:

Kalkaska County Selected System Alternative Phase 2
Detailed System Component Descriptions

Clean Community:

Comprehensive solid waste collection services would be made available to all households and businesses in the County. Illegal dumping and litter would be policed with enforcement of violations. Spring/fall cleanup days would be provided in more urban areas with scavenging/trading/reuse encouraged and recycling of as many materials left as possible. Household hazardous waste collection services would be provided and expanded to include collection of agricultural pesticides and herbicides. Adopt a "____" programs would be organized with volunteers and business/service group sponsorship for periodic cleaning of roadsides, streambanks, lakeshores, parks and forests.

Recycling Incentives:

Proactive education and promotion strategies would encourage responsible solid waste management and strong reduce/reuse/recycle behavior. Pay As You Throw (PAYT) programs would be widespread throughout the County. Recycling drop-offs would add more materials to encourage overall participation in program by more citizens and businesses.

Drop-Off Residential Recycling:

A permanent network of drop-off sites for recycling would be located in the County, open at convenient hours most days of the week. Material would be collected in a commingled form to make use of the facilities easier. A wide variety of recyclable materials would be collected at each of the drop-off sites. One of the three drop-off sites would be a "flagship" site that accepts a broader range of materials for recycling and includes added educational opportunities. This flagship site would likely be located in Kalkaska.

Curbside Residential Recycling:

Subscription curbside recycling would be available for residents that were willing to make their own arrangements for the service with area haulers.

Residential Yard Waste Composting:

Fall leaf collection would be provided in Kalkaska and other villages/towns or more densely populated areas. Backyard composting would be encouraged through distribution of backyard bins

at discount rates. At least one and possibly more permanent drop-off options for yard waste would be provided throughout the County. A permanent yard waste drop-off site would be located at the flagship recycling drop-off.

Commercial Recycling:

Businesses would be encouraged to use the drop-off recycling network for smaller volumes of commingled paper and commingled containers. Arrangements would be made for larger volumes to be delivered to a site capable of handling compacted or loose loads of commercial recyclables. Businesses would be encouraged to contract with their hauler for collection of cardboard and other high volume recyclable materials. Service to a designated "business service district" could possibly be coordinated with neighboring county programs that may be pursuing a similar program.

Material Transfer and Processing:

Arrangements would be made to provide access to a material recovery facility (MRF) to service all recycling collectors in the system. These arrangements would include guarantees that sufficient capacity was available to meet the County's needs over the long term and that the facility would be able to process commingled containers and commingled fibers as well as presorted recyclables like OCC.

Disposal:

Existing landfills in the region would be used with direct haul by compacting collection vehicles and use of local transfer stations being the primary methods of transportation to the landfills. A network of drop-off facilities for solid waste would be available with this system preferably located at same sites as recycling drop-offs. If determined to be necessary, waste transfer facilities would be developed with county sponsorship or an existing transfer station upgraded should direct haul options for landfilling no longer be available, be cost prohibitive, or otherwise be determined to not be in the best interests of Kalkaska County. The county would also consider participation in development of a regional landfill facility or authority should other disposal options be determined to not be in the best interests of Kalkaska County.

As required by the Plan Format, the remainder of the descriptions that follow cover the details regarding specific components of the Plan's Enforceable Program and Process that answer the "who, what, when, where, and how" aspects of the Selected Alternative, including:

- Solid Waste Efforts including:
  - Current and Future Import/Export Authorization and Related Conditions
  - Disposal Areas to be Used in the Plan's Enforceable Program
  - Solid Waste Collection Services and Transportation

- Resource Conservation Efforts, including:
  - Projections of Diversion in Table III-1
  - Waste Reduction, Recycling and Composting Programs
  - Volume Reduction Techniques

- Resource Recovery and Recycling, including:
  - Overview of Resource Recovery and Recycling Programs
  - Recycling and Composting
  - Details of Current and Future Programs in Tables III-3 through III-8
  - Identification of Resource Recovery Management Entities
  - Projections of Diversion in Table III-9
  - Market Availability in Table III-10
  - Educational and Informational Programs

SELECTED SYSTEM

These aspects of the Plan's Enforceable Program provide sufficient export capacity and specific disposal areas identified to document the necessary 10 years disposal capacity for the Planning Period. Further details on the "who, what, when, where, and how" of the Plan's Enforceable Program then continue with the following sections:

- Timetable for Selected System Implementation
- Siting Review Procedures
- Solid Waste Management Components
- Identification of Responsible Parties
- Local Ordinances and Regulations Affecting Solid Waste Disposal
- Capacity Certifications

II-2 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

RETURN TO APPROVAL LETTER

IMPORTING COUNTY	EXPORTING COUNTY	FACILITY NAME[1]	AUTHORIZED QUANTITY/ DAILY	AUTHORIZED QUANTITY/ ANNUAL	AUTHORIZED CONDITIONS[2]
Not Applicable (See Note Below)					

NOTE TO "NOT APPLICABLE": Disposal Areas located within the County and licensed to process special wastes (drilling muds) import these drilling muds from other counties. The drilling muds, however, are liquid wastes at the time of import and thus are not subject to the import constraints of this section. As well, Disposal Areas within the County licensed to transfer solid waste regulated by this Plan import these solid wastes from other counties. The solid waste, however, is not disposed of in Kalkaska County and thus is not subject to the import constraints of this section.

_____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

SELECTED SYSTEM

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]
Not Applicable (See Note Below)					

NOTE TO "NOT APPLICABLE": Disposal Areas located within the County and licensed to process special wastes (drilling muds) import these drilling muds from other counties. The drilling muds, however, are liquid wastes at the time of import and thus are not subject to the import constraints of this section. As well, Disposal Areas within the County licensed to transfer solid waste regulated by this Plan import these solid wastes from other counties. The solid waste, however, is not disposed of in Kalkaska County and thus is not subject to the import constraints of this section.

_____Conditions 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

Table 1-B Attachments Section
FUTURE IMPORT VOLUME AUTHORIZATION OF SOLID WASTE CONTINGENT ON NEW FACILITIES BEING SITED

Not applicable

III-3 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

IMPORTING COUNTY	EXPORTING COUNTY	FACILITY NAME[1]	AUTHORIZED QUANTITY/ DAILY	AUTHORIZED QUANTITY/ ANNUAL	AUTHORIZED CONDITIONS[2]
Crawford	Kalkaska	CES Waters	NA	NA	P *
Leelanau	Kalkaska	NA	NA	NA	P * & **
Manistee	Kalkaska	NA	NA	NA	P *
Grand Traverse	Kalkaska	NA	NA	NA	P * & **
Chippewa	Kalkaska	NA	NA	NA	P *
Presque Isle	Kalkaska	NA	NA	NA	P *
Charlevoix	Kalkaska	NA	NA	NA	P *
Montmorency	Kalkaska	NA	NA	NA	P *
Wexford	Kalkaska	NA	NA	NA	P *
Bay	Kalkaska	NA	NA	NA	P *
Clare	Kalkaska	NA	NA	NA	P *
Wayne	Kalkaska	NA	NA	NA	P *
Monroe	Kalkaska	NA	NA	NA	P *
Washtenaw	Kalkaska	NA	NA	NA	P *
Calhoun	Kalkaska	NA	NA	NA	P *
Ottawa	Kalkaska	NA	NA	NA	P *
Kent	Kalkaska	NA	NA	NA	P *
Midland	Kalkaska	NA	NA	NA	P *
Shiawasee	Kalkaska	NA	NA	NA	P *
Genesee	Kalkaska	NA	NA	NA	P *
Saginaw	Kalkaska	NA	NA	NA	P *

X Condition 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 on the following page

Table 2-A Attachments Section: CURRENT EXPORT VOLUME AUTHORIZATION OF SOLID WASTE

* Condition for Current Exports:

RETURN TO APPROVAL LETTER

Export of Type II and Type III waste will be allowed to the identified counties only if such waste collected for export is collected in compliance with all applicable laws, ordinances, rules and regulations of the Kalkaska County Solid Waste Management System, Ordinance and Intergovernmental Agreements consistent with the Plan's Enforceable Program. Special Industrial Waste shall be exempt from these conditions. All other wastes will be exempt from these conditions only on a temporary basis in the event of a temporary shutdown of any solid waste facilities provided for in the Selected Alternative and then only until such time that those facilities again begin to operate. The export of solid waste out of the State of Michigan shall be allowed as provided by federal or state law.

** Condition for Current Exports:

For export to these Counties to be consistent with import restrictions imposed by those counties then recycling, composting and household hazardous waste programs must be in place in Kalkaska County as specified in the Reciprocal Agreement shown in the Attachments section.

SELECTED SYSTEM

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

IMPORTING COUNTY	EXPORTING COUNTY	FACILITY NAME[1]	AUTHORIZED QUANTITY/ DAILY	AUTHORIZED QUANTITY/ ANNUAL	AUTHORIZED CONDITIONS[2]
Crawford	Kalkaska	NA	NA	NA	P *
Leelanau	Kalkaska	NA	NA	NA	P *
Manistee	Kalkaska	NA	NA	NA	P *
Mecosta	Kalkaska	NA	NA	NA	P *
Chippewa	Kalkaska	NA	NA	NA	P *
Presque Isle	Kalkaska	NA	NA	NA	P *
Charlevoix	Kalkaska	NA	NA	NA	P *
Montmorency	Kalkaska	NA	NA	NA	P *
Wexford	Kalkaska	NA	NA	NA	P *
Bay	Kalkaska	NA	NA	NA	P *
Clare	Kalkaska	NA	NA	NA	P *
Osceola	Kalkaska	NA	NA	NA	P *
Muskegon	Kalkaska	NA	NA	NA	P *
Saginaw	Kalkaska	NA	NA	NA	P *
Sanilac	Kalkaska	NA	NA	NA	P *
Ottawa	Kalkaska	NA	NA	NA	P *
Kent	Kalkaska	NA	NA	NA	P *
Clinton	Kalkaska	NA	NA	NA	P *
Shiawasee	Kalkaska	NA	NA	NA	P *
Genesee	Kalkaska	NA	NA	NA	P *
Kalamazoo	Kalkaska	NA	NA	NA	P *
Barry	Kalkaska	NA	NA	NA	P *
Ingham	Kalkaska	NA	NA	NA	P *
Oakland	Kalkaska	NA	NA	NA	P *
Macomb	Kalkaska	NA	NA	NA	P *
Calhoun	Kalkaska	NA	NA	NA	P *
Jackson	Kalkaska	NA	NA	NA	P *
Washtenaw	Kalkaska	NA	NA	NA	P *
Wayne	Kalkaska	NA	NA	NA	P *
Berrien	Kalkaska	NA	NA	NA	P *
St. Joseph	Kalkaska	NA	NA	NA	P *
Lenawee	Kalkaska	NA	NA	NA	P *
Monroe	Kalkaska	NA	NA	NA	P *

__X__ Conditions 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 on the following page

Table 2-B (continued): FUTURE EXPORT 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]
Midland	Kalkaska	NA	NA	NA	P *
Montcalm	Kalkaska	NA	NA	NA	P*
Menominee	Kalkaska	NA	NA	NA	P*
Delta	Kalkaska	NA	NA	NA	P*
Ontonagon	Kalkaska	NA	NA	NA	P*
Emmet	Kalkaska	NA	NA	NA	P*

Table 2-B Attachments Section: FUTURE EXPORT VOLUME AUTHORIZATION OF SOLID WASTE CONTINGENT ON NEW FACILITIES BEING SITED

* Condition for Future Exports:

Export of Type II and Type III waste will be allowed to the identified counties only if such waste collected for export is collected in compliance with all applicable laws, ordinances, rules and regulations of the Kalkaska County Solid Waste Management System, Ordinance and Intergovernmental Agreements consistent with the Plan's Enforceable Program. Special Industrial Waste shall be exempt from these conditions. All other wastes will be exempt from these conditions only on a temporary basis in the event of a temporary shutdown of any solid waste facilities provided for in the Selected Alternative and then only until such time that those facilities again begin to operate. The export of solid waste out of the State of Michigan shall be allowed as provided by federal or state law.

III-4 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 Kalkaska County for the next five years and, if possible, the next ten years. Pages III-10 through III-15 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.

Export of Type II and Type III waste to any of the facilities identified below that are located outside of Kalkaska County will be allowed only if such waste collected for export is collected in compliance with all applicable laws, ordinances, rules and regulations of the Kalkaska County solid waste management system.

Type II Landfill:

Cedar Ridge Landfill

Glen's Sanitary Landfill

CES Waters Landfill

Montmorency-Oscoda Joint Sanitary Landfill

Manistee County (Harland's) Landfill

Northern Oaks Recycling and Disposal

Wexford County Landfill

Type III Landfill:

Incinerator:

Waste-to-Energy Incinerator:

Type A Transfer Facility:

Kalkaska/Antrim Transfer Station

Plum Valley Transfer Station

Type B Transfer Facility:

Processing Plant:

Northern A-1 Services Processing Plant

Welltech Eastern Inc. Processing Plant

Waste Piles:

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 Kalkaska County's solid waste are in the Attachments Section.

SELECTED SYSTEM

FACILITY DESCRIPTIONS

Facility Type: **Type A Transfer Station**

Facility Name: **Kalkaska/Antrim Transfer Station (Northern A-1 Services)**

County: Kalkaska Location: Town T27N Range R7W 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: Glen's Landfill or CES Waters Landfill

____ Public x Private Owner: U.S. Liquids

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
	construction permit	x	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:	not applicable(NA)	acres
Total area sited for use:	NA	acres
Total area permitted:		acres
Operating:		acres
Not excavated:		acres
Current capacity:		
Estimated lifetime:		years
Estimated days open per year:	312	days
Estimated yearly disposal volume:	NA	

(if applicable)
Annual energy production:

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

SELECTED SYSTEM

FACILITY DESCRIPTIONS

Facility Type: **Type A Transfer Station**

Facility Name: **Plum Valley Transfer Station**

County: Kalkaska Location: Town T28N Range R7W Section(s) 10

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: CES Waters Landfill

____ Public x ____ Private Owner: William Kiel

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
	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:	not applicable(NA)	acres
Total area sited for use:	NA	acres
Total area permitted:		acres
Operating:		acres
Not excavated:		acres
Current capacity:		
Estimated lifetime:		years
Estimated days open per year:	NA	days
Estimated yearly disposal volume:	NA	

(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: **Cedar Ridge Landfill**

County: Charlevoix Location: Town T33N Range R7W Section(s) 19

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 x_____Private Owner: Waste Management, Inc.

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
	construction permit	x	contaminated soils
	open, but closure pending	x	special wastes *
			other:

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

Foundry sand and flyash from East Jordan Iron Works.

Site Size:

Total area of facility property:	120	acres
Total area sited for use:	40	acres
Total area permitted:	40	acres
Operating:	21	acres
Not excavated:	0	acres

Current capacity:	approx. 370,000 bank cubic yards	
Estimated lifetime:	2.5	years
Estimated days open per year:	260	days
Estimated yearly disposal volume:	311,000 gate cubic yards	

(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: **Glen's Sanitary Landfill**

County: Leelanau Location: Town T28N Range 13W Section(s) 35

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, Inc.

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	x	contaminated soils
	open, but closure pending	x	special wastes *
			other: ____

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

Asbestos (non-friable)

Site Size:

Total area of facility property:	460	acres
Total area sited for use:	133	acres
Total area permitted:	133	acres
Operating:	14.8	acres
Not excavated:	89.3	acres

Current capacity:	22,000,000 cubic yards	
Estimated lifetime:	60	years
Estimated days open per year:	264	days
Estimated yearly disposal volume:	300,000 gate cubic yards	

(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: **City Environmental Svcs., Inc. of Waters (Crawford-Otsego Landfill)**

County: Crawford Location: Town T28N Range R8E 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 x Private Owner: Waste Management, Inc.

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	x	contaminated soils
	open, but closure pending	x	special wastes *
			other: ____

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

not avail.

Site Size:

Total area of facility property:	252.20	acres
Total area sited for use:	252.20	acres
Total area permitted:	79.07	acres
Operating:	9.7	acres
Not excavated:	64.87	acres

Current capacity:	8.2 million cy	
Estimated lifetime:	>20	years
Estimated days open per year:	313	days
Estimated yearly disposal volume:	320,000 gate cubic yards	

(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: **Montmorency-Oscoda Joint Sanitary Landfill**

County: Montmorency Location: Town R29N Range R3E 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 pending		special wastes *
			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	acres
Current capacity:	3,500,000	
Estimated lifetime:	30	years
Estimated days open per year:	310	days
Estimated yearly disposal volume:	145,000 gate cubic yards	

(if applicable)
Annual energy production:

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

FACILITY DESCRIPTIONS

Facility Type: **Type II Landfill**

Facility Name: **Manistee County Landfill (Harland's)**

County: Manistee Location: Town T21N Range R16W Section(s) 32

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 x Private Owner: Allied Disposal

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	x	contaminated soils
	open, but closure pending	x	special wastes *
			other:

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

asbestos, flyash

Site Size:

Total area of facility property:	336	acres
Total area sited for use:	40	acres
Total area permitted:	40	acres
Operating:	40	acres
Not excavated:	13	acres

Current capacity:	1,700,000 cy	
Estimated lifetime:	14	years
Estimated days open per year:	250	days
Estimated yearly disposal volume:	200,000 cy	

(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 and Disposal Facility**

County: Clare Location: Town T19N Range R4W Section(s) 32

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 x Private Owner: Waste Management, Inc.

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
	construction permit	x	contaminated soils
	open, but closure pending		special wastes *
		x	other: water treatment filter cake

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

Site Size:

Total area of facility property:	160	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 cy	
Estimated lifetime:	43	years
Estimated days open per year:	260	days
Estimated yearly disposal volume:	409,000 gate cubic yards	

(if applicable)
Annual energy production:

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

SELECTED SYSTEM

FACILITY DESCRIPTIONS

Facility Type: **Processing Facility**

Facility Name: **Northern A-1 Services Drilling Mud Processing Facility**

County: Kalkaska Location: Town T27N Range R7W Section(s) 4

Map identifying location included in Attachment Section: ____ Yes x No

If facility is an Incinerator or a Transfer Station, list the final disposal site and location for Incinerator ash or Transfer Station wastes: Glen's Landfill or CES Waters Landfill

____ Public x Private Owner: U.S. Liquids

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

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

Drilling muds only

Site Size:

Total area of facility property:	not applicable(NA)	acres
Total area sited for use:	NA	acres
Total area permitted:	____	acres
Operating:	____	acres
Not excavated:	____	acres
Current capacity:	____	
Estimated lifetime:	____	years
Estimated days open per year:	312	days
Estimated yearly disposal volume:	NA	

(if applicable)

Annual energy production:

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

SELECTED SYSTEM

FACILITY DESCRIPTIONS

Facility Type: **Processing Facility**

Facility Name: **Welltech Eastern, Inc. dba Kal Con Environmental Services**

County: Kalkaska Location: Town T27N Range R7W Section(s) 29

Map identifying location included in Attachment Section: ____ Yes x No

If facility is an Incinerator or a Transfer Station, list the final disposal site and location for Incinerator ash or Transfer Station wastes: Glen's Landfill or CES Waters Landfill

____ Public x Private Owner: Welltech Eastern, Inc. dba Kal Con Environmental

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

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

Drilling muds only

Site Size:

Total area of facility property:	not applicable(NA)	acres
Total area sited for use:	NA	acres
Total area permitted:	____	acres
Operating:	____	acres
Not excavated:	____	acres

Current capacity:	____	
Estimated lifetime:	____	years
Estimated days open per year:	____	days
Estimated yearly disposal volume:	NA	

(if applicable)

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

III-5 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.

In Phase 1 of the Plan's Enforceable Program (1999-2003) basic solid waste collection services would be made available to all households and businesses in the County. Illegal dumping and litter would be policed with enforcement of violations. Spring/fall cleanup days would be provided in more urban areas. Household hazardous waste collection services would be provided. Existing landfills in the region would be used with direct haul by compacting collection vehicles and use of local transfer stations being the primary methods of transportation to the landfills. If determined to be necessary, waste transfer facilities would be developed with county sponsorship or existing transfer stations upgraded should direct haul options for landfilling no longer be available, be cost prohibitive, or otherwise be determined to not be in the best interests of Kalkaska County.

In Phase II of the Plan's Enforceable Program (2003-2004), comprehensive solid waste collection services would be made available to all households and businesses in the County. Illegal dumping and litter would be policed with enforcement of violations. Spring/fall cleanup days would be provided in more urban areas with scavenging/trading/reuse encouraged and recycling of as many materials left as possible. Household hazardous waste collection services would be provided and would include services to collect small quantities of agricultural pesticides and herbicides. Adopt a "____" programs would be organized with volunteers and business/service group sponsorship for periodic cleaning of roadsides, streambanks, lakeshores, parks and forests. Existing landfills in the region would be used with direct haul by compacting collection vehicles and use of local transfer stations being the primary methods of transportation to the landfills. A network of drop-off facilities for solid waste would be available with this system preferably located at same sites as recycling drop-offs. If determined to be necessary, a waste transfer facility would be developed with county sponsorship or existing transfer stations upgraded should direct haul options for landfilling no longer be available, be cost prohibitive, or otherwise be determined to not be in the best interests of Kalkaska County.

III-6 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.

The Resource Conservation Efforts will use education and incentives to encourage source reduction, reuse and recycling with the following projected impact in measurable programs and additional impact in source reduction that cannot be measured.

Table III-1: Resource Conservation Effort

Table III-1: Resource Conservation Effort **Description**	**Est. Diversion Tons/Yr**		
	Current	**5th yr**	**10th yr**
Recycling Drop-off	40	336	561
Curbside recycling	0	20	30
Commercial recycling	90	1,040	1,683
Yard waste collection	40	200	250
Household Hazardous waste collection	0	0	1
TOTALS	**170**	**1,596**	**2,525**

III-7 WASTE REDUCTION, RECYCLING & COMPOSTING

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.

The Plan's Enforceable Program provides for high compaction waste transfer in order to increase the density of loads that are transported to landfills, thus lowering tip fees at those landfills and/or reducing transportation costs. This will reduce the gate yards taken in at these landfills but will not impact bank yards (i.e.: estimated air space conserved in cubic yards) since the final compaction density at landfills is not expected to change Landfills will use less energy, fuel, etc. to reach those densities, however, which does provide some economic benefit to the landfill owner.

Table III-2 Volume Reduction Techniques *Not Applicable*

OVERVIEW OF RESOURCE RECOVERY AND RECYCLING 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.

Total waste generation for Kalkaska County was calculated using pounds per person per day (residential) and pounds per employee per day (commercial and industrial) models. These numbers were compared and reconciled with actual disposal and recovery data to determine a final generation number. Using population projected out over the planning period, waste generation was then estimated. The County then evaluated various material recovery and waste reduction strategies, and compared actual recovery rates for the current system against what may be possible given new program implementation. With target recovery goals in mind (8+ percent for 2003 and 13+ percent for 2008), the County was able to determine target material tonnage for recovery and then matched actual programs and recovery benchmarks from other communities, needed to meet those goals.

RECYCLING AND COMPOSTING

The following is a brief analysis of the recycling and composting programs selected for the County in this Plan's Enforceable Program. 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 are three tables that 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. The second group of three tables lists 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.

Recycling

XX 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:

In Phase I of the Selected Alternative the following recycling systems would be developed:

Recycling Incentives:

Basic education and promotion strategies would encourage responsible solid waste management and reduce/reuse/recycle behavior.

Drop-Off Residential Recycling:

A network of 3 drop-off sites for recycling would be located in the County, open at limited times on specific days of each week. Material would be collected in a source separated form to make the material easier to handle and ship to markets.

Curbside Residential Recycling:

No curbside recycling would be expected to be available for residents.

Commercial Recycling:

Businesses would be encouraged to recycle with their hauler and/or to use one drop-off site set up to better handle the larger volumes that a business would generate. Arrangements would be made with a larger drop-off site perhaps in Antrim or Grand Traverse Counties to handle larger drop-off quantities.

Material Transfer and Processing:

Arrangements would be made to provide recycling processing capabilities as needed to support the drop-off recycling network through collection and processing of source separated recyclable materials and to service all recycling collectors in the system.. These arrangements would include guarantees that sufficient capacity was available to meet the County's needs over the long term. Arrangements could be made through Grand Traverse or Emmet County or other public, private or non-profit service providers as deemed necessary by the Plan's Implementation Agency.

In Phase II of the Selected Alternative the recycling systems would be further developed:

Recycling Incentives:

Proactive education and promotion strategies would encourage responsible solid waste management and strong reduce/reuse/recycle behavior. Pay As You Throw (PAYT) programs would be widespread throughout the County. Recycling drop-offs would add more materials to encourage overall participation in program by more citizens and businesses.

Drop-Off Residential Recycling:

A permanent network of drop-off sites for recycling would be located in the County, open at convenient hours most days of the week. Material would be collected in a commingled form to make use of the facilities easier. A wide variety of recyclable materials would be collected at each of the drop-off sites. One of the three drop-off sites would be a "flagship" site that accepts a broader range of materials for recycling and includes added educational opportunities. This flagship site would likely be located in Kalkaska.

Curbside Residential Recycling:

Subscription curbside recycling would be available for residents that were willing to make their own arrangements for the service with area haulers.

Commercial Recycling:

Businesses would be encouraged to use the drop-off recycling network for smaller volumes of commingled paper and commingled containers. Arrangements would be made for larger volumes to be delivered to a site capable of handling compacted or loose loads of commercial recyclables. Businesses would be encouraged to contract with their hauler for collection of cardboard and other high volume recyclable materials. Service to a designated "business service district" could possibly be coordinated with neighboring county programs that may be pursuing a similar direction.

Material Transfer and Processing:

Arrangements would be made to provide access to a material recovery facility (MRF) to service all recycling collectors in the system. These arrangements would include guarantees that sufficient capacity was available to meet the County's needs over the long term and that the facility would be able to process commingled containers and commingled fibers as well as presorted recyclables like OCC.

SELECTED SYSTEM

Composting

XX 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:

Residential Yard Waste Composting:

In Phase I of the Selected Alternative the following composting systems would be developed:

Fall leaf collection would be provided in Kalkaska. Backyard composting would be encouraged in the educational materials. One permanent drop-off site for yard waste would be provided for the County.

In Phase II of the Selected Alternative the following composting systems would be further developed:

Fall leaf collection would be provided in Kalkaska and other villages/towns or more densely populated areas. Backyard composting would be encouraged through distribution of backyard bins at discount rates. At least one and possibly more permanent drop-off options for yard waste would be provided throughout the County. A permanent yard waste drop-off site would be located at the flagship recycling drop-off.

SELECTED SYSTEM

Clean Community

XX 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:

In Phase I of the Selected Alternative, the existing household hazardous waste collection program in conjunction with Grand Traverse County would be continued.

In Phase II of the Selected Alternative, Household hazardous waste collection services would be provided in the county and expanded to include collection of agricultural pesticides and herbicides.

TABLE III-1

RECYCLING: Based on Current Programs

Program Name	Service Area	Public or Private	Collection Point[2]	Collection Frequency[3]	Materials[4]	Program Management Responsibilities[1] Development	Operation	Evaluation
Subscription Commercial OCC Route	Selected Businesses	Private	o	w,b,m	C	3	xxx	xxx

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

[1] Program Management responsibilities: 1=Designated Planning Agency; 2= County Board of Commissioners; 3=Department of Public Works; 4= Environmental Group; 5=Private Owner/Operator; 6=Other

[2] Collection Point: c=curbside; d=drop-off; o=onsite

[3] Collection Frequency: d=daily; w=weekly; b=bi-weekly; m=monthly; Sp=Spring; Su=Summer; Fa=Fall; Wi=Winter

[4] Material types: A=Plastics; B=Newspaper; C= Corrugated Containers; D=Other paper; E=Total Glass; F1=Other materials; G=Grass and Leaves; H=Wood waste; I=Construction & Demolition; J=Food & food processing; K=Tires; L=Total metals

TABLE III-2

COMPOSTING: Based on Current Programs

Program Name	Service Area	Public or Private	Collection Point[2]	Collection Frequency[3]	Materials[4]	Program Management Responsibilities[1] Development	Operation	Evaluation
A&K Disposal	County-wide	Private	o	w	L, Gr,	Private	Private	Private
Village of Kalkaska	Village	Public	do	Fa	L, Gr	Public	Public	Public
South Boardman Twp	Township	Public	do	Su	Br	Public	Public	Public

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

[1] Program Management responsibilities: 1=Designated Planning Agency; 2= County Board of Commissioners; 3=Department of Public Works; 4= Environmental Group; 5=Private Owner/Operator; 6=Other

[2] Collection Point: c=curbside; d=drop-off; o=onsite

[3] Collection Frequency: d=daily; w=weekly; b=bi-weekly; m=monthly; Sp=Spring; Su=Summer; Fa=Fall; Wi=Winter

[4] Material types: G=Grass; L=Leaves F=Food; W=Wood; P=Paper; S=Municipal Sewage Sludge; A=Animal Waste/Bedding; M=Municipal Solid Waste

TABLE III-3

SOURCE SEPARATION OF POTENTIALLY HAZARDOUS MATERIALS: Based on Current Programs

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	Public or Private	Collection Point[2]	Collection Frequency[3]	Materials[4]	Program Management Responsibilities[1] Development	Operation	Evaluation
Grand Traverse County Household Hazardous Waste Collection Program	four counties	Public	d	1/year	A, B1, B2, C, H, P, PS, PH	2	6 (Grand Traverse County)	2

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

[1] Program Management responsibilities: 1=Designated Planning Agency; 2= County Board of Commissioners; 3=Department of Public Works; 4= Environmental Group; 5=Private Owner/Operator; 6=Other

[2] Collection Point: c=curbside; d=drop-off; o=onsite

[3] Collection Frequency: d=daily; w=weekly; b=bi-weekly; m=monthly; Sp=Spring; Su=Summer; Fa=Fall; Wi=Winter

[4] Materials: 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 HealProducts; U=Used Oil; OT=Other Materials and identified

TABLE III-4

PROPOSED RECYCLING:

Program Name	Service Area	Public or Private	Collection Point[2]	Collection Frequency[3]	Materials[4]	Program Management Responsibilities[1] Development	Operation	Evaluation
3-station drop-off	County-wide	Public	d	d	A, B, C, D, E, L	xxx	xxx	xxx
Subscription curbside (years 6-10)	Limited	Private	c	w	A, B, C, D, E, L	xxx	xxx	xxx
Expanded commercial collection	Business districts	Private	o	w, bi, m	C, D	xxx	xxx	xxx

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

[1] Program Management responsibilities: 1=Designated Planning Agency; 2= County Board of Commissioners; 3=Department of Public Works; 4= Environmental Group; 5=Private Owner/Operator; 6=Other

[2] Collection Point: c=curbside; d=drop-off; o=onsite

[3] Collection Frequency: d=daily; w=weekly; b=bi-weekly; m=monthly; Sp=Spring; Su=Summer; Fa=Fall; Wi=Winter

[4] Material types: A=Plastics; B=Newspaper; C= Corrugated Containers; D=Other paper; E=Total Glass; F1=Other materials; G=Grass and Leaves; H=Wood waste; I=Construction & Demolition; J=Food & food processing; K=Tires; L=Total metals

TABLE III-5

PROPOSED COMPOSTING:

Program Name	Service Area	Public or Private	Collection Point[2]	Collection Frequency[3]	Materials[4]	Program Management Responsibilities[1] Development	Operation	Evaluation
Fall leaf pickup	City of Kalkaska	Public	c	Fa	L, BR	xxx	xxx	xxx
Yard Waste Drop-off	County-Wide	Public	d	d	L, BR	xxx	xxx	xxx

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

[1] Program Management responsibilities: 1=Designated Planning Agency; 2= County Board of Commissioners; 3=Department of Public Works; 4= Environmental Group; 5=Private Owner/Operator; 6=Other

[2] Collection Point: c=curbside; d=drop-off; o=onsite

[3] Collection Frequency: d=daily; w=weekly; b=bi-weekly; m=monthly; Sp=Spring; Su=Summer; Fa=Fall; Wi=Winter

[4] Material types: G=Grass; L=Leaves F=Food; Br=Brush; W=Wood; P=Paper; S=Municipal Sewage Sludge; A=Animal Waste/Bedding; M=Municipal Solid Waste

TABLE III-6

PROPOSED SOURCE SEPARATION OF POTENTIALLY HAZARDOUS MATERIALS:

Program Name	Service Area	Public or Private	Collection Point[2]	Collection Frequency[3]	Materials[4]	Program Management Responsibilities[1] Development	Operation	Evaluation
County Hoursehold Hazardous Waste Collection Program	County-wide	Public	d	4 times per year, by appt.	AN, A, P, PS, PH, OT	xxx	xxx	xxx
Battery collection	County-wide	Public	d	d	B2			

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

[1] Program Management responsibilities: 1=Designated Planning Agency; 2= County Board of Commissioners; 3=Department of Public Works; 4= Environmental Group; 5=Private Owner/Operator; 6=Other

[2] Collection Point: c=curbside; d=drop-off; o=onsite

[3] Collection Frequency: d=daily; w=weekly; b=bi-weekly; m=monthly; Sp=Spring; Su=Summer; Fa=Fall; Wi=Winter

[4] Materials: 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 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.

Various Service Providers including Waste Management, Inc (USA Waste, United Waste), A&K Disposal, Northern Quality, Northern Sanitation and others:

These private sector service providers will deliver solid waste and recycling services under the terms of the Plan's Enforceable Program as contained in the Kalkaska County Solid Waste Management System. Services from these entities are expected to include collection of solid waste from residential, commercial, and/or industrial generators and, under certain circumstances, corrugated collection routes for businesses throughout the county

Various Service Providers for Waste Transfer and Recycling Processing including Northern A-1, Plum Valley and A&K:

These private sector service providers will operate solid waste transfer facilities and/or recycling processing facilities within the County.

Kalkaska County Solid Waste Committee or Equivalent Designated Plan Implementation Agency

Promotion and education for all resource recovery programs; oversight of household hazardous waste collection program; oversight of county recycling and yard waste drop-off sites and any other responsibilities for the implementation and management of the Plan's Enforceable Program.

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:*		
	Year 0	Year 5	Year 10		Year 0	Year 5	Year 10
A. TOTAL PLASTICS:	3	28	45	G. GRASS & LEAVES:	20	200	250
B. NEWSPAPER:	26	279	451	H. WOOD WASTE:			
C. CARDBOARD:	56	600	970	I. CONSTR. & DEMO.		200	500
D. OTHER PAPER	25	237	383	J. FOOD PROCESSING			
E GLASS	10	112	180	K. TIRES:			
F. OTHER MATERIALS:				L. TOTAL METALS:	4	70	113

*does not include metals from scrap yard recovery

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.

Note that recyclable materials are commodity products and that the actual movement of these materials to end-markets fluctuates and will change from time to time during the course of the plan. In some cases these commodities will only be used in-state due to the weight of the material, high transportation costs and relatively low value per ton. This is frequently the case for yard waste, wood waste and other similar materials. Other materials that have higher levels of demand worldwide will, from time to time, be shipped out-of-state and in some cases out of the country and overseas as market conditions dictate.

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:	100 %	
B NEWSPAPER:	100 %		H. WOOD WASTE:	100 %	
C CARDBOARD	100 %		I. CONSTR. & DEMO :	100 %	
D. OTHER PAPER	100 %		J. FOOD PROCESSING	100 %	
G GLASS	100 %		K. TIRES:	100 %	
F. OTHER MATERIALS:	100%		L. TOTAL METALS:	100 %	

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	Delivery Medium	Targeted Audience	Program Provider
Recycling/general solid waste education	Display at public events	General public	DPA
Recycling, Composting	Radio ads	General public	DPA
Recycling, Composting	Newspaper ads	General public	DPA
General solid waste education	School presentations	School-age children	DPA
General solid waste education	Teacher Training/WISE curriculum	Teachers	DPA
Resource conservation	Presentations/workshops	Businesses/ public	DPA
All programs	Brochures, flyers	General public; businesses	DPA, Cooperative Extension, area Environmental Groups

III-8 TIMETABLE FOR SELECTED SYSTEM IMPLEMENTATION

This timetable is a guideline to implement components of the Plan's Enforceable Program. The Timeline gives a range of time in which the component will be implemented such as "1999-2000" or "On-going." Timelines may be adjusted later, if necessary

Management Components	Timeline
1) Designate Solid Waste Plan Implementation Agency	1999
2) Designate Implementation Oversight Committee	1999
3) Develop/Adopt Implementation Action Plan	1999
4) Draft/Adopt Intergovernmental Agreements/Ordinance/Rules/Regs	1999
5) Preliminary Program Specifications for Planned Programs	1999
6) Establish Budgets for Planned Programs	1999
7) Finalize Funding Structure and Enforcement Mechanisms	1999
8) Contract for Recycling Processing Capacity	1999/2000
9) Initiate all Outreach/Education Programs	1999/2000
10) Procure all Other System Improvements	1999/2000
11) Final Implementation of Funding Mechanisms	1999/2000
12) Continued Evaluation of Role of Transfer Facility	2000-2008
13) Modify Role of Transfer Facility if Needed	2000-2008
14) Preliminary Program Specifications for Planned Ph II Programs	2002-2003
15) Establish Budgets for Planned Phase II Programs	2002-2003
16) Finalize Any Upgrades to Funding Structure and Mechanisms	2002-2003
17) Initiate all Phase II outreach/education programs	2003-2008
18) Procure all other Phase II system improvements	2003-2008
19) Data Tracking to Assess Program Performance	Annual/Ongoing
20) Update Implementation Action Plan	Annual/Ongoing

III-9 SITING REVIEW PROCEDURES

The Siting Review Procedures contained in this Plan begins with a description of *Authorized Disposal Area Types* followed by a description of the *Siting Criteria and Process*.

AUTHORIZED DISPOSAL AREA TYPES

Per the requirements of Part 115 Section 11533 of NREPA, this Plan includes an Enforceable Program and process that assures that the nonhazardous waste to be generated in the planning area over the next 10 years will be collected and recovered, processed, and disposed of at disposal areas that comply with state law and rules promulgated by the Michigan DEQ governing the location, design and operation of the disposal areas.

As provided for in Part 115 Section 11537 (a) of NREPA, this Plan demonstrates that the planning area has in excess of 66 months of available disposal capacity and will have in excess of 66 months of available disposal capacity for the duration of the 5 year planning period for which this Plan is provided. As a result, the County may refuse to utilize the siting mechanism contained herein until the County is no longer able to demonstrate 66 months of disposal capacity or until the County amends this Plan to provide for the annual certification process described in Part 115 Section 11538 (4) of NREPA.

This Plan does not include an annual certification process, as provided for in Part 115 Section 11538 (2) of NREPA, since specific disposal areas are identified in this Plan for the five year period after approval of the Plan and, as such, is not required to provide the annual certification process described in Part 115 Section 11538 (4) of NREPA, or the interim siting mechanism described in Part 115 Section 11538 (3) of NREPA.

A: <u>Facilities Included in this Plan</u>:

This Plan's Enforceable Program and process, per the requirements of Part 115 Section 11533 of NREPA, includes new disposal areas within the County as described below. Disposal areas at specific sites identified in this Plan are automatically included in the Plan. Disposal areas without specific sites identified will be sited following the Plan's siting mechanism as provided for in this Chapter as will any changes in type or expansions of any existing disposal area unless provided for elsewhere in this Plan.

A.1: <u>Type II Landfill Disposal Area</u>: Not Applicable. No Type II or Type III Landfill disposal areas may be sited by this Plan.

A.2: <u>Solid Waste Transfer Station Disposal Area</u>: A Solid Waste Transfer Station disposal area or areas, as described in the Plan's Enforceable Program, constructed with recycling/material recovery capabilities and sponsored by the County, is included in the Plan. Sponsorship by the County is defined to mean, at a minimum, ownership of the land on which the disposal area is located with solid waste directed to the disposal area by ordinance, contract or other similar mechanism as provided for in the Plan's Enforceable Program. Such a Solid Waste Transfer Station disposal area or areas will be sited following the Plan's siting mechanisms as provided for in this chapter since no specific sites have been identified in the Plan for a Solid Waste Transfer Station disposal area. No other Solid Waste Transfer Station disposal areas may be sited by this Plan.

B: <u>Exempt Facilities</u>:

The following types of facilities do not require a construction permit and operating license from DEQ under Part 115 of NREPA.

B.1: <u>Solid Waste Transfer Facility Disposal Area</u>: Part 115 of NREPA specifies that the following types of solid waste transfer facility disposal areas do not require a construction permit and operating license from DEQ if either of the following circumstances exist:

i: The solid waste transfer facility disposal area is not designed to accept wastes from vehicles with mechanical compaction devices.

ii: The solid waste transfer facility disposal area accepts less than 200 uncompacted cubic yards per day

These types of solid waste transfer facility disposal areas are still subject to the Plan's siting mechanism as provided for in this chapter and are still exempt from local zoning.

B.2: Recycling and Compost Processing Facility: A processing facility that processes only source separated materials of any type does not require a construction permit and operating license from DEQ. These types of facilities do not have be sited by the Plan in order to be constructed and are subject to local zoning. These types of facilities can be sited with the approval of the local unit of government that has jurisdiction over a proposed site with the enforcement of local ordinances, including zoning, applicable to that siting being authorized elsewhere in this Plan.

C: Facilities Not Included in this Plan:

A proposal for any other disposal area as defined in Part 115 or NREPA, whether a solid waste transfer facility, incinerator, sanitary landfill, processing plant or other solid waste handling or disposal area utilized in the disposal of solid waste is not included in this Plan and, thus, will not be allowed to trigger the Plan's siting mechanism.

D: Plan Amendment to Include a Facility Not Included in this Plan:

If a proposed facility is not consistent with or compliance with this Plan, the facility proposer can request that the County amend the Plan. The procedure to amend this Plan is the same as the process for adopting this Plan, as provided for in Section 115 of NREPA. A request to amend the Plan should be made to the appropriate County Agency identified below. Upon receipt of such a request to amend the Plan, the County shall prepare a budget showing the costs anticipated to amend the Plan. Upon adoption of that Budget by the County Board of Commissioners the total amount of that budget shall become the fee charged to consider a proposed amendment to the Plan.

SITING CRITERIA AND PROCESS

The following process describes the application process and site review criteria to be used to site solid waste disposal facilities and determine consistency with this Plan.

If a disposal area being considered for development is included in the Plan's Authorized Disposal Area Types as described above then the Plan's Siting Review Process can be triggered as follows:

A: Initiating the Plan's Siting Review Process: To initiate the Plan's Siting Review Process, the Applicant shall submit 17 copies of an administratively complete application and the Application Fee to:

Kalkaska County Clerk's Office
605 N. Birch
Kalkaska, MI 49646
616 258-3304

The above office will act as the administrator and staffing for the County in this Siting Review Process and will be referred to below as the "Agency".

B: Application Fee: *Application Fee Structure:* An administratively complete application shall include the Application Fee in the form of a certified check or money order in the amount identified for the type of facility being proposed:

Type of Facility Requiring Permit	Application Fee
Landfill	$15,000
Incinerator	$15,000
Processing Facility	$15,000
Transfer Station	$4,000

The Application Fees will be used, at the discretion of the County, in evaluating the Application including but not limited to 1) staff time spent on the Siting Review Procedures and related tasks, 2) costs of required public meetings and related services, 3) costs for publication and mailing of notices and printing of documents, and 4) costs for consulting fees and other technical assistance as required related to the Siting Review Process. The above fee schedule may be modified by the County Board of Commissioners at their sole discretion. It is the responsibility of the Applicant to contact the County to determine the current fee amount that must be included with the application.

C: An Administratively Complete Application: An administratively complete application shall include all the items identified below. The required information shall be used in this Siting Review Process to apply the minimum siting criteria as provided for in Part 115 Section 11538 (3) or NREPA. Some of the requirements for an administratively complete application are for informational purposes in order to assist in completing the Siting Review Process.

1: Type of Facility (landfill, incinerator, processing facility, transfer station)

2: Legal description of all parcels included in the proposed disposal area.

3: Name, address and telephone number for:

a) The applicant and its parent company, if any;

b) Property owner of the site (if different);

c) Operator of the proposed disposal area (if different);

d) Designer/Engineer of the proposed disposal area; and

e) Designated contact for the Siting Review Process.

4: A statement that the applicant is the owner of all the parcels involved in the application or, if the owner of any of the parcels is different than the applicant, documentation in the form of land contracts, purchase agreements, or other binding legal instruments which substantiate the applicant's ability to proceed with development and operation of all parcels involved in the application.

5: General site location map(s). The general site location map(s) shall include more than one drawing where required for clarity. One set of the general site location map(s) shall be drawn at a scale and of such accuracy that one can readily interpret the general site location map(s). Another set of the general site location map(s) shall be reduced so each sheet shall fit on 8 1/2 by 11 inch, or 8 1/2 by 14 inch, paper. Such general site location map(s) shall be designed and prepared by a registered professional architect, landscape architect, engineer, land surveyor, or community planner. The general site location map(s) shall include the following information:

a) The parcel(s) within the general site location map, identified by parcel lines and location including dimensions, angles and size, correlated with the legal description of said parcel(s).

b) The scale, north point, boundary dimensions, topography, and natural features such as woodlots, streams, rivers, lakes, drainage and similar features.

c) Existing man-made features such as roads, buildings, structures, high tension towers, pipelines, existing utilities such as water and sewer lines, excavations, bridges, culverts, drains and easements, and shall identify adjacent properties and their existing uses including:

i) Access roads to the site;

ii) Proposed access point(s) to the site;

iii) Location of any public use airports licensed by the Bureau of Aeronautics Michigan Department of Transportation that are within ten thousand (10,000) feet of the proposed active disposal area;

iv) Location of public and private water wells within one mile of the proposed active disposal area and showing established/approved wellhead protection areas; and

v) Residences, commercial establishments, industries, institutions including schools, churches, hospitals and historic or archaeological sites within one mile of the proposed active disposal area.

d) Current zoning at the site and for adjacent land uses.

6: A detailed site plan or plans describing 1) the site as it exists, and 2) the site in use as a solid waste disposal area. The site plan shall include more than one drawing where required for clarity. One set of the site plans shall be drawn at a scale not to be greater than one (1) inch equals twenty (20) feet nor less than one (1) inch equals two hundred (200) feet, and of such accuracy one can readily interpret the site plan. Another set of the site plan shall be reduced so each sheet shall fit on 8 1/2 by 11 inch, or 8 1/2 by 14 inch, paper. Such site plan shall be designed and prepared by a registered professional architect, landscape architect, engineer, land surveyor, or community planner. The site plan shall include the following information:

a) The parcel(s), identified by parcel lines and location including dimensions, angles and size, correlated with the legal description of said parcel(s).

b) The scale, north point, boundary dimensions, existing topography (at least two (2) feet contour intervals), and existing natural features including woodlots, streams, rivers, ponds, lakes, wetlands, high risk erosion areas, slopes over 25%, beach, sand dunes, drainage and similar features, including:

i) One hundred year flood plains (as identified by DNR flood plain maps and as defined in the Part 115 Administrative Rules) within the boundaries of the site;

ii) Lands regulated under the Farmland and Open Space Preservation Act, 1974, Part 361 of NREPA, as emended, that are within the boundaries of the site;

iii) Location of surface water within the boundaries of the site;

iv) All wetlands (regulated and non-regulated) within the boundaries of the site;

v) Location of drains within the boundaries of the site;

vi) Topography information based on USGS datum, or selected on-site elevations; and

vii) Soil analysis based on a Modern Progressive Soil Survey of the County. If such survey is not completed for the site, then generalized soil analysis data regarding the soils and their adaptability to the use must be submitted.

c) Location and boundary dimensions of existing man-made features within the boundaries of the site including buildings, structures, high tension towers, pipelines, water wells, existing utilities including water and sewer lines, excavations, bridges, culverts, drains, easements and any known existing contamination.

d) The location and boundary dimensions of proposed changes within the boundaries of the site including:

i) Solid waste processing and disposal areas;

ii) Individual landfill cells (if applicable) with an estimate of volumetric air space capacities and when individual cells would be developed during the life of the facility.

iii) On site roads, driveways, sidewalks and other vehicular and pedestrian circulation features within and adjacent to the site including staging area for trucks waiting to use the facility, parking spaces in the off-street parking areas and the identification of service lanes and service parking;

iv) Main and accessory buildings, their relation one to another and to any existing structures on the site, the height of all buildings and square footage of floor space, finished floor and grade line elevations;

v) Open spaces, landscaping and buffering and security features, greenbelts, fences and walls;

vi) Connections to existing utilities and proposed extensions thereof;

vii) Soil erosion and sediment control measures including preventative soil erosion devices or measures, both during and after any site work related to the development, when required;

viii) Interior and exterior areas and structures to be used for storage, use, loading/unloading, recycling, or disposal of hazardous substances;

ix) Underground and above ground storage tanks for such uses as fuel storage, waste oil holding tanks, chemical storage, hazardous waste storage, collection of contaminated stormwater or wash water, and all similar uses;

x) Exterior and interior drains, on-site sewage systems, dry wells; catch basins; retention/detention areas; sumps and other facilities designed to collect, store or transport stormwater or wastewater including point of discharge for all drains; and

xi) Any other man-made features not specifically described above.

e) Conceptual engineering plans for construction of the facility.

7: A written narrative that shall include the following information:

a) Name and type of solid waste facility.

b) General description of the facility and how it functions (for informational purposes in the Permit Review Process) including the types and quantities of waste to be delivered to the facility, the targeted service area (e.g. communities, major commercial and industrial establishments, institutions, and waste haulers) for the facility, useful life and capacities of the facility, description of how each type of material will be handled at the facility, the eventual disposition of the materials to be handled by the facility, the proposed operating schedules (days and hours), a description of any resource recovery, recycling and composting activity planned for the site, the expected employment of the facility, a discussion of the economic and engineering feasibility of the final use plan for the site, and the applicant's rationale for developing the facility.

c) Summary of the results of the DEQ advisory analysis (if completed), with responses to any points raised in the advisory analysis and a copy of the advisory analysis attached as an exhibit.

d) Summary of the results of an Environmental Permits Checklist (with a copy attached as an exhibit), with discussion regarding any required permits along with current permit status documentation including either copies of received permits attached as exhibits, letters of intent to approve and issue a permit, letters of understanding for concurrent approval (issuing a permit) from those agencies or summary of discussions held with authorities responsible for issuing those permits. The site plans should be drawn to show design/placement as required for compliance with each of the applicable permits. Permits to be covered where applicable include:

i) Well permit,
ii) Type II water supply permit,
iii) Type III water supply permit,
iv) On site sewage disposal permit,
v) Soil erosion permit,
vi) Land division or subdivision approval,
vii) Waste disposal or storage or monitor wells permit(s),
viii) Sand dune mining permit,
ix) Permit to cut forest products,
x) Forestry use or special use permit,
xi) Easements for utilities and public agencies (on state or federal lands),
xii) Dam construction permit,
xiii) Certificate of Public Convenience and necessity for pipelines,
xiv) Air quality installation permit, operating permit,
xv) National Pollutant discharge elimination system permit,

xvi) Groundwater discharge permit,
xvii) Wastewater collection and treatment facilities construction permit,
xviii) Great Lakes Shorelands permit,
xix) Inland Lakes and Streams permit, and
xx) Wetlands permit.

e) An inventory of public services (fire protection, sewer, water, sanitation, emergency services/response, quasi-public utility companies (gas, electric, telephone)) showing:

i) Public services which are required by the solid waste facility,

ii) Public services which exist to service the site of the solid waste facility.

f) Statements relative to the impact of the proposed development on soil erosion, shoreline protection, wildlife habitat, air pollution, water pollution (ground and surface), noise and the scale of development in terms of the surrounding environment.

g) Other narrative statements necessary which specifically address the siting standards listed in part two of this chapter.

h) Other narrative statements necessary regarding design and operation of the proposed facility in response to applicable requirements of County and local ordinances and rules/regulations.

D: Step One: Application Review - Administratively Complete Finding: Upon receipt of an application the Agency shall review the application and determine if the application is complete. The Agency shall complete a checklist documenting the satisfactory submittal of each item required in an administratively complete application or noting the specific area that is not satisfactory. The checklist shall then be provided to the Applicant should additional information be required. This shall be completed within 60 days of submission of the Application. If the Agency does not make a finding the Application is either complete or not complete within the 60 days then the application automatically proceeds to the next step below.

E: Step Two: Application Review - Engagement of Review Committee: Upon receipt of an Application, the Agency shall notify the County Board of Commissioners (Board) who shall appoint the Solid Waste Facility Siting Committee (SWFSC) as described below.

The SWFSC will consist of membership as defined in Attachment A to this Plan Siting Mechanism. The County Board or designee shall call for the first meeting of the SWFSC and, upon election of the Chairperson, the Chair shall officially convene each meeting of the SWFSC. The SWFSC will be dissolved when either the Application is deemed inconsistent with the Plan, or the Michigan DEQ has issued the facility an operating permit. The County Board shall make provisions for appropriate staff and technical resources through the Application Fee, or other funding mechanisms as may be identified.

The SWFSC will then review the Application as guided by this Permit Review Process and the Minimum Standard Siting Criteria contained in Attachment B to this Siting Review Process.

F: Step Three: Application Review - Public Notice of First SWFSC Meeting: Within 10 days of the determination of an administratively complete application, or the creation of the SWFSC, whichever is later, the Agency shall set a date for the first SWFSC meeting and mail agendas.

a) The agenda shall be mailed to the routine list of recipients of County agendas as well as:

i) The applicant;
ii) The owners of the property for which approval is being considered;
iii) the owners of the property within 300 feet of the boundary of the property for which approval is being considered, as shown by the latest equalization roll;
iv) All occupants of structures within 300 feet of the property in question. If the name of an occupant is not known, the term "occupant" may be used in the notice. Notification need not be given to more than one (1) occupant of a structure, except that, if a structure contains more than one (1) dwelling unit or spatial area owned or leased by different individuals, partnerships, businesses or organizations, one (1) occupant of each unit or spatial area shall receive notice. In the case of a single

structure containing more than four (4) dwelling units or other distinct spatial areas owned or leased by different individuals, partnerships, businesses, or organizations, notice may be given to the manager or owner of the structure who shall be requested to post the notice at the primary entrance to the structure;

v) The chief elected official of the municipality the site is proposed to be located in;
vi) Members of the SWFSC;
vi) Any other notification required by the Michigan Open Meeting Act; P.A. 267 of 1976, as amended; and
vii) Any other notification required by Part 115 of NREPA.

b) The agenda shall indicate:

i) The applicant;
ii) The property which is the subject of the application;
iii) The date, time and location of the first SWFSC meeting;
iv) The order of business for the meeting with action items identified; and
v) A short overview of the Site Review Process.

c) The agenda shall be sent out at least 10 days prior to the date of the meeting.

G: Step Four: Application Review - First SWFSC Meeting: Within 30 days of the determination of an administratively complete application, the SWFSC shall hold its first meeting.

a) The SWFSC shall elect a chair and vice chair as the first order of business at the first meeting

b) At, or prior to the meeting the Agency shall distribute the Application to the SWFSC along with documentation of it being administratively complete.

c) The SWFSC shall make an initial discussion of the Application.

d) The Agency shall then communicate its work plan for background review of the Application and preliminary scoring against the Minimum Standard Siting Criteria.

e) The SWFSC shall then establish a date for their formal review and consideration of the Application.

f) Public comment will then be received and the meeting adjourned.

H: Step Five: Application Review - Agency Evaluation of Application: Within 80 days of the first SWFSC meeting, the Agency shall complete its review of the Application and prepare a written review of the Application including preliminary findings and scoring of the Application against the Minimum Standard Siting Criteria provided in Attachment B to this Siting Mechanism.

I: Step Six: Application Review - Meeting to Consider Application: Within 90 days of the first SWFSC meeting, the SWFSC shall meet to formally consider the Application.

a) The agenda shall be mailed to the routine list of recipients of County agendas as well as the list specified in E (a) above.

b) The agenda shall indicate:

i) The applicant;
ii) The property which is the subject of the application;
iii) The date, time and location of the SWFSC meeting for formal consideration of the Application;
iv) The order of business for the meeting with action items identified; and
v) A short overview of the Site Review Process; and
vi) When and where written and verbal public comments can be delivered.

c) A meeting packet, containing a copy of the Agency's written review of the Application, including preliminary findings and scoring of the Application against the Minimum Standard Siting Criteria, shall accompany the agenda for the following recipients of the agenda:

i) The applicant;
ii) The owners of the property for which approval is being considered;

iii) the owners of the property within 300 feet of the boundary of the property for which approval is being considered, as shown by the latest equalization roll;

iv) All occupants of structures within 300 feet of the property in question. If the name of an occupant is not known, the term "occupant" may be used in the notice. Notification need not be given to more than one (1) occupant of a structure, except that, if a structure contains more than one (1) dwelling unit or spatial area owned or leased by different individuals, partnerships, businesses or organizations, one (1) occupant of each unit or spatial area shall receive notice. In the case of a single structure containing more than four (4) dwelling units or other distinct spatial areas owned or leased by different individuals, partnerships, businesses, or organizations, notice may be given to the manager or owner of the structure who shall be requested to post the notice at the primary entrance to the structure;

v) The chief elected official of the municipality the site is proposed to be located in;

vi) Members of the SWFSC; and

vii) Any individuals that have made a request in writing to the Agency to receive the meeting packet.

d) The agenda and meeting packet shall be sent out at least 10 days prior to the date of the meeting.

e) Notice of the meeting shall be published in a newspaper which circulates in the municipality the site is proposed to be located in and shall be mailed or personally delivered to the newspaper fifteen (15) days prior to the date the application will be considered. The Notice shall include information on where the meeting packet can be viewed.

f) At the meeting the Agency shall present its findings resulting from completing the work plan for background review of the Application and preliminary scoring against the Minimum Standard Siting Criteria.

g) The SWFSC shall then complete a discussion of the findings of the Agency in their review of the Application and preliminary scoring against the Minimum Standard Siting Criteria. The result of these discussions will be a vote by the SWFSC on the final scoring of the Application against the Minimum Standard Siting Criteria.

h) Applications that do not meet the Minimum Standard Siting Criteria will be determined inconsistent with and not in compliance with the Plan and will not undergo further evaluation. Applications that do meet the Minimum Standard Siting Criteria will be determined to be consistent with and in compliance with the Plan. The written findings shall be communicated to the Michigan DEQ and the Applicant.

J: Step Seven: Application Review - Notification of Finding: Within 15 days of the conclusion of the formal SWFSC meeting to consider the Application, the Agency shall provide its recommendations to the County Board for the final consistency determination. If an Application if found to be consistent with the Plan, formal notice will be forwarded to the Michigan DEQ with a copy to the Applicant. If an Application is found to be not consistent with the Plan formal notice will be forwarded to the Applicant. If formal notice is not provided to the Applicant within 160 days from the initial determination of an administratively complete application, then the Application shall automatically be considered by the County to be consistent with the Plan whether or not such notice is provided to the Michigan DEQ by the County, unless both parties mutually agree in writing to extend this 160 day requirement for action. The Michigan DEQ will then make the final determination, to the extent provided for in Part 115 of NREPA, as part of its review of the Construction Permit application.

K: Step Eight: Application Review - Followup: The SWFSC shall receive formal written notice from the County Agency at the time that the Applicant receives its Construction Permit from the Michigan DEQ or is rejected for that Construction Permit and at the time that the Applicant receives its Operating License. At the discretion of the chair or a simple majority of the members of the SWFSC it will reconvene as needed during this period (before its final dissolution 10 days after the Operating License is issued or after rejection of the Application by Michigan DEQ).

Attachment A to Plan Siting Mechanism
Definition of the Facility Siting Committee

The SWFSC will consist of membership as defined below:

- 1 Person representing environmental concerns
- 1 Person representing the County Soil Conservation Service
- 1 Person representing the County Board of Public Works, Drain Commissioner or Equivalent
- 1 Person representing the County Planning Commission
- 1 Person representing the County Road Commission
- 1 Person representing the Regional Solid Waste Planning Agency
- 2 Persons representing the municipality in which the facility site is proposed including the chief elected official or designee
- 2 Persons from any municipality located within three (3) miles of the active work area of the proposed site including the chief elected official or designee, and another representative from that municipality. Only one (1) of these persons will be a voting member, the other will be an ex-officio member. In the event that more than one municipality is located within three (3) miles of the active work area of the proposed site, then these municipalities will together choose only one person to be a voting member to represent these municipalities, and each municipality will designate one (1) ex-officio member.

The representatives from the County Road Commission and from the local municipality(s) will be selected by that agency and government(s), respectively. The names of the selected individuals will be submitted to the County Board for confirmation of appointment. All other members of the SWFSC will be appointed by the County Board.

The County Board or designee shall call for the first meeting of the SWFSC and, upon election of the Chairperson, the Chair shall officially convene each meeting of the SWFSC.

The SWFSC will be dissolved when either the Application is deemed inconsistent with the Plan, or 10 days after the Michigan DEQ issues an Operating License to the Applicant.

Attachment B to Plan Siting Mechanism
Minimum Standard Siting Criteria

Minimum Standard Siting Criteria are considered minimum standards that any proposed facility must meet. Each criterion listed below must be answered in the affirmative in order for a facility to fulfill the Minimum Standard Siting Criteria requirements. Detailed descriptions of each criteria follow the yes/no checklist below.

MINIMUM STANDARD SITING CRITERIA EVALUATION CHECKLIST

	YES	NO	CRITERION (See detailed descriptions following checklist)
A			Site Ownership
B			Frontage on Appropriate Roads
C			Distance from Wetlands
D			Distance from Farmland and Open Space Part 361 NREPA Lands
E			Distance from Designated Historic Sites
F			Distance from 100 Year Flood Plains
G			Distance from Designated Wellhead Protection Zones
H			Distance from Water, Beaches, Utility Easements, Public Right of Way
I			Distance from Water Well Serving a Dwelling
J			Distance from Specified Building Types
K			Distance from Land Conservancy Parcels
L			Distance from Schools and Educational Establishments
M			Distance from Certain Recreational Facilities
N			Distance from MDEQ Natural Features Inventory Lands
O			Distance from Specified Types of Natural Resource Lands
P			Distance from Certain Additional Recreational Lands
Q			Distance from a Licensed Public Use Runway
R			Design Incorporates Certain Setback Requirements w/Signed Statement
S			Analysis Submitted Documenting Availability of Required Public Services
T			Signed Statement to Abide by Certain Regulatory Requirements
U			Written Agreement to Abide by Certain Non-locational Zoning Requirements

PRIMARY SITING CRITERIA DETAILED DESCRIPTIONS

A. The site and respective parcel must be owned by the applicant or under long term lease (20 years or greater) from a state agency.

B. The proposed site has frontage on or direct access to a paved county primary road or state trunk line which is designed to handle the type and volume of additional traffic associated with the facility.

RETURN TO APPROVAL LETTER

C. No part of the site and respective parcel(s) is located within or less than 2,640 feet from a regulated wetland as defined by Part 303 of P.A. 451 of 1994, as amended (being the Wetlands part of the Michigan NREPA, M.C.L. 324.30301 *et. seq.*) or local wetland ordinance.

D. No part of the site and respective parcel(s) is located within or less than 2,640 feet from land enrolled under the Farmland and Open Space Preservation Act, 1974, Part 361 of NREPA.

E. No part of the site and respective parcel(s) is located within or less than 2,640 feet from land that is a designated historic or archaeological area as defined by the State Historic Preservation Officer (SHPO) or by local historic preservation districts.

F. No part of the site and respective parcel(s) is located within or less than 2,640 feet from one hundred year flood plains (as identified by Michigan DNR flood plain maps and as defined in the Part 115 Administrative Rules).

G. No part of the site and respective parcel(s) is located within or less than 2,640 feet from the boundary edge of a Wellhead Protection Zone established around municipal Type I public water supplies as created pursuant to a Wellhead Protection Program established, or being established under Michigan Wellhead Protection guidelines unless the disposal area to be located on the site and respect parcel(s) is a Solid Waste Transfer Station.

H. No part of the site and respective parcel(s) is located within or less than 2,640 feet from the boundary edge of:

1. Any surface water;
2. Beach contiguous to a lake or stream;
3. Existing public utility easements; and
4. Existing public rights-of-way.

I. No part of the site and respective parcel(s) is located within or less than 2,640 feet from a water well which services a dwelling (which is drilled by a licensed well driller and a well log is filed with the Geological Survey Division of the DEQ and district Health Department) in existence on the date the disposal area application was found complete.

J. No part of the site and respective parcel(s) is located within or less than 2,640 feet from dwellings, duplexes, apartment buildings, hospital, medical care facilities and foster care facilities in existence on the date the disposal area application was found complete.

K. No part of the site and respective parcel(s) is located within or less than 2,640 feet from lands which are held by a land conservancy or which have development restrictions held by a land conservancy, either of which were in existence on the date the disposal area application was found complete.

L. No part of the site and respective parcel(s) is located less than 2,640 feet from the boundary edge of schools and education establishments in existence on the date the disposal area application was found complete.

M. No part of the site and respective parcel(s) is located less than 2,640 feet from the boundary edge of certain recreation facilities:

1. Snowmobile and all terrain vehicle trails which are marked and signed and receive care, grooming with public funds;
2. Horse, bicycle, hiking and ski trails which are marked and signed and receive care, grooming with public funds;
3. Abandoned rail road right-of-ways when owned by a railroad company or a public agency;
4. The parcel boundary of state game area;
5. The parcel boundary of municipal and county parks with recreation facility improvements;

6. A national park or recreation area designated by the U.S. Department of Interior;
7. A national scenic river designated by the U.S. Department of Interior; and
8. A special interest area as designated by the U.S. Forest Service.

N. No part of the site and respective parcel(s) is located within or less than 2,640 feet from land listed on the MDNR Natural Features Inventory, as determined by the MDNR through the Environmental Review process for compliance with Act 365, Endangered Species Protection, of the NREPA as amended.

O. No part of the site and respective parcel(s) is located within or less than 2,640 feet from land regulated under parts 351 through 361 of P.A. 451 of 1994, as amended (being the Wilderness and Natural Areas, Sand Dunes, Biological Diversity, Natural Beauty Roads, Sanctuaries, Farmland and Open Space preservation part of the Michigan NREPA, M.C.L. 324.35101 *et. seq.* through 324.35101 *et. seq.*) and part 511 of P.A. 451 of 1994, as amended (being the Commercial Forests part of the Michigan NREPA, M.C.L. 324.51101 *et seq.*).

P. No part of the site and respective parcel(s) is located less than 5,280 feet from the boundary edge of certain recreation lands:

1. The parcel boundary of a state park;
2. The licensed area of public and private campgrounds licensed by the District Health Department;
3. The parcel boundary of day, summer and retreat camps;
4. Federally designated wild and scenic river corridors;
5. State designated natural river's water's edge; and
6. The parcel boundary of arboretums, sanctuaries established under statute.

Q. No part of the site and respective parcel(s) is located less than 10,000 feet from the boundary edge of a licensed public use airport runway(s), unless the proposed facility is only an enclosed solid waste transfer station or processing facility disposal area.

R. Applicant's Proposal demonstrates that the facility as designed and constructed will incorporate the following setback, buffering, screening and service access requirements and includes a written and signed statement from the Applicant indicating that they will abide by and remain in compliance with these requirements at all times.

1: For facilities which are landfill disposal areas or landfill disposal area expansions, vegetation belt, buffer, screening and service access area shall meet standards which are not less than:

a: Vegetation Belt: A vegetation belt of 100 feet from the parcel line toward the center of the parcel will be maintained in natural vegetation to provide visual screening from roads and adjacent property. The vegetation belt will not include any improvements, buildings, fences, except for an entrance drive(s), utilities and identification signs.

i: If the site, prior to the date of application, has mature forest cover it will be maintained within this vegetation belt except for the entrance drive, utilities.

ii: If the site, prior to the date of application, does not have mature forest cover, or mature forest cover is lost at any time during the operation of the facility, then the mature forest will be established by planting a variety of native forest species under consultation of a professional forester. The planting will be designed with use of appropriate species to have fast maturing trees to have a mature forest as soon as possible and species which will be mature trees with a long life span.

iii: The mature forest cover will be maintained by the landfill operator and will not be removed.

b: Buffers: Toward the center of the landfill property, but not within the 100 foot vegetation belt, a buffer shall be established which will include an earth berm. The berm shall:

i: Be eight (8) feet, or more, higher than the original grade within the buffer area, and

ii: Not be sloped greater than one (1) unit vertical for each of the same two (2) units horizontal.

iii: Be covered with a healthy grass, lawn, ground cover or other indigenous vegetation.

c: Service Access Area: Toward the center of the Landfill property, but not within the 100 foot vegetation belt, or buffer will be established a minimum of a ten (10) foot wide service access area maintained between the berm and nearest edge of the landfill's active fill area.

2: For facilities which are not landfill disposal areas, vegetation belt, buffer, screening and service access area shall meet standards which are not less than:

a: Vegetation Belt: A vegetation belt of five (5) feet from the parcel line toward the center of the parcel will be maintained in woody plant vegetation to provide visual screening from roads and adjacent property. The vegetation belt will not include any improvements, buildings or fences except for an entrance drive(s), utilities and identification signs.

b: Buffers: Measuring toward the center of the disposal area property, but not within the 5 foot vegetation belt, a buffer shall be established which:

i: Shall not be occupied by any structure, storage of equipment, materials, operations, or be similarly activities;

ii: Shall consist of the following for any side of the parcel that is adjacent to a industrial or commercial zoned area:
- a buffer area setback of fifty (50) feet, or
- a berm four (4) feet, or more high not sloped greater than (1) vertical for each of the same two units horizontal, or
- a solid wall four (4) feet, or more, in height, or
- a proportionately adjusted combination of the above.

ii: Shall consist of the following for any side of the parcel that is adjacent to all other uses:
- a buffer area setback of one hundred (100) feet, or
- a buffer area setback of fifty (50) feet followed by a berm four (4) feet, or more high not sloped greater than (1) vertical for each of the same two units horizontal, or
- a buffer area setback of twenty-five (25) feet followed by a solid wall four (4) feet, or more, in height.

c: No Service Access Area is required.

S. An analysis has been submitted that defines the public services which are required by the solid waste disposal area, that inventories existing public services (fire protection, sewer, water, sanitation, County emergency services/response, and utilities including gas, electric, telephone) available at the site boundaries and that documents that the existing public services are the same as or exceed the public services required by the solid waste disposal area.

T. Applicant has submitted a written and signed statement that the disposal area will abide by and remain in compliance with any applicable part of the Michigan Subdivision Control Act; Michigan Soil Erosion and Sedimentation Control Act; Michigan Construction Code; applicable state air and water pollution standards; local wellhead protection ordinances, applicable building codes, state and local health codes, local noise ordinances and local junk ordinances as determined with the advice of appropriate state and local officials and as specified in Section III of the Solid Waste Plan, Local Ordinances and Regulations.

U. Applicant has submitted a written and signed statement that the disposal area will abide by and remain in compliance with any applicable part of the respective zoning ordinance's regulations dealing with: parcel size, road frontage, setback requirements, buffering and screening, off street parking, signs, as specified in Section III of the Solid Waste Plan,

SELECTED SYSTEM

Local Ordinances and Regulations but not subject to zoning regulation of location of a solid waste disposal area as a land use

III-10 SOLID WASTE MANAGEMENT COMPONENTS

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

NEEDS OF THE CURRENT MANAGEMENT SYSTEM

There are two principal gaps that need to be addressed in developing a management component capable of funding the selected alternative.

1) Setting up a funding mechanism in the selected system is a critical element of the necessary management component. This is especially critical given the need for facilities to be open to all haulers and recycling collectors in the region "on the same terms" (i.e.: all users pay the same rates and have the same access).

2) Setting up a funding mechanism for "value added" programs is a critical element of the necessary management component. The "value added" programs are the services and program functions that are difficult to link to a particular user under a typical system and include household hazardous waste services, overall education/promotion of the programs, drop-off recycling programs, overall program management, planning and development costs, selected program capital and operating costs and other services as deemed necessary.

The Management Components that are authorized by this Plan include all organizational mechanisms deemed necessary to enable the above two funding mechanisms to work.

BUILDING ON CURRENT MANAGEMENT SYSTEM

Some key components of the organizational and management structure will need to be put in place as required to develop a suitable funding mechanism to implement the selected alternative.

The capital and operational funding required to implement the planned programs can build on some of the current structure that is already in place with some key modifications that are needed. These include:

A: User fees will continue to be the backbone of the Plan's Management Component funding system, as they are right now, with the majority of value added system costs folded into the user fee rate structures that are charged for waste as it moves from point of generation, through to disposal and or recovery. Specifically:

1: ***at point of waste generation*** the current practice of a resident or business paying a monthly or quarterly fee for their solid waste management services will continue with the following enhancements: 1) continued effort to make sure that the fee structures include "pay as you throw" (PAYT) features that result in the generator incurring additional costs as volumes of solid waste increase, 2) costs for residential curbside and/or commercial recycling collection (e.g. OCC) will be bundled into the monthly or quarterly fee, and 3) the fee will be a single fee for solid waste, recycling and yard waste collection. The service provider's costs for the total service package (solid waste collection/processing as well as recycling collection/disposal) must be reasonable, but the generator must also have a financial incentive to use the recycling systems as much as possible.

2: ***at point of transfer/disposal*** the user fee paid for tipping at any disposal facility operating within the County (i.e.: the Transfer Station tip fee) will have two key features that will encourage healthy competition and provide funds for system development and operation:

First, in order to support healthy competition, there will be a published tipping fee rate at the facility that is competitive in the regional marketplace and that is available to any generator or hauler that wants to provide solid waste collection services in the County. The rate may be tiered to acknowledge that a larger volume user (e.g. a major industry) will get some price advantages.

However, a major hauler will have to pay this published rate, even if it is the same company that has some involvement in ownership/operation of these facilities. If this is not acceptable to this type of operator then ownership of transfer/disposal facilities will be limited to an independent operator or a public/quasi public agency (e.g. solid waste authority) The County will negotiate a long term multi-year agreement for a published rate structure and have those rates be available to all companies that are authorized to provide collection services in the County

Secondly, in order to make funds available for other system costs, the published rate will include a percentage or fixed per cubic yard or per ton amount that is set aside for system costs. This amount, which will need to be determined based on the specifics of the planned program and the mix of funding sources, will be deposited into a system enterprise fund and be managed by the County's Plan Implementation Agency or designee. It will then be used for funding some operating costs (e.g. recycling drop-off system collection/processing, household hazardous waste collection program, education/promotion) and some capital costs (e.g. specific amount set aside to assist with debt service on required facilities).

3: ***at point of recycling processing*** there will be a user fee paid for tipping at the recycling processing facility (i.e.: the recycling tip fee) that will have two key features - providing a needed revenue stream and providing an incentive for diverting materials:

First, information on processing costs (including both operating and capitalized debt retirement) for the recycling facility will be publicly available and these costs (budgeted and actuals) will form the basis for a published tipping fee rate that is charged to any generator or hauler that is authorized to provide recycling services in the county (or region). The County will negotiate a long term multi-year agreement for this published rate structure including rules on how costs are accounted for in establishing the rate structure. Recyclables collected at residential curbside, at commercial locations, or through recycling drop-offs will all be charged the published rates based on the type of material delivered.

Secondly, the revenue received from markets for these recyclable materials (net of any transportation costs to get the material to markets) will also be a matter of public record and these funds will be tracked and deposited into the same system enterprise fund or a similar system account that the transfer/disposal fees are deposited into -- managed by the County's Plan Implementation Agency or designee. These revenues will then be distributed in ways that encourage community oriented recycling programming, modeled after some of the types of successful volunteer incentives demonstrated elsewhere in the region.

4: ***at point of yard waste processing*** there will be a user fee paid for tipping at a yard waste composting site(s) (i.e.: the composting tip fee) that will have two key features - providing a needed revenue stream and providing an incentive for diverting materials:

First, as with recycling processing, the compost processing costs (including both operating and capitalized debt retirement if any) for the composting operations will be publicly available and these costs (budgeted and actuals) will form the basis for a published tipping fee rate that is available to any generator or hauler that is authorized to provide yard waste collection services in the county (or region). Yard waste collected at residential curbside, by landscape firms, or through other yard waste drop-offs will all be charged the published rates based on the type of material delivered (leaves, brush, etc.).

Secondly, yard waste products will be sold and some portion of the soil amendment, mulches, etc. may be made available at no or low cost for community beautification efforts by area municipalities, parks, residents, etc. Rules will be established to limit quantities to any one party in order to assure that material is available to all users and is fairly distributed based on contributed volumes of incoming material.

Where applicable, the County's Solid Waste Management System ordinance, intergovernmental agreements and administrative rules, along with commercial contracting mechanisms (service agreements along with hauler licensing agreements and designated facility agreements) will be used to establish the conditions described above.

B: A supporting network of service contracts will be used to consolidate a critical mass of residential and commercial customers into larger buyer groups, taking advantage of the contracting and

franchising provisions in Michigan municipal solid waste law to direct waste and recyclables to specific facilities and to specify the terms under which those services will be provided. These contracting arrangements will be structured to be compatible with and supportive of the County's Solid Waste Management System ordinance, intergovernmental agreements and administrative rules.

These arrangements for contracting or franchising services will be structured to introducing more competition into the marketplace as a means to reduce costs and control costs for solid waste services and as a means to guarantee provision of recycling services. The participants in the County's Solid Waste Management System ordinance, intergovernmental agreements and administrative rules will authorize the County to take steps as needed to establish service categories, define specific service requirements, mark out geographic service zones and assist in coordinating purchase of solid waste and recycling services together from private sector service providers. Longer term contracts are authorized to be used to enable the service provider to deliver more services at lower pricing and to enable private and non-profit entities to seek any required bank financing for their capital equipment, providing a valuable source of capital for financing system equipment purchases.

C: A parallel revenue generating system will also be developed that provides for an additional funding source in order to address strategic capital requirements for the system (e.g. development of recycling capacity and solid waste transfer capacity) and to develop a mechanism for further strengthening the County's Solid Waste Management System ordinance, intergovernmental agreements and administrative rules. Six potential mechanisms that will be considered as acceptable for this parallel revenue generating system are 1) licensed haulers paying a per customer user fee each month as a condition of their hauler licensing agreement (solid waste volume handled being an alternate approach); 2) setting up a user fee assessment through the provisions of the state statute that authorizes powers of a County public works program, 3) the use of P.A. 138 funding mechanism (although that is limited to residential households, unlike the first two which can be applied to all sectors), 4) a regional landfill tip fee surcharge should such a system ever be developed, 5) potential revenue from sale of recycled materials (see D below), or 6) other funding sources as the County may deem appropriate.

The fund that these fees accumulate to will be set up as a revenue fund in which sources of funds will be deposited. The fund will have rules directing its use solely for implementation of the Plan's Selected Alternative and specifically directed at those program costs that are difficult to fund through other means. This includes the Drop-off recycling system, other recycling collection and processing services, education/promotion of reduce/reuse/recycle, the household hazardous waste program, and similar components of the Plan's Selected Alternative. The fund will have a well recognized name, (e.g. County's Solid Waste and Recycling Enterprise Fund), include an independent annual audit and a regular reporting (annual at minimum) to participants and to the community of sources and uses of the fund.

D. One of these sources of revenue that will be deposited into the fund should be revenue received from recycled materials that are collected in some parts of system. Arrangements for drop-off recycling services will be set up so that costs of providing the service are paid to the service provider out of the fund and that some portion of the revenue that the processor gets for marketing the material will be returned to the County's Solid Waste and Recycling Enterprise Fund. These additional revenues will then be distributed in ways that encourage community oriented recycling programming, modeled after a successful approach that is used by the Lakeshore Industries recycling drop-off system serving Manistee and Benzie Counties.

E: Leveraging of contributed resources will be encouraged in order to reduce program budget requirements. The best model of this is again the Lakeshore Industries recycling drop-off system serving Manistee and Benzie Counties which benefits from donated funds, equipment, services and labor in order to lower capital and operating costs. These approaches will be used to build the perception for residents and businesses that the "community recycling program" is theirs - run for their benefit and for an improved quality of life and better business climate. Public and private service agencies as well as school groups will be brought involved as much as practical.

F: Private bank financing will be expected to be available for capital improvements made by private companies and non-profits that are involved in the system -- supported by the contracting

framework described above with long contract timelines, sufficient funds and suitable allocation of risk.

G: Agency funds from public entities will be an important part of the mix of operating and capital funding that are needed to sustain the system. These funds will be part of ongoing operational cost areas that are already part of municipal budgets. In addition, these agency funds will be used to assist in part with capital requirements for some of the projects.

H: Bond financing may be a funding mechanism that is used depending on how the overall system is structured and the level of involvement by the county and/or area municipalities.

I: Further steps should be taken to access the fundraising power of private giving and foundations to build off the good will that private donors are ready to contribute to recycling and the environment. A "friends of Kalkaska County recycling" will be created to leverage additional private donations from individuals, estates, foundations as well as corporations and other granting agencies that can strengthen the overall program across the County. These efforts will be used to provide support for education and promotion of clean community initiatives, reduce/reuse/recycle programming and capital funds for informational exhibits, displays, educational facilities and school programs. It will also be used as a tool for channeling volunteer time and overall community good-will to assure that funds are available to cover costs of quality programming that is supported by the public.

FURTHER DEVELOPMENT OF THE MANAGEMENT COMPONENT

Further development of the Plan's Management Component is provided for as part of the Plan as deemed necessary to enable the two funding mechanisms to work that were referenced earlier in this section. These developments may take a number of forms and will only be initiated after an evaluation of the required steps that must be taken to build on the strength of the current system already in place. Every effort will be made during further development of the Management Component, to build a system that is supportive of and enables development of similar services and management capabilities throughout the region out-of-county.

These include:

- The county will need to further establish the role of a designated implementation agency with necessary staffing/administrative capability to reach project goals.
- An oversight committee will be needed that has the endorsement of the key stakeholders and that provides a mechanism for community input into the system.
- A legal/ordinance framework will be needed that will help establish necessary controls for the funding mechanisms and the delegation of authority.
- Contracts between the various participants in the system will be needed that will specify services, exchange of resources, etc.

These steps that need to be taken are deemed to be consistent with the Plan and are authorized as the basis for further development of the Plan's Management Component with all the assignment of powers able to be provided for by the Plan.

In evaluating options and making final decisions, the County has the Plan's authorization to take whatever steps required to strengthen the basic Management Component required for the selected alternative, both organizationally and legally. These steps are expected to follow some, if not all, of the following more detailed description of a management system that will provide for a method of funding the Selected Alternative.

A: The Solid Waste and Recycling Office of Kalkaska County is established in this Plan as the "designated implementation agency" to take responsibility for necessary program development through public and private sector channels, working with the Solid Waste and Recycling Council (see below) and key stakeholders on the implementation process. The Office will be provided with continued staffing, supporting technical resources as well as a budget and all required delegated responsibilities in order to accomplish its task. Where appropriate, every effort will be

made to link this implementation capability with other regional efforts out-of-county. As well, other alternate approaches for implementation will be allowed for should they be determined to be necessary including 1) a Department of Public Works, 2) a multi-governmental Authority organized as provided for in Michigan law; 3) a quasi-governmental consortium with staff provided by its member agencies (County and Cities); 4) a newly created non-profit agency; 5) an existing non-profit agency, or 6) contracting with a service provider.

B: Establish a Solid Waste and Recycling Council as an advisory committee to the Board that would function as the Plan's "implementation oversight committee" assigned the responsibility to facilitate program development through public and private sector channels, advising the County Board of Commissioners and key stakeholders on the implementation process. The Council will serve as the focal point for encouraging intergovernmental cooperation, regional collaboration and private sector participation as well as involving the local business sector and community groups.

C: Development of a comprehensive "Implementation Action Plan" covering all aspects of Solid Waste Plan program implementation, where specific milestones will be identified for the coming years -- serving as a road map to guide the Solid Waste and Recycling Council and the Solid Waste and Recycling Office of Kalkaska County. This action plan will have a strong emphasis on "planning to plan" in order to define required decisions, important decision factors, and expected timing/outcomes. The action plan format will also provide for a means to be updated on a regular basis based on monitoring of progress towards plan goals and targeted diversion rates and a mechanism for feeding these updates into the ordinance/contract structure should they need to be changed.

D: Development and adoption of intergovernmental contracts between the County and participating local units of government that would activate required funding mechanisms and take additional steps to assign certain powers and responsibilities to the County and local units of government for coordinating programs funded by fees that are raised. This will require creation of an ordinance and administrative rules that coordinate the responsibilities delegated by the local units to the county. This will structure the basic framework of the solid waste and recycling system for the County and link it to the funding mechanism. A negotiation process will be initiated with communities in the County to identify and resolve specific issues that need to be addressed before the communities are expected to sign the intergovernmental agreements. These communities as well as other key parties affected by the planned programs will be asked to participate in discussions on implementation details, scheduling and coordination issues. This process will include discussions and decisions about the various roles to be played by the public and private sectors in system implementation. The resulting recommendations will then be incorporated into the Implementation Action Plan and the Plan Management Component legal/financing mechanisms to the degree that they support implementation of the Plan's selected alternative. This process will involve negotiations with nearby counties interested in working with the County on various program areas (e.g. recycling processing and landfill capacity) so that these details can be worked out and incorporated into the Action Plan.

E: System improvements, new services, required contract/licensing structures and processing facility expansions will be further detailed, incorporated into the Implementation Action Plan and then implemented. The implementation is expected to be handled by private and/or non-profit or other governmental agencies with service contracts being the principal means to define expected performance and the necessary flow of funds. In addition to developing the intergovernmental contract, County Ordinance and the hauler licensing and facility designation contracts, it is expected that service contracts will be needed for any recommended service zones or franchise arrangements. Other contracts will be needed for purchased services such as the upgraded household hazardous waste program as well as other program components.

F: Upon implementation progress will be tracked through methodical data compilation and analysis in order to measure, on an annual basis, overall waste generation, reduction and recycling, benchmark performance against goals, and target future implementation planning. Regular updates of system performance and new goals will be incorporated into the continuously updated Implementation Action Plan as they develop.

III-11 IDENTIFICATION OF RESPONSIBLE PARTIES

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

Kalkaska County Board of Commissioners: The County Board is responsible for the overall supervision of the solid waste management system for the county acting through its Solid Waste Management Planning Committee, Solid Waste and Recycling Council and the Solid Waste and Recycling Office of Kalkaska County.

Solid Waste Management Planning Committee (SWMPC): The Kalkaska County SWMPC is responsible for updating the County five-year and 10-year Solid Waste Management Plan, as is the purpose of this report. The SWMPC is also responsible to the County Board to assist in the approval process of the plan. Some portion or all of the SWMPC may also function as the Solid Waste and Recycling Council (see below).

Solid Waste and Recycling Council: This entity shall be appointed by the Board of Commissioners and shall serve as the Plan Implementation Advisory Committee for the Solid Waste and Recycling Office of Kalkaska County (see below).

Solid Waste and Recycling Office of Kalkaska County: This entity shall be created by the Board of Commissioners to serve as the Designated Plan Implementation Agency reporting to the Solid Waste and Recycling Council and responsible for implementing the Plan's Selected Alternative, Management Component and Enforcement Mechanisms.

Municipal and Township Governments: All local units of government will be asked to participate in the development of the County's Solid Waste Management System Ordinance, Intergovernmental Agreements and Administrative Rules and to work with the County to implement the Plan's Selected Alternative, Management Component and Enforcement Mechanisms.

Private Solid Waste Haulers: Private sector waste haulers will provide for collection of solid waste and management of certain facilities within the structure of the County's Solid Waste Management System Ordinance, Intergovernmental Agreements and Administrative Rules.

The following lists which entities within the County will have management responsibilities over various areas of the Plan:

Resource Conservation:	**Responsible Parties**
Source or Waste Reduction -	Designated Plan Implementation Agency (DPIA) and area user/producers
Product Reuse -	DPIA and area user/producers
Reduced Material Volume -	DPIA and area user/producers
Increased Product Lifetime -	DPIA and area user/producers
Decreased Consumption -	DPIA and area user/producers
Resource Recovery Programs	**Responsible Parties**
Composting -	DPIA and area user/producers
Recycling -	DPIA and area user/producers
Energy Production -	not applicable
Volume Reduction Techniques:	DPIA and area user/producerss
Collection Processes:	DPIA and area user/producers
Transportation:	Private waste haulers and other system participants
Disposal Areas:	
Processing Plants	Private waste haulers
Incineration -	n/a
Transfer Stations -	DPIA and private sector firms
Sanitary Landfills -	Private waste companies

SELECTED SYSTEM

Ultimate Disposal Area Uses:	Designated Plan Implementation Agency
Local Responsibility for Plan Update Monitoring & Enforcement:	DPIA and area user/producers
Educational and Informational Programs:	DPIA and area user/producers

Documentation of acceptance of responsibilities is contained in Appendix D.

III-12 LOCAL ORDINANCES AND REGULATIONS AFFECTING SOLID WASTE DISPOSAL

_X__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.

There are two principal areas where the County's Solid Waste Management System is authorized to include ordinance provisions and appropriate rules and regulations. These are:

RETURN TO APPROVAL LETTER

A. Selected provisions of the Siting Mechanism contained in this Plan cover ancillary construction details and operational aspects of any permitted facility that is sited within the County. These provisions are considered to be consistent with the Plan and are enabled and authorized by the Plan including any ordinance and related rules and regulations required to implement them which may be adopted and implemented by the appropriate governmental unit without additional authorization from, or formal amendment to, the Solid Waste Management Plan. These include and are limited to the following:

a. Certain ancillary construction details,

b. Hours of operation,

c. Noise, litter, odor and dust controls as well as other site nuisances,

d. Operating records and reports,

e. Facility security and safety,

f. Monitoring requirements for wastes accepted, banned or prohibited, and

g. Volume reduction, recycling and composting requirements.

B. The Plan's Enforceable Program and Process, including the Authorized Management Component, the Authorized Export conditions, and the Plan's authorized Ordinance provisions, will be carried out through the County's system of intergovernmental contracts and ordinances, its administrative rules and regulations and a supporting hauler licensing, facility designation agreements and service contracts and system procurement provisions. These provisions and mechanisms are considered to be consistent with the Plan's Enforceable Program, including any further amendments to ordinances and related rules and regulations, as required to implement the Plan's Enforceable Program which may be adopted and implemented by the appropriate governmental unit without additional authorization from, or formal amendment to, the Solid Waste Management Plan, except that such amendments shall not exceed the authority provided for in Part 115 of NREPA with regards to the location of disposal areas.

N.A.__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:

_X__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 meeting these qualifications may be adopted and implemented by the appropriate governmental unit without additional authorization from, or formal amendment to, the Solid Waste Management Plan. Allowable areas of local regulation, beyond those specified elsewhere in this document, include:

RETURN TO APPROVAL LETTER

a. Certain ancillary construction details,
b. Hours of operation,
c. Noise, litter, odor and dust controls as well as other site nuisances,
d. Operating records and reports,
e. Facility security and safety,
f. Monitoring requirements for wastes accepted, banned or prohibited, and
g. Volume reduction, recycling and composting requirements.

III-13 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.

____X____ 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:

The table below identifies landfill disposal areas, their expected life, historical usage rates, and supporting analysis that demonstrates that the County will have more than ten years of disposal capacity for the duration of the ten year planning period. These facilities have all been included in the Plan and appropriate export arrangements made.

Identified Disposal Area Capacity	Available Air Space (Gate CY)	Gate CY Delivered 1995/96	Landfill Life (in yrs) Based on 1995/96 Delivery Rates	Landfill Life (in yrs) Based on 1995/96 Rates w/2% Growth
Manistee (Allied)	7,000,000	151,083	74	60
Glen's (WMI)	22,000,000	278,469	126	102
Cedar Ridge (WMI)	370,000	279,593	2	2
Ken's (WMI)	140,000	77,020	3	2
Wexford	2,000,000	215,027	15	12
CES Waters (WMI)	8,200,000	217,314	60	49
TOTAL	39,710,000	1,218,506	52	42

The calculations of landfill life assume that 20% of available air space is lost to cover and liner components and that gate cubic yards to in-place compaction is 50%. Available air space and delivery rates are based on information provided by landfills either to the State of Michigan or directly to Resource Recycling Systems, Inc.. Available air space for Manistee (Allied) was estimated based on the site that is currently approved in the County Plan and assuming approximately 2 million cubic yards per 40 acres with 2 million cubic yards for overfill, minus 1 million cubic yards for existing filled space.

A demonstration of available capacity for Kalkaska County's primary disposal needs is provided in the form of letters from landfills as shown in Attachment B

APPENDICES

APPENDIX A: ADDITIONAL INFORMATION REGARDING THE SELECTED SYSTEM

APPENDIX B: ADDITIONAL INFORMATION REGARDING THE NON-SELECTED SYSTEMS

APPENDIX C: PUBLIC PARTICIPATION AND APPROVAL

APPENDIX D: PLAN IMPLEMENTATION STRATEGY

APPENDIX A: ADDITIONAL INFORMATION REGARDING THE SELECTED SYSTEM

EVALUATION OF RECYCLING

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

DETAILED FEATURES OF RECYCLING AND COMPOSTING PROGRAMS:

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

The following table shows estimated waste composition and volumes by material type. Nearly all materials in the waste stream are available for recycling or composting, however, it is not at this time practical to recycle or compost the entire waste stream in Kalkaska County.

	Percent of Total Waste	1998 Tons	2003 Tons	2008 Tons
Generation Totals	100%	16,802	18,309	19,603
ONP	5%	919	1002	1072
Mixed Office	6%	943	1027	1100
OCC	19%	3244	3535	3785
Mixed Other Paper	8%	1396	1521	1629
All Metals	12%	1949	2124	2274
All Textiles	2%	365	397	425
All Glass	6%	926	1009	1080
All Plastic	7%	1235	1346	1441
All Yard Waste	15%	2461	2682	2872
Food Waste	10%	1633	1780	1905
Wood Waste	5%	756	824	882
Misc. Bio-degradable	4%	588	641	686
Misc. Non Bio-degradable	2%	386	421	451

Program Recovery Estimates (tons per year)

	1998	*2003*	*2008*
Drop-off system	40	336	561
Curbside recycling		20	30
Commercial recycling	90	1,040	1,683
Yard waste	40	200	250
Total Recovery	**170**	**1,596**	**2,525**

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

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.

The Selected System is intended to provide waste collection, recycling and composting opportunities throughout the County. Equipment and site selection is based on that intent and the desire for economical reliable services.

Existing Programs:

Drop-off recycling stations - Existing recycling opportunities are being phased out as part of USA Waste's consolidation.

Proposed Programs:

Drop-off recycling stations - Kalkaska County plans to add three recycling stations. Selection of equipment is expected to be provided by the service provider as specified by the County Implementation Committee.

Curbside Collections - Kalkaska County will depend on collectors/haulers to select and provide curbside collection equipment.

Commercial Collections - Commercial collections will be provided by private haulers. Haulers will select and provide equipment.

Composting - Composting efforts will be base on existing municipal equipment (loaders, dump trucks, etc.). Municipalities may provide containers or vehicles at drop-off stations to facilitate drop-off collection of yard debris.

Site Availability & Selection

Existing Programs:

No existing programs continue.

Proposed Programs:

Drop-offs - The County Commissioners will work with municipalities, businesses and potential service providers to select suitable drop-off sites.

Composting - Municipalities will identify suitable sites to receive and process yard wastes that are collected.

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.

Proposed Programs:

Proposed programs will be very low tech. Leaves will be piled in windrows and turned by loader. Municipalities may rent screening equipment when sufficient quantities of composted materials accumulate

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.

Implementation of the selected alternative will be completed in full compliance with the state and federal laws and in coordination with both local and regional public health, planning and environmental agencies. Section III of the Plan provides detail on the Management Component of the Plan as well as Ordinances and Siting Requirements.

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	Estimated Costs	Potential Funding Sources
Clean Community:		
Solid Waste Collection	No estimate	Customer contract payments
Spring/fall Cleanup	No estimate	Local governmental unit
HHHW	$10,800-16,000/yr $35,000 capital	System Enterprise Fund
Adopt a _____ programs	No budget	Volunteer efforts
Recycling Incentives:		
Promotion and Education	$10-20,000/yr	System Enterprise Fund/private sector
Pay as You Throw	Approx. $1-1.50/bag	Paid by users
Residential Recycling:	(collection and processing)	
Drop-offs	$25-42,000/year (operating) $18,000 (capital)	System Enterprise Fund w/private, public partnerships
Super Drop-off (after 2003)	$52,500/yr (operating) $36,-54,000 (capital)	Same as above
Subscription Curbside	$6/hhld/mo	Paid by users
Yard Waste Recovery:		
Yard Waste Drop-off Sites	$3,000/yr	System Enterprise Fund with other public sector partners
Fall Leaf collection	$15,000/yr	Municipalities
Alternative Seasonal Collection	$1-2/bag	User fees
Commercial Recycling:	(collection and processing)	
Commercial Corrugated Routes	$51,000	User contract fees
Other Commercial Recycling	$variable	User contract fees
Compost Processing:		
Yard Waste Processing	included in programs above	Municipal operations
Solid Waste Transfer:		
Existing Transfer	varies	Tipping fees
Future Transfer	to be determined	Tipping fees
Management Arrangements	Included in above programs	System Enterprise Fund

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:

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.

Kalkaska County Selected System
Expanded Clean Community & Recycling Program

ADVANTAGES:

1. Clean community and education/promotion create stronger interest in responsible practices
2. Illegal dumping activity minimized
3. Most small quantity unregulated hazardous wastes diverted from landfill disposal (Phase II)
4. Recycling/composting starts to become the dominant method of waste management (Phase II)
5. Organics management system is an effective alternative to landfilling
6. Source reduction impact will be observed both residential and commercial
7. Diversion through recycling/composting likely in the 13% +/- range (8% Phase I)

DISADVANTAGES:

1. Small quantity unregulated hazardous wastes still end up in landfills (Phase I)
2. Landfilling still dominant form of waste management
3. System costs may not yet be optimized despite increased recovery
4. System costs increase ($2.00 to $5.00 per capita per year as general estimate)

APPENDIX B: 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.

SYSTEM COMPONENTS:

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

Kalkaska County evaluated waste management components on a continuum that was defined by the following level of recovery and complexity of programs:

A: Basic Waste Collection and Disposal Program
B: Level 1 Basic Clean Community and Drop-Off Recycling Program
C: Level 2 Expanded Clean Community and Drop-Off Recycling Program
D: Level 3 Expanded Clean Community and Curbside Recycling Program
E: Level 4 Expanded Clean Community and Comprehensive Recycling Program
F: Level 5 Advanced Recovery Systems

Each major level included a relative service level in the following programs:

I: Clean Community Programs
Residential & Commercial Solid Waste Collection at Curb
Spring /Fall Cleanup Days
Illegal Dumping Enforcement
Adopt a "_____" program
Household Hazardous Waste Program
Agricultural and Small Quantity Hazardous Waste Programs

II: Recycling Incentive Programs
Education
Promotion
Pay as You Throw (PAYT)
Recycle More
Material Bans

III: Drop-off Residential Recycling Programs
Mobile Drop-offs - for Sorted Recyclables
Mobile Drop-offs - for Commingled Recyclables
Permanent Drop-offs for Sorted Recyclables
Permanent Drop-offs for Commingled Recyclables

IV: Curbside Residential Recycling Programs
Curbside Recycling - Sorted
Curbside Recycling - Commingled
Co-collection of Separated Recyclables and Solid Waste
Two or Three Stream "Wet/Dry" Collection
Co-collection of "Blue Bag" Recyclables and Solid Waste

V: Residential Yard Waste Composting Programs
Back Yard Composting Bin Distribution Programs
Mulching Mower Programs

Yard Waste Drop-off Stations
Curbside Yard Waste Collection
Fall Leaf Collection

VI: Commercial Recycling Programs
Waste Assessment Services
Drop-off Recycling Services - Sorted
Drop-off Recycling Services - Commingled
Commercial Recycling Collection - Sorted
Commercial Recycling Collection - Commingled

VII: Material Transfer and Processing Programs
Solid Waste Drop-off Sites
Solid Waste Drop-off and Recycling
Solid Waste Transfer Stations
Solid Waste Transfer Stations w/Recycling Drop-off and Processing Capabilities
Stand-Alone Recycling Processing Facilities (MRF)
Construction & Demolition Debris Processing Facility
Mixed Waste Recycling and Compost Processing Facility

VIII: Disposal Programs
Large Solid Waste Landfills in Region
Smaller Solid Waste Landfills Serving Counties
Transfer of Waste Out of Region
Municipal Solid Waste Incineration

Kalkaska County evaluated its current achievements and goals for improved future solid waste management against these benchmarks. Kalkaska County chose as a goal of the Solid Waste Plan to move toward the B to C level.

Programs of the Selected System were selected to be attainable from the existing county conditions.

Most programs were deemed impractical as explained below:

SYSTEM COMPONENTS:

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

RECYCLING INCENTIVES:

Recycle More
Material Bans
Kalkaska County lacks the infrastructure to implement these programs.

COLLECTION PROCESSES:

Back Yard Composting Bin Distribution Programs
Mulching Mower Programs
Curbside Yard Waste Collection
These programs may be considered in a future planning period. Kalkaska County has selected to put basic programs in place first.

Mobile Drop-offs - for Sorted Recyclables
Fixed drop-off stations were selected as more available than mobile drop-off stations

Co-collection of Separated Recyclables and Solid Waste
Two or Three Stream "Wet/Dry" Collection
Co-collection of "Blue Bag" Recyclables and Solid Waste
County-wide Curbside Collection of Recyclables
The above programs were deemed too costly to implement in the near future.

PROCESSING:
Solid Waste Transfer Stations w/Recycling Drop-off and Processing Capabilities
Stand-Alone Recycling Processing Facilities (MRF)
Construction & Demolition Debris Processing Facility
Mixed Waste Recycling and Compost Processing Facility
The county cannot support a processing facility based on existing waste volumes and resources.

DISPOSAL AREAS:
Large Solid Waste Landfills in Region
Smaller Solid Waste Landfills Serving Counties
Kalkaska County has adequate landfill capacity available through the Plum Valley Transfer Station and through landfills in nearby counties
Municipal Solid Waste Incineration
Adequate landfill capacity is available. Incineration provides no obvious advantages at significant capital risk.

In selecting a waste management system, Kalkaska County separated the system management and financial considerations from the cost/benefit evaluation of individual programs. Once it was decided that Kalkaska County would target a particular level of waste diversion, that disposal needs could be met, and programs that could cost effectively meet the goals had been selected, the management and finance system needs were tabulated and assessed.

Kalkaska County chose to continue using user fees and as the primary means to finance future programs, however will support initiation of new recycling programs with some dedicated county funds.

INSTITUTIONAL ARRANGEMENTS:

Kalkaska County has not recently operated a dedicated management structure for solid waste programs except as the Board of Commissioners deems necessary. This system will continue, with the establishment of an implementation committee designed to oversee implementation of the selected system.

While the Selected System does not specifically provide for other institutional arrangements, it does not prohibit future changes in the institutional arrangements. Examples of arrangements that have been considered but not specifically included are:

- Recyclables collection and processing contracts with neighboring counties
- Shared C&D processing facilities between counties

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. The Solid Waste Planning Committee met monthly throughout 1998, with primary discussions focusing on aspects of selecting a solid waste system.

ADVANTAGES/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.

Since the Selected System is a combination of the systems evaluated, the Non-Selected System can only be discussed as the components not selected. Much of this is described on the preceding pages. Kalkaska County has selected components addressing all of the considered program areas.

ADVANTAGES:

1. Some of the rejected programs would have offered the collection and processing of more material types:
Mixed Waste Recycling and Compost Processing Facility
Two or Three Stream "Wet/Dry" Collection

2. Others would have offered residents more convenient collection:
Co-collection of Separated Recyclables and Solid Waste
Co-collection of "Blue Bag" Recyclables and Solid Waste
Two or Three Stream "Wet/Dry" Collection

3. Others would have feed the County from dependence on out of county landfills:
Smaller Solid Waste Landfills Serving Counties
Municipal Solid Waste Incineration

DISADVANTAGES:

1. High cost
Mixed Waste Recycling and Compost Processing Facility
Two or Three Stream "Wet/Dry" Collection
Co-collection of Separated Recyclables and Solid Waste
Co-collection of "Blue Bag" Recyclables and Solid Waste
Smaller Solid Waste Landfills Serving Counties
Municipal Solid Waste Incineration

2. Not good match to seasonal nature of population
Mixed Waste Recycling and Compost Processing Facility
Two or Three Stream "Wet/Dry" Collection

3. Not perceived as acceptable options to public
Smaller Solid Waste Landfills Serving Counties
Municipal Solid Waste Incineration

APPENDIX C: 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.

PUBLIC INVOLVEMENT PROCESS:

Following is 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.

Kalkaska County's Solid Waste Planning Committee complied with all requirements for public participation and approval at all times and has filed all necessary documentation. Agendas were mailed to all committee members, and to the chief elected official of each city, township and village in the county ten days prior to each meeting, and to all persons/agencies requesting information on the solid waste planning process. All meetings were duly posted, and a public comment period was listed on each agenda.

The Plan for the public comment period was approved by a majority of the committee on October 21, 1998 and the Public Comment Period was initiated on November 15, 1998, and closed on April 21, 1999. The Public Hearing was held on April 14, 1999. The meeting was recorded, notes taken, and minutes were prepared and accepted by the Committee. The Public Hearing was announced in local newspapers as required. The Solid Waste Committee met on July 21, 1999 and approved the draft plan. The revised Plan was presented to the County Board of Commissioners on August 10, 1999, and approved by unanimous vote. The Plan was released for municipal approval the week of August 16, 1999. Resolutions approving the Plan were adopted by 2/3's of the Local Units of Government and are attached. The Plan was submitted to the Michigan DEQ for final approval on March 1, 2000.

PUBLIC COMMENT PERIOD INPUT:

Comments received from municipalities during the Public Comment Period were recorded in the Solid Waste Meeting Minutes of March 17, 1999 and April 15, 1999 and are kept on file at the County Clerk's Office. The significant comments involved changes to text to make sure that the Northern A-1 Sanitation and the Kal-Con/WellTec solid waste processing sites were correctly described in the plan. No other comments received required significant changes in the Plan. Changes were made to respond to comments received from the DEQ.

PLANNING COMMITTEE APPOINTMENT PROCEDURE:

Solid Waste Planning Committee members were nominated to and appointed by the Board of Commissioners to meet the requirements of Part 115 rules for representation. When members resigned, new members were sought and duly appointed.

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. Don Emerson, WellTec
2. Jesse Valentine, A&K Disposal
3. Bill Kiel, Plum Valley Transfer Station

4. ED ASCIONE, JR. NORTHERN A-1

One representative from an industrial waste generator:

1. JIM CAMPBELL, ALKEN ZIEGLER, INC.

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

1. Ann Custer
2. Dick Courson

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

1. James Green, County Commissioner

One representative from township government:

1. Gerald Gaultier (Chair), South Boardman Township

One representative from city government:

1. Tony Miller, Village of Kalkaska

One representative from the regional solid waste planning agency:

1. Marge McCully, NWM Council of Governments Solid Waste Committee

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

1. Jeanette Olmstead
2. George Nice
3. Frank Wright

APPENDIX D: Plan Implementation Strategy

The following discusses how the County intends to implement the plan and provides documentation of acceptance of responsibilities from all entities that will be performing a role in the Plan.

The County Board's adoption of the Plan is intended as a demonstration of the County's acceptance of responsibilities for implementing the Plan as follows:

This timetable is a guideline to implement components of the Plan's Enforceable Program. The Timeline gives a range of time in which the component will be implemented such as "1999-2000" or "On-going." Timelines may be adjusted later, if necessary.

Management Components	Timeline
1) Designate Solid Waste Plan Implementation Agency	1999
2) Designate Implementation Oversight Committee	1999
3) Develop/Adopt Implementation Action Plan	1999
4) Draft/Adopt Intergovernmental Agreements/Ordinance/Rules/Regs	1999
5) Preliminary Program Specifications for Planned Programs	1999
6) Establish Budgets for Planned Programs	1999
7) Finalize Funding Structure and Enforcement Mechanisms	1999
8) Contract for Recycling Processing Capacity	1999/2000
9) Initiate all Outreach/Education Programs	1999/2000
10) Procure all Other System Improvements	1999/2000
11) Final Implementation of Funding Mechanisms	1999/2000
12) Continued Evaluation of Role of Transfer Facility	2000-2008
13) Modify Role of Transfer Facility if Needed	2000-2008
14) Preliminary Program Specifications for Planned Ph II Programs	2002-2003
15) Establish Budgets for Planned Phase II Programs	2002-2003
16) Finalize Any Upgrades to Funding Structure and Mechanisms	2002-2003
17) Initiate all Phase II outreach/education programs	2003-2008
18) Procure all other Phase II system improvements	2003-2008
19) Data Tracking to Assess Program Performance	Annual/Ongoing
20) Update Implementation Action Plan	Annual/Ongoing

ATTACHMENTS

The following attachments are included as part of the Plan.

ATTACHMENT A: Resolutions - *NOT APPLICABLE*

The following are resolutions from County Board of Commissioners approving *municipality's* request to be included in an adjacent County's Plan.

ATTACHMENT B: Listed Capacity

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

ATTACHMENT C: Maps

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

ATTACHMENT D: Inter-County Agreements

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

ATTACHMENT E: Detailed population data

Detailed population data in chart form

ATTACHMENT F: Special Conditions

Special conditions to import and export of solid waste in addition to those related to Inter-County Agreements as provided for in Attachment D.

ATTACHMENT G: Kalkaska County Nuisance Ordinance

THIS PAGE INTENTIONALLY LEFT BLANK

ATTACHMENT A

RESOLUTIONS

(NOT APPLICABLE)

THIS PAGE INTENTIONALLY LEFT BLANK

KALKASKA COUNTY
BOARD OF COMMISSIONERS
AUGUST 10, 1999

The regular monthly meeting of the Kalkaska County Board of Commissioners was called to order at 9:00 a.m., Tuesday, August 10, 1999, by James Green, chairman.

Present: Russell Bell, Zachary Cox, James Green, Margaret McCully, Dianna Needham, George Nice and Beatrice Sherman.

The pledge to the flag was given by all, followed with invocation by McCully.

Nice moved to approve the agenda as presented, adding the zoning administrator under public input. Supported by Needham. All yeas. No nays. Carried.

Sherman moved to approve the July 13, 1999 minutes as presented. Supported by Bell. Roll call vote. Yeas: Sherman, Bell, Cox, McCully, Nice, Needham and Green. No nays. Carried.

Sherman moved to approve general fund bills of $269,138.52. Supported by Bell. Discussion on #49 for $437.50 to Michael Cox, Building Authority; #64 for $6,085.18 to John Dzuirman, Architect for sports complex; #76 through #79, Glen's Market for $168.28; the question of a cake being purchased for a retiring county employee and if it was paid for with county funds was discussed. The board was reminded this can't be done. Invoice #105, Kalkaska County Road for $50.00 for road maps; #114 to Kalkaska Memorial Health Center for $297.00 for Allen Price; #117 through #120 for Kalkaska Public Transit for $150.00, for sheriff vehicle repair; #179 for $2,396.71 to Michigan County Services for Treasurer's tax rolls; #183 through #186, MSU Extension payroll for $32,202.68; #211 to Pineview Homes for $3,302.43 for Housing Commission; #251 to Voice Motor Sales for $5,337.31 for sheriff vehicle repair; #257 & #258, KEPDX for $302.75 for copy paper, per controller; #261 and #262 Ace Tel-A-Tape for $658.02, lein machine; #264, 265 & #266 CDW Computer Center for $639.83 for MSU; #267, Cherry St. Market for $67.50 for bushes. #272 Curtis-Road Industries, $287.25 MSU; #273, Curtis Statewide Properties, for Prosecutor; #275 Delta College, $265.00, for Deputy Steve Brown; #276 Detroit Legal News, $125.00, tax notice; #278 Patrick Dougherty for $1,752.20 Circuit Court, atty fees; #280 and #281 and #282 to Feyen Zylstra Inc., for $2,715.76 for phone work at Island Lake Rd. property; #284 Four Seasons Glass, $2,725.00 for Construction Code office; #288 Mary Mason for $225.70, for Foster Care; #295 for Norman's, for sheriff for 911 cabinet for $3,920.00; #297 & #298 to Oak Hill Electric for $356.45 for wiring 911; #306, Search Institute for $10.95 for MSU. Roll call vote. Yeas: Sherman, Bell, McCully, Cox, Nice, Needham and Green. No nays. Carried.

Sherman moved to approve post approved bills of $208,163.47. Supported by McCully. Roll call vote. Yeas: Sherman, McCully, Nice, Cox, Bell, Needham and Green. No nays. Carried.

Sherman moved to approve payroll #14 of $94,718.43 and payroll #15 of $107,478.29. Supported by Needham. 1 call vote. Yeas: Sherman, Needham, Bell, McCully, Cox and Green. Nay: Nice. Carried.

Sherman moved to approve payroll and per diem of the commissioners of $3,222.00. Supported by McCully. Roll call vote. Yeas: Sherman, McCully, Cox, Bell, Nice, Needham and Green. No nays. Carried.

Under unfinished business, Green spoke regarding the solid waste plan.

Nice moved to approve the Solid Waste Management Plan and forward it to the townships. Supported by Needham. Roll call vote. Yeas: Nice, Needham, Bell, Cox, McCully, Sherman and Green. No nays. Carried. Plan not given for the record.

Sherman spoke on Commission On Aging appointments. Term will be June, 2002.

Green reappointed the following to the Commission On Aging Board:

Werner Claus - Elsie Merrill - Mary Ellen Thick - Pauline Salenski

Bell moved to approve the re-appointments. Supported by Needham. All yeas. No nays. Carried.

Sherman gave a budget and finance committee report.

Nice moved to approve the replacement ($1,283.45) of garage door for the Civic Center. Supported by Needham. Roll call vote. Yeas: Nice, Needham, Bell, Cox, Sherman, McCully and Green. No nays. Carried.

Nice moved to purchase carpeting for the prosecutor's office, estimate $2,920.00 @ $12.81 sq. ft. and for Island Lake Rd. building also @ $12.81 sq ft. from Kiss Carpet. Supported by Cox. Roll call vote. Yeas: Nice, Cox, Sherman, McCully, Bell, Needham and Green. No nays. Carried.

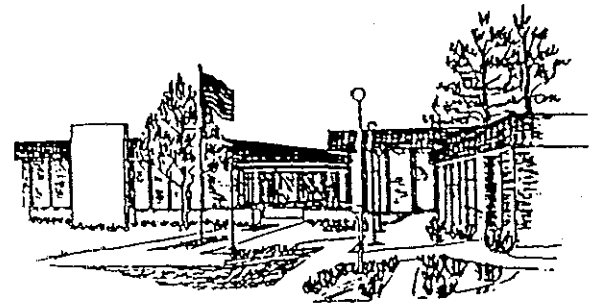
Sherman moved for compensation of $1.00, the titles be given to Bear Lake and Garfield Townships for military vehicles. Supported by Nice. Roll call vote. Yeas: Sherman, Nice, Cox, Bell, Needham, McCully and Green. No nays. Carried.

Discussion regarding the sheriff driving a county vehicle and being paid $300.00 per month in lieu of mileage. It is added to his wages.

Sherman moved to approve the employee delegate Sharon Waterman for the Municipal Employees Retirement System annual meeting and Patricia Rodgers as the officer delegate and alternate, Frank Wright and the $125.00 registration be paid. Supported by Nice. Roll call vote. Yeas: Sherman, Nice, McCully, Needham, Bell, Cox and Green. No nays. Carried.

County of Kalkaska

GOVERNMENTAL CENTER
605 N. Birch St. - P.O. Box 780
Kalkaska, Michigan 49646



(616) 258-3336

MARCH 3, 2000

KALKASKA COUNTY HAS A TOTAL OF TWEVLE TOWNSHIP'S AND A TOTAL OF NINE TOWNSHIP'S HAS APPROVED THE SOLID WASTE MANAGEMENT PLAN. THE FOLLOWING LIST OF TOWNSHIP'S HAVE APPROVED THE SOLID WASTE PLAN:

BEAR LAKE
BOARDMAN
CLEARWATER
COLDSPRINGS
EXCELSIOR
KALKASKA
ORANGE
RAPID RIVER
SPRINGFIELD

THE FOLLOWING LIST OF TOWNSHIP HAVE NOT VOTED TO APPROVED OR REJECT THE SOLID WASTE PLAN:

BLUE LAKE
GARFIELD
OLIVER

Bear Lake Township

Bear Lake Township

MINUTES OF REGULAR MTG.
December 7, 1999

MEMBERS PRESENT:

SUPERVISOR, WM. JACKSON
TREASURER, D. RIDKY
CLERK, C. ROSENBERG
TRUSTEE, C. KOSKI
TRUSTEE, R. DORRANCE

MEETING CALLED TO ORDER by Supervisor at 7 pm.

PLEDGE said by all. Five members present, a quorum. Approx. 22 residents present.

PREVIOUS MINUTES
Motion by C. Koski to approve previous minutes.
Support by D. Ridky. Motion carried.

BILLS PRESENTED: The clerk presented General Fund Vouchers 2412 – 2415 = $865.11 and 2416 - 2434 = $ 5,587.39; and Fire Fund Vouchers 1876 – 1877 = $2,083.88 and 1878 - 1897 = $1,139.77; Rescue Fund Vouchers 1200 - 1216 = $1,271.94 Motion by C. Koski to approve bills to be paid.
Support by R. Dorrance. Motion carried.

TREASURER'S REPORT: The Treasurer presentec

GENERAL FUND CHECKING.....
GENERAL FUND TRUST.....
RESCUE CHECKING.....
FIRE CHECKING.....
FIRE TRUST.....
GENERAL FUND CD.....
CD GYPSY MOTH.....

Motion by C. Koski to accept treasurers report
Motion carried.

FIRE DEPT. REPORT: Supr. Jackson reported that Fire Chief Bob Ohneck resigned his position as of 12/7/1999. He had the firefighters put their recommendation for new fire chief down and turn it in to him. The result was 8 votes for Mark Laskowski; 2 votes for Art Hall; 1 vote for Duane Petty and 1 vote for Dan Brown.
The Township Board appointed Mark Laskowski as the new fire chief.
Asst. Duane Petty gave the Fire Report tonight. The snowmobile is ready to go. They had their business meeting; they worked on the trucks; there were 7 fire runs and 7 medical runs.
OTHER CONSIDERATIONS:

Supr. Jackson presented a resolution to change for rental hall lease. The changes included renting hall only from 4/15 to 11/1 and to township residents only. The fee will be changed to $50.00 with $100.00 deposit. Effective January 1, 2000.
Motion by Wm. Jackson to adopt the resolution changing the rental lease for the hall. Support by Richard Dorrance. Roll call: All Board members voted in favor. Motion carried.

Treasurer Ridky announced that the Crawford/AuSable Schools/ COOR want her to collect summer taxes. She has agreed to do it and will call them to make arrangements. She saved over $200 by consolidating all the tax bills.
ASSESSOR REPORT: Ron Clark submitted a written report. To summarize: residential sales study shows a tentative factor of 1.1156; reassessments to eliminate this tentative factor have been completed. Total parcel count for 2000 is 2,047. Consumer price index applied for 2000 is 1.019; The 2000 tentative figures may change due to ongoing new construction and splits; they will be attending a seminar on 12/15/1999; December Board of Review will be 12/14/1999 at 9 am.

SHERIFF DEPT: Sgt. Bruce Gaultier was present representing the Sheriff Dept. They are working on the junk complaints; radio testing on the hi bands were good; looking for date on public meeting re: parking at public access at Bear Lake.

Zach Cox, County Commissioner reported they approved new roof on ANR Bldg. And jail; voted to replace computers; there will be a delay in opening of swimming pool.
ZONING: Art Hall reported that there about 100 towers going up in the northern part of the county this coming year.
BLFFA: None

BLTIA: They are not meeting until May, 2000.
UNFINISHED BUSINESS: Discussion on proposed county Solid Waste Proposal. All townships must approve it in Kalkaska County. Discussion with Commissioner Cox.
Motion by C. Koski, Trustee to accept the proposed Kalkaska County Solid Waste Plan. Support by Wm. Jackson, Supervisor. Motion carried.
Commissioner Cox agreed to find out who does the inspecting of facilities and who will it cost for this.

NEW BUSINESS: None.
PUBLIC INPUT: Duane Petty requested on behalf of the Fire Department that they get a plaque for Bob Oheck in appreciation for his years of service. The Board will let him know.

MERRY CHRISTMAS AND
HAPPY NEW MILLENIUM

Motion by D. Ridky to Adjourn, 8:00 pm. Support by C. Rosenberg. Motion Carried.
Respectfully submitted,

Carol Rosenberg, Clerk

OFFICE OF
BOARDMAN TOWNSHIP CLERK

South Boardman, Michigan 49680

November 3,1999
At a regular Boardman Township board meeting RESOLUTION 2-11-3-1999, WAS ADOPTED, Motion by Clerk Baxter to adopt Kalkaska County Solid Waster Plan as passed by the Kalkaska County Commissioners on August 10, 1999. Second by Treasurer Jensen, Roll call vote Yeas: Babrick, Baxter, Gerring, Gauliter, Jensen Nays: none M/C

Geraldine Baxter Clerk

Regular Meeting
September 21, 1999

The regular meeting of the Clearwater Township Board was called to order at 7:00 p.m. by Supervisor Grimm Board members present were: Grimm, Vance, Severns, Seaman. Guy was absent Also present were 14 guests.

Supervisor Grimm opened the meeting with the Pledge of Allegiance.

Clerks Report: Moved by Grimm, seconded by Vance, to approve the July 20, 1999 regular meeting minutes as presented. All in favor.

Moved by Vance, seconded by Grimm to approve the August 17, 1999 regular meeting minutes as corrected: Moved by Vance, seconded by Severns to approve paying bills from General Fund, voucher number 11612 through 11629. Roll Call Vote: Grimm -Yes; Vance-Yes; Seaman-Yes; Severns-Yes. Motion carried.

Moved by Severns, seconded by Seaman to approve paying bills from Fire Fund, voucher number 2879 through 2891. Roll Call Vote: Seaman-Yes; Vance-Yes; Severns-Yes; Grimm-Yes. Motion carried.

Moved by Grimm, seconded by Seaman to approve paying bills from General Fund, voucher number 11647 through 11671. Roll Call Vote: Vance-Yes; Seaman-Yes; Severns-Yes; Grimm-Yes. Motion carried.

Moved by Vance, seconded by Seaman to approve paying bills from Fire Fund, voucher number 2901 through 2909. Roll Call Vote: Seaman-Yes; Vance-Yes; Severns-Yes; Grimm-Yes. Motion carried.

Moved by Grimm, seconded by Seaman to approve the purchase of 1999 Labor Law Posters for state and federal compliance from HRdirect in the amount of $109.90. Roll Call Vote: Severns-Yes; Grimm-Yes; Seaman-Yes; Vance-Yes. Motion carried.

Zoning: Moved by Grimm, seconded by Seaman to approve amendment #43 to the Clearwater Township Zoning Ordinance #9 as follows: The Township of Clearwater ordains and accepts Amendment #43 - Village Residential District. Roll Call Vote: Vance-Yes; Severns-Yes; Grimm-Yes; Seaman-Yes. Motion carried.

Meeting recessed at 9:00 p.m. and was called back to order at 9:12 p.m.

Moved by Grimm, seconded by Severns to approve amendment #44 to the Clearwater Township Zoning Ordinance #9 as follows: The Township of Clearwater ordains and accepts Amendment #44 - Village Commercial District. Roll Call Vote: Grimm-Yes; Seaman-Yes; Severns-Yes; Vance-Yes. Motion carried.

Solid Waste Plan - Moved by Vance, seconded by Seaman to accept the Kalkaska County Solid Waste Management Plan Update. Roll Call Vote: Severns-Yes; Seaman-Yes; Grimm-Yes; Vance-Yes. Motion carried.

Moved by Severns, seconded by Grimm to return previously received bid from Wolverine Construction in regards to township hall roof unopened. All in favor. Motion carried.

Moved by Severns, seconded by Vance to accept Springfield Construction bid to reroof township hall for a cost of $20,454.00. Roll Call Vote: Seaman-Yes; Grimm-Yes; Vance-Yes; Severns-Yes. Motion carried.

Moved by Grimm, seconded by Seaman to allocate an additional $2,000 for purchase of counter tops and other necessary items for community center renovations. Roll Call Vote: Vance-Yes; Grimm-Yes; Seaman-Yes; Severns-Yes. Motion carried.

Moved by Grimm, seconded by Seaman to approve up to $3,000 for siding, repairs & labor to chapel building at cemetery. Roll Call Vote: Grimm-Yes; Severns-Yes; Vance-Yes; Seaman-Yes. Motion carried.

Moved by Vance, seconded by Grimm to approve up to $500.00 for siding and repairs to building at South ball park. Roll Call Vote: Seaman-Yes; Severns-Yes; Grimm-Yes; Vance-Yes. Motion carried.

Moved by Grimm, seconded by Seaman to approve up to 200 additional hours for Richard Szwajka at a rate of $7.00 per hour. Roll Call Vote: Vance-Yes; Grimm-Yes; Severns-Yes; Seaman-Yes. Motion carried.

Meeting adjourned at 10:45 p.m.

Respectfully submitted,

Julie K. Vance
Township Clerk

APPROVED NOV 0 8 1999

COLDSPRINGS TOWNSHIP

REGULAR BOARD MEETING MINUTES

COLDSPRINGS TOWNSHIP HALL - CO. ROAD 571 - 7:00 P.M.

OCTOBER 11, 1999

Supervisor Lamkin called the meeting to order at 7:00 p.m.. Pledge of Allegiance was said by all. Board members present at roll call were Supervisor Lamkin, Clerk Hodges, Treasurer Casto and Trustees Neubecker and Bondy. Approx. 10 guests were also present.

Adoption of the Agenda: M/Neubecker S/Bondy to adopt the agenda as presented. All in favor. Motion carried.

Approval of the Minutes: M/Bondy S/Casto to approve the minutes from the September 13, 1999 regular board meeting. All in favor. Motion carried.

Deputy Southworth: Not Present

Correspondence: Clerk Hodges received the approved minutes from the KMHC Executive Board meeting from August 31, 1999. Copy on file. Hodges also received from our Attorney, copies of the first set of interrogatories and request for production of documents on the Crescent Drive, Dean Street and Central Avenue cases. Copies on file. The Clerk also received a letter from MSU Extension notifying the Township that MSU Extension will no longer be handling the swim program. However, they will be promoting two Summer Day Camps. One program will be for 5-11 year olds and will be a typical park or facility day camp program. The other day camp program will be for teens 13-15 years old and will involve adventure trips, team building and community service projects. MSU would like each of the Townships to fund the programs by setting aside at least $14.00 per child as they did for the swim program. The swim program will be taken over by the Sportsplex Authority Board. Lamkin asked Commissioner Green if there would be a charge for the swim program and Green said that there probably would be. Hodges asked if the township could fund a day camp. Attorney Elsenheimer was present and said that the rule is, that a township cannot use public funds for donations, and the theory is, that the township is not getting anything in return for their donations. What an organization can do, for any funds that they ask for from the township, is send an agreement or simply a letter that they will provide certain services, such as day camp, or whatever, for Coldsprings Township residents. Elsenheimer said that as a matter of law it can be done, as a matter of policy that is for the board to decide. The important thing is, that the township has a legitimate paper on file showing that the township is receiving services for its citizens, for the funds that they are providing. More discussion followed. M/Neubecker S/Casto to table the letter from MSU Extension until next month. Neubecker asked the

attend the MTA workshop in Gan Gaylord. Cost $65.00 each. M/Bondy S/Neubecker to make the money available for thor the Clerk & Treasurer to attend the MTA workshop in Gaylord. Roll call vote: Casto ysto yes, Hodges yes, Lamkin yes, Neubecker yes and Bondy yes. All in favor. Motion carriecarried. (C) KPTA Agreement: Neubecker questioned the fact that it was already dated Septemptember 20, 1999. M/ Neubecker S/Bondy to enter into the Indemnity Agreement with the Khe Kalkaska Public Transit Authority and authorize the Township Supervisor and ClerkClerk to sign an acknowledgment that we are entering into the agreement with regards to bussinussing. All in favor. Motion carried. The Clerk will contact KPTA and see if it is necessary sary to have an agreement sent with the corrected date on it. (D) Solid Waste Plan: Commismmissioner Green updated the board on the changes in the Plan. M/Bondy S/Casto to acceaccept the Solid Waste Plan. Roll call vote. Hodges yes, Lamkin yes, Neubecker yes, Bon Bondy yes and Casto yes. All in favor. Motion carried. (E) Call a Special Meeting for the Sne Special Assessment District. Supervisor Lamkin explained that this is one of the steps that hhat has to be taken to proceed with the Special Assessment for Manistee Lake. The date of thef the meeting will be November 9th at 7:00 p.m.. (F) Amend the Budget for the 2nd quarter.rter of the fiscal year: M/Neubecker S/Casto to amend the budget as stated by the Clerk. Rk. Roll call vote: Bondy Yes, Neubecker yes, Lamkin yes, Hodges yes and Casto yes. All i All in favor. Motion carried. Copy of amended budget is on file.

Approval of Bills: Clerk Hodgeodges said that $22.00 will have to be added for Antrim County News subscription renewal and and $130.00 for the MTA workshop that was approved tonight. Hodges said that she hne had received a bill from the Kalkaska County Road Commission for $167.40 for thor the publications of the Resolution for the road endings. On the bill it stated that it was the Ehe Townships share. Hodges said she did not know who authorized them to bill the townownship and that they did not charge for the first Resolution. Lamkin said that they moved ated at their meeting that they were going to bill the township. She said that it seems that the tone township board should have been made aware that there would be a charge for the publioublications. Neubecker said that he has a problem with that also. He said that if the Road Gad Commission is going to bill us for something that they have not billed us for before, he said said that he would like them to present some documentation as to why we are all of a sudden ben being billed. Hodges also asked Lamkin about the mileage bill that he turned in for the Hae Hart case. She wondered how it added up to 10 miles. He said that he met Elsenheimer ater at the township hall and then drove back to the site and that's where the 10 miles came from.rom. Hodges said that we don't get paid mileage for driving to and from the township hall. M/. M/Neubecker S/Casto to pay the bills as presented except for the bill we received from the Kae Kalkaska County Road Commission. Roll call Vote. Hodges yes, Lamkin yes, Neubecker yeer yes, Bondy yes and Casto yes. All in favor. Motion carried. Checks $7711 thru #7740 totalitotaling $9,864.88 were issued for payment. Hodges will contact the Road Commission.tion to get a copy of the minutes regarding the bill they sent to the township.

Citizens Comments: Someoneeone asked Lamkin if he could talk to the Road Commission about re-stripping East Shore Ere Drive. He said that he would mention it to them.

M/Bondy S/Casto to adjourn. rn.

Meeting adjourned at 9:25 p.m.

Mary Hodges

Mary Hodges
Coldsprings Township Clerk

EXCELSIOR TOWNSHIP
0987 Co Rd 571 NE
KALKASKA COUNTY, MICHIGAN

MINUTES

1. The regular meeting of the Excelsior Township Board was held November 1, 1999 in the Town Hall. Members present: Groner, Horvath, Hill, Whitehead, and Larabee.

   Also present: Martin Cottrell, Henrietta Hudson, Mike VanHorn (Assessor) and Zack Cox (BOC), Mike Cox, Al & Evelyn Binford, and Rod Limbaugh.

2. Supervisor Hill called the meeting to order at 7:00 pm.

3. Minutes of the October 4, 1999 regular meeting were approved as presented.

4. Treasurer's Report - The Board received Treasurer Whitehead's report of:

MM Savings	$ 84,886.93
Checking Acct	200.44
CD	40,000.00
	$ 125,087.37
Tax Account	$ 4,256.68

5. Correspondence -
   - a- Sheriff's Dept - Liquor inspection & incident reports.
   - b- MSU Extension - letter telling that they will not be having swim program, and that there will be swim program at the Sportsplex; and that camping program is being developed, and asking that township support the camping program.
   - c- ANR - calendar and information about their pipeline and plant.
   - d- KMHC - financials & minutes, also newsletter with information about the Health Center.
   - e- MDOT - workshop about developing roads and moving traffic.
   - f- DNR - 1999 Campground permit for Black Bear RV park at Manistee Lake.
   - g- MTA - asking for township support of SB 205, which would allow some local control in Right to Farm issues.
   - h- Rep. Ken Bradstreet - asking township support for bill which would return 25% of severance tax to the county, township, or city/village from which the oil or gas was taken.
   - i- Kalkaska Co. P&Z - hearing about proposed tower to be located on Jane Hill's property in Section 17.
   - j- Fire Contract - with Rapid River Township, for fire & rescue service to Sections 1,12,13,14,23,24 of Rapid River Township. Charge will be $8,000, to be paid quarterly.
   - k- PROTEC - a Michigan coalition seeking to establish a standard 5% user fee for use of municipal ROWs by telecommunication companies.
   - l- Various - bulletins, newsletters, information, etc.

6. Fire Contract - was discussed. Whitehead moved, Horvath seconded, to approve the agreement to provide fire service to Rapid River Township, provided the Fire Board approves the contract. Motion carried.

7. Bills & wages - in the amount of $4,458.66 were presented for approval and payment. Whitehead moved, Horvath seconded, to approve and pay the bills presented. Roll call vote. Ayes: Whitehead, Horvath, Groner, Larabee, Hill. Nays: None. Motion carried. Checks numbered 4021 thru 4036 were used for payment.

6. Pick up site - for Kalkaska School District children was discussed. Mike Cox is spearheading program to have Public Transit transport the children (since the school is no longer busing the students), and asked that we allow use of the Excelsior Town Hall parking lots as a pickup site.

   This will likely require more snow blowing or plowing. It will be at least 3 weeks before the site would be used, as they are having trouble finding the good, experienced drivers they need.

   Horvath moved, Groner seconded, to allow use of the Township Hall parking lots, by Kalkaska Public Transit Authority, as a pick up site for Kalkaska Public School students. Motion carried.

   Cox will send us the draft agreement that has been used with other pickup sites, and we will need to see about keeping the driveways open, as Avery may not want to do it now.

7. Fire Department - Groner reported: that as of September 30, the department had 146 runs (113 rescue); Lonnie Farr has been named Captain; they are talking to KEU about increasing the reimbursement received for ambulance runs (both basic and extra for mileage beyond Kalkaska).

8. Board of Commissioners - Zack Cox reported that the Sportsplex was open for ice skating, and pools should be open within the next month - tax bills may be printed by Manatron this year, rather than Equalization office - recycling is in operation on Island Lake Rd.

9. S.O.B. - County now has a Sexually Oriented Business ordinance in place, so we do not need one.

10. Kalkaska **Solid Waste Plan Update** - was discussed, as Plan needs township approval. Horvath moved, Groner seconded, to approve the Kalkaska County Solid Waste Plan Update. Motion carried. Clerk to send notice of approval to Board of Commissioners.

11. Sigma Road - was discussed, as Supervisor Hill has been to County Road Commission meeting about TEA 21, and how roads qualify for the Federal money. The rules require the road to be improved run between two major primary roads.

    However, the Road Commission also gets State gas tax money for road maintenance and improvement. Whitehead moved, Groner seconded, to have Clerk write letter to County Road Commission asking that Sigma Road be repaired. Motion carried.

12. *Tower - proposed to be located in SE 1/4 of SE 1/4 of Sec 17*, was discussed. Site will be back by woods and at least 750 ft from any house.

    Larabee moved, Horvath seconded, to tell Planning & Zoning (by letter) that we have no problem with the proposed location for a communications tower in Section 17. Motion carried with Supervisor Hill abstaining.

Upon proper motion, meeting adjourned at 8:45 pm.

Bethel Larabee, Clerk

Kalkaska Twp.

February 01, 2000

PRESENT: MIKE WINTER, AL DIMON, MARGARETE JOHNSTON, MIKE BLAKE, AND CONNIE DUPUIE. ALSO ATTENDING WAS COMMISSIONER DIANA NEEDHAM.

MEETING WAS CALLED TO ORDER BY SUPERVISOR, MIKE WINTER, AT 7:00 P.M.

MOTION BY DIMON TO ACCEPT THE TREASURER'S REPORT. SUPPORTED BY BLAKE. MOTION CARRIED. ALL "AYES".

MOTION TO ACCEPT THE MINUTES OF THE JANUARY MEETING MADE BY DIMON. SUPPORTED BY BLAKE. MOTION CARRIED. ALL "AYES".

DEPUTY HOFFMAN ATTENDED OUR MEETING AND GAVE HIS ACTIVITY REPORT.

OLD BUSINESS:

MIKE WINTER AND MIKE BLAKE MET WITH THE FIRE DEPT. COMMITTEE ON WAGES. THEY WILL HAVE ONE MORE MEETING BEFORE MAKING ANY DECISIONS ON INCREASES IN WAGES.

THE TOWNSHIP BOARD HAS BEEN ASKED AGAIN TO VOTE ON THE SOLID WASTE PLAN FOR KALKASKA COUNTY. COMMISSIONER NEEDHAM TRIED TO EXPLAIN HOW THIS WILL AFFECT OUR TOWNSHIP IF WE DO NOT HAVE A PLAN OF OUR OWN OR ACCEPT THE COUNTY PLAN.
MOTION BY DIMON TO ACCEPT THE KALKASKA COUNTY SOLID WASTE PLAN AS PRESENTED. SUPPORTED BY DUPUIE. MOTION CARRIED. ALL "AYES".

MICHAEL VAN HORN ATTENDED OUR MEETING WITH A PROPOSED ROAD ORDINANCE. THE BOARD REVIEWED THIS, BUT WOULD LIKE TO HAVE A SPECIAL MEETING TO BE ABLE TO SPEND MORE TIME ON IT. IT WILL BE APPROVED BY THE TOWNSHIP BOARD, THEN SENT TO THE COUNTY ROAD COMMISSION FOR THEIR INPUT, AND FINALLY TO AN ATTORNEY.

NEW BUSINESS:

MR. & MRS. CHRIS SEABOLT ATTENDED OUR MEETING TO EXPRESS THEIR CONCERNS ABOUT CUTTING THE TREES DOWN ON GOLDEN ROAD. THIS IS BEING DONE TO PREPARE THE ROAD FOR FUTURE PAVING. AFTER MUCH DISCUSSION, THE BOARD AGREED TO ASK TO COUNTY ROAD TO STOP CUTTING TREES UNTIL MR. ROOT, MR. SLATER, AND MR. WELLS CAN MEET WITH MR. & MRS. SEABOLT TO SEE IF THERE IS SOME WAY THEY CAN AVOID CUTTING ALL THE TREES.

MOTION BY JOHNSTON TO SIGN AGREEMENT FOR THE COLLECTION OF SUMMER SCHOOL TAXES. THE FEE OF $3.65 PER PARCEL TO REMAIN THE SAME FOR 2000. SUPPORTED BY DIMON. MOTION CARRIED. ALL "AYES".

MR. DARRYL DRYS HAS ASKED TO TOWNSHIP TO IMPROVE A SEASONAL ROAD (RICE ROAD) APPROXIMATELY 400'. HE IS PLANNING TO PUT A HOUSE ON THIS PROPERTY AND NEEDS A BETTER ROAD. THE BOARD AGREED THAT THE FUNDS ARE NOT AVAILABLE AT THIS TIME TO UPGRADE A SEASONAL ROAD.

MOTION TO PAY THE TOWNSHIP AND FIRE BILLS TOTALING $14,408.01, WITH CHECKS #11076 - 11119 MADE BY DIMON. SUPPORTED BY JOHNSTON. MOTION CARRIED. ALL "AYES".

MOTION TO ADJOURN MADE BY BLAKE. SUPPORTED BY DIMON. MOTION CARRIED. ALL "AYES". MEETING ADJOURNED AT 10:00 P.M.

CONNIE DUPUIE, CLERK Connie Dupuie

Minutes from Regular Meeting, Orange Township Board, October 11, 1999, 7:00 P.M.

The meeting was called to order by the supervisor at 7:00 P.M. All board members present. Guests were Bill Price, Ralph Zirkle, Paul Olsen of MUM, Ron Zingg, and Sheriff Cannon.

Motion to accept the September minutes as read was made by Raymond with support by Smithingell. All ayes. Carried.

Public Input: Wm Price provided the KMHC report. He also commented on B&E's in the neighborhood. A request was made for a bulletin board to be put up to post information from the KMHC.

Paul Olsen, MUM, provided an insurance proposal for township coverage.

Sheriff Cannon paid courtesy visit to the township. He was given information on the vandalism over at the cemetery to be investigated.

Motion to accept the financial report as read was made by Smithingell with support by Raymond. All ayes. Carried.

Motion by Raymond to accept the revised Kalkaska County Solid Waste Plan with support by Smithingell. Roll Call: Raymond, aye; Smithingell, aye; Arsnoe, aye; Zirkle, aye; and Hoenicke, aye. Carried.

Land division 99-010 approved by the reviewer. Notice of illegal division sent to McMichael on Puffer Rd by the reviewer. Discussed land division application completion procedures. Communications tower being proposed in Orange township in the vicinity of M-66 and Bass Lake Rd. Housing development in the works on property around Price Lake.

Audit Engagement Letter for the next fiscal year received from Campbell, Kusterer and Co. with fee of $1,100.00. Clerk will send letter asking for same rate ($800.00) as last year since mode of operation has not changed.

Letter from MSU received disbanding the Summer Swim Program and setting up a day camp program. Asked for township to support the endeavor. Program for 12 year-olds not included. MSU to be queried about support for that age group and MTA will be consulted regarding the spending of township funds for this program.

List of possible road names to be selected when naming new roads in the township was received from the County Equalization Dept.

The KMHC will provide Flu shots for all area citizens at the Township Hall on October 28th, 5-7 PM.

The County Road Commission has not yet installed the "Deaf Child" signs on Krumlauf Rd.

Mike Meriwether, Kalkaska Soil and Water Conservation Officer, advised that trees in the cemetery should be native trees for optimum survival. He suggested transplanting trees from the undeveloped section to the south addition and this would be done in the spring. A machine may be cost-shared to handle the planting. Will revisit in the spring.

Boardman Valley Construction to do the septic work at the town hall as soon as his workload permits.

Work at East Lake dry hydrant not completed as yet.

Per telephone message, Garbage cleanup day is set for May 6, 2000 with both Waste Mgt and Antrim Recycling. Another source will have to be found for disposal of tires.

The Township Newsletter to go with the winter tax notice is being composed and ready for print next month.

Notices have been sent to all recipients in the friendly suit to obtain the old 131 property by the attorney and the paperwork filed in court.

Motion to pay all bills as presented was made by Smithingell with support by Hoenicke All ayes. Motion carried.

There being no further business, a motion to adjourn was made by Raymond with support by Arsnoe and Smithingell. All ayes. Meeting adjourned at 9:10 P.M.

Respectfully submitted by,

Marilyn K. Zirkle

MARILYN K. ZIRKLE, Clerk
Orange Township

OCTOBER 19, 1999

THE REGULAR BOARD MEETING OF THE RAPID RIVER TOWNSHIP BOARD WAS CALLED TO ORDER AT 7:34 PM BY SUPERVISOR WINFIELD HANSEN.

BOARD MEMBERS PRESENT: WINFIELD HANSEN, KIM STEWART, RANDY BUYZE & VALERIE HANSEN. ABSENT: JAYNE COOK.

OTHERS PRESENT: RUTH CRAWFORD, TOM & ETHEL PICKERING, GORDON & RHEATA RAY CASE, PHYLLIS SENSKE & ALICE BABCOCK.

AFTER VIEWING THE AGENDA BUYZE MOTIONED TO APPROVE THE AGENDA AS PRESENTED WITH SUPPORT FROM V. HANSEN. ALL AYES RECEIVED - MOTION CARRIED.

PUBLIC INPUT: NONE

NEW BUSINESS:

1. K.P.T.A. INDEMNITY AGREEMENT: AFTER DISCUSSING THIS IT WAS DECIDED THAT COOK WILL TALK WITH THE TRANSIT AUTHORITY TO CLARIFY A COUPLE OF POINTS. TABLE UNTIL NOVEMBER MEETING.
2. VOTE ON SOLID WASTE PLAN: AFTER A DISCUSSION BUYZE MOTIONED TO SUPPORT THE KALKASKA COUNTY BOARD OF COMMISSIONERS SOLID WASTE PLAN - SUPPORT FROM V. HANSEN -ALL AYES RECEIVED - MOTION CARRIED.
3. 1999/2000 SNOW PLOW BID: TABLED UNTIL NOVEMBER MEETING.
4. KALKASKA SCREW TAX ABATEMENT: AFTER A LENGTHY DISCUSSION THE TAX ABATEMENT WAS TABLED TO OBTAIN FURTHER INFORMATION AND WE SUGGEST THAT KALKASKA SCREW PRODUCTS MAY CONSIDER CONTACTING THE KALKASKA COUNTY ZONING DEPT. FOR INFORMATION.
5. APPROVAL OF FIRE CONTRACTS: AFTER A DISCUSSION COOK MOTIONED TO ACCEPT & ISSUE FIRE CONTRACTS AS WRITTEN - BUZYE GAVE SUPPORT - ALL AYES RECEIVED - MOTION CARRIED.
6. COMPUTERS: V. HANSEN STATED THAT THE HALL COMPUTER SHOULD ARRIVE THIS WEEK AND THE LAP-TOP WILL BE SHIPPED IN ABOUT 10 DAYS. THE TOTAL WILL BE $4,041.00. HANSEN ALSO STATED THAT SHE WILL HAVE TO PURCHASE THE QUICK BOOKS UPDATE BUT DID NOT HAVE A COST ON IT YET.
7. NAMING OF EASEMENT: CHRISTOPHER LAPRISE HAS ASKED THAT THE EASEMENT GOING INTO HIS PROPERTY (011-029-004-08) BE NAMED "EASY STREET". KALKASKA DEPT. OF EQUILIZATION HAS TOLD MR. LAPRISE THE NAME IS FINE. BUYZE MOTIONED TO APPROVE THE NAME "EASY STREET" WITH SUPPORT FROM V. HANSEN. ALL AYES RECEIVED - MOTION CARRIED.

PUBLIC INPUT: W. HANSEN TALKED ABOUT THE COMMUNICATION TOWER SITES IN KALKASKA COUNTY. ONE IS IN RAPID RIVER TOWNSHIP. A HEARING WILL BE HELD THE 2ND TUESDAY IN NOVEMBER FOR ANYONE TO ATTEND.

Regular Meeting, December 7, 1999
Springfield Township Hall

Meeting called To order at 7:00 PM.
All members present.

Minutes of The November 2, 1999 regular meeting and November 9, 1999 Special Meeting were read and accepted as read on a motion from Wm Harvey, seconded by Bonnie Conyer Carried.

Joyce Ingersoll moved, seconded by Wm Harvey To hold a special meeting January 11, 2000 at 7:00 PM at The Springfield Township Hall To discuss plans for the Manistee River Overlook Area at The South end of Creighton Rd. Also To possibly form a parks and recreation Board of interested citizens. Bonnie Conyer To get copy of a Parks + Recreation Plan and be the liason with the DNR.

The Private Road Ordinance and Maintenance Agreement was Tabled on a motion from Carl Ingersoll, seconded by Wm Harvey Carried.

Clerk reported that at The Special Meeting of The Kalkaska County Zoning Board of Appeals, held November 18, 1999, The deck set-back variance request of Philip + Jacqueline Sorenson, Lake Drive Resort was denied.

Citizens opposing the proposed property splits on the Corner of Ingersoll + Diebart Roads were present, and expressed their concerns on the number of splits, etc.

over

December 7, 1999 Cont'd

Douglas Mansfield and David Kroneberger were present representing the owner of the property. Wm Harvey moved, seconded by Carl Ingersoll To allow Clerk and Assessor To consult with Bryan Graham, attorney at law, before official approval or denial is made. All in favor. Carried.

Bonnie Gonyer reported that a copy machine and cartridge for Treasurer's use has been purchased from L-L Office Supply.

There will be a public hearing of the Kalkaska County Zoning Board Dec 8, 1999 at 7:30 PM at The Island Lake Road Complex, Kalkaska, Mi., To discuss a proposed Cellular Tower To be Located ½ mile South of Clark Cemetery.

Clerk reported that all proceedings in Goedike et al vs Springfield Township have been held in abeyance until the Michigan Court of Appeals ruling on Springfield Township vs Sorenson.

Joyce Ingersoll moved, seconded by Bonnie Gonyer To approve the Kalkaska County Solid Waste Management Plan Update.

Roll Call vote:

Yes: Carl Ingersoll, Thomas Gray, Bonnie Gonyer Joyce Ingersoll

No: Wm Harvey

Absent: None

Abstain: None

Kalkaska County Solid Waste Management Plan Update declared approved by the Springfield Township Board.

over

December 7, 1999 Cont'd

Robert Ingersoll reported That The new Kalkaska County Zoning Ordinance will not be in effect until at least May, 2000.

Tom Gray gave the November 1999, police report.

It was decided To schedule meetings for citizen input before contacting an architect for the Town Hall addition.

Land Split Applications: It was suggested that the Board require a survey, and double The application fee when splits are made before the application is approved.

November, 1999 financial report was presented. Wm Harvey moved, seconded by Tom Gray To approve report. All in favor Carried.

Bills were presented. Carl Ingersoll moved, seconded by Bonnie Geyer To approve payment. All in favor Carried.

Checks # 4879 Through 4899 were written.

Joyce Ingersoll moved To adjourn, seconded by Bonnie Geyer. Carried.

Meeting adjourned at 9:10 P.M.

Joyce M. Ingersoll
Clerk

ATTACHMENT B

LISTED CAPACITY

Glen's Landfill

Montmorency/Oscoda Landfill

CES Waters Landfill

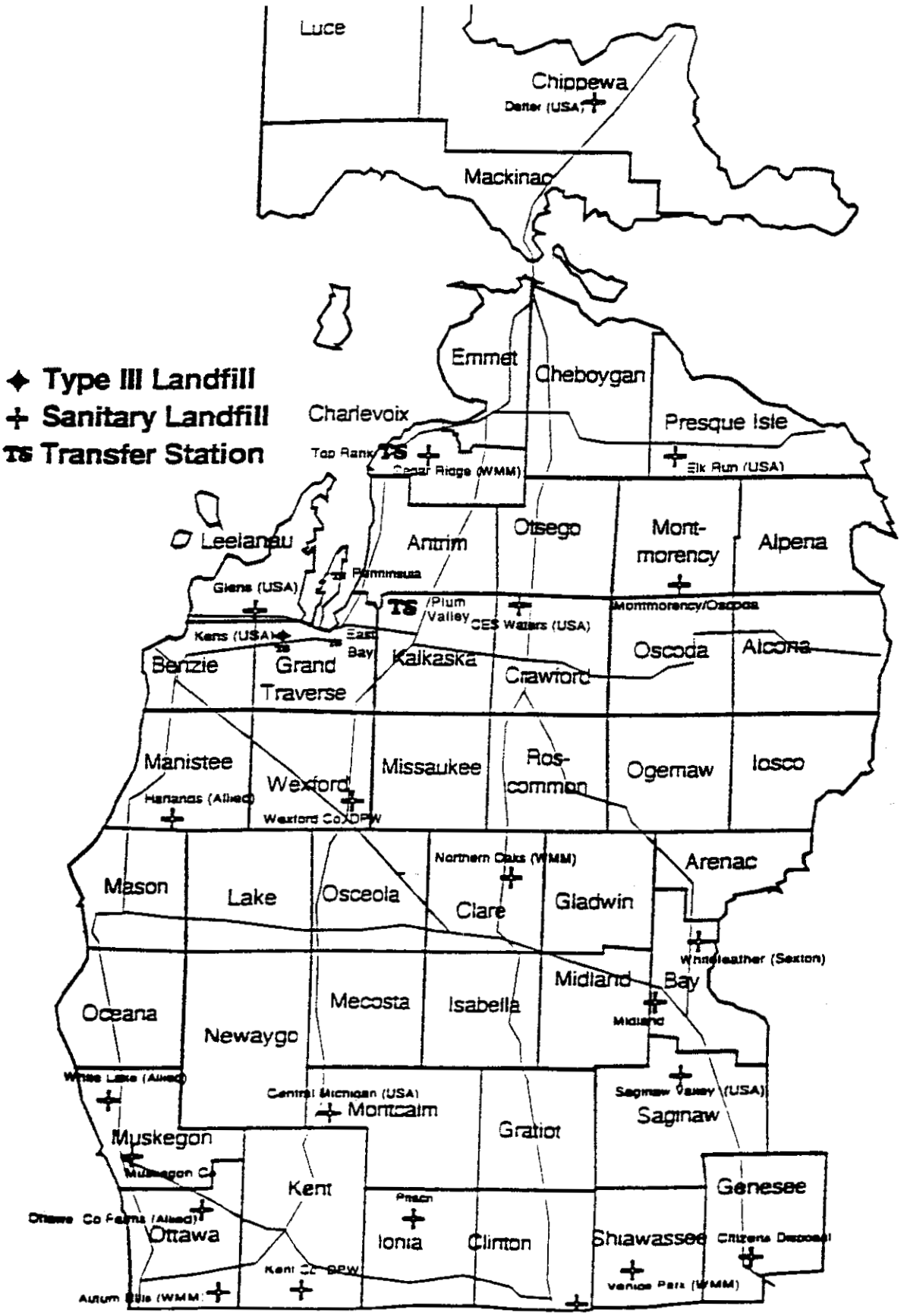
THIS PAGE INTENTIONALLY LEFT BLANK

ATTACHMENT C

MAPS

THIS PAGE INTENTIONALLY LEFT BLANK

Landfills and Transfer Stations Potentially Serving Kalkaska County



ATTACHMENT D

INTER-COUNTY AGREEMENTS

THIS PAGE INTENTIONALLY LEFT BLANK

ATTACHMENT E

DETAILED POPULATION DATA

THIS PAGE INTENTIONALLY LEFT BLANK

Kalkaska County Residential Waste Projections Summary			
Municipality	**1998**	**2003**	**2008**
Bear Lake township	324	363	388
Blue Lake township	174	184	185
Boardman township	546	611	656
Clearwater township	994	1113	1194
Cold Springs township	707	792	849
Excelsior township	362	405	434
Garfield township	302	339	363
Kalkaska village	1221	1323	1372
Balance of Kalkaska township	1175	1316	1411
Oliver township	147	165	176
Orange township	449	504	540
Rapid River township	345	364	368
Springfield township	408	435	443
Kalkaska County Total	***7155***	***7912***	***8380***
	tons/year	*tons/year*	*tons/year*

2003 Estimated Seasonal Population	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Avg.
Bear Lake township	901	909	917	901	941	1112	1120	1128	958	949	933	925	975
Blue Lake township	456	460	465	456	477	563	567	571	485	481	473	469	494
Boardman township	1519	1533	1547	1519	1588	1875	1889	1903	1615	1602	1574	1561	1644
Clearwater township	2766	2791	2816	2766	2891	3414	3439	3464	2940	2916	2866	2841	2992
Cold Springs township	1514	1527	1541	1514	1582	1868	1882	1896	1609	1596	1568	1555	1638
Excelsior township	1006	1015	1024	1006	1051	1242	1251	1260	1070	1061	1042	1033	1088
Garfield township	841	849	856	841	879	1038	1046	1053	894	887	871	864	910
Kalkaska village	2529	2552	2574	2529	2643	3121	3144	3167	2688	2666	2620	2597	2736
Balance of Kalkaska township	3270	3300	3329	3270	3417	4036	4066	4095	3476	3447	3388	3359	3538
Oliver township	410	413	417	410	428	505	509	513	435	432	424	421	443
Orange township	1251	1262	1274	1251	1308	1544	1556	1567	1330	1319	1296	1285	1354
Rapid River township	904	913	921	904	945	1116	1124	1133	962	953	937	929	978
Springfield township	1080	1090	1100	1080	1129	1333	1343	1353	1148	1139	1119	1109	1169
Kalkaska County Total	*18448*	*18614*	*18781*	*18448*	*19279*	*22769*	*22936*	*23102*	*19612*	*19445*	*19113*	*18947*	*19958*

2003 Estimate Waste Generation, tons	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total, tpy
Bear Lake township	28	28	28	28	29	34	35	35	30	29	29	29	*363*
Blue Lake township	14	14	14	14	15	17	18	18	15	15	15	15	*184*
Boardman township	47	48	48	47	49	58	59	59	50	50	49	48	*611*
Clearwater township	86	87	87	86	90	106	107	107	91	90	89	88	*1113*
Cold Spnngs township	61	62	62	61	64	75	76	76	65	64	63	63	*792*
Excelsior township	31	31	32	31	33	38	39	39	33	33	32	32	*405*
Garfield township	26	26	27	26	27	32	32	33	28	27	27	27	*339*
Kalkaska village	102	103	104	102	107	126	127	128	108	107	106	105	*1323*
Balance of Kalkaska township	101	102	103	101	106	125	126	127	108	107	105	104	*1316*
Oliver township	13	13	13	13	13	16	16	16	13	13	13	13	*165*
Orange township	39	39	39	39	41	48	48	49	41	41	40	40	*504*
Rapid River township	28	28	29	28	29	35	35	35	30	30	29	29	*364*
Springfield township	33	34	34	33	35	41	42	42	36	35	35	34	*435*
Kalkaska County Total	*609*	*615*	*620*	*609*	*637*	*752*	*758*	*763*	*648*	*642*	*631*	*626*	*7912*

*Waste Gen. Multiplier is presently 2.0 pounds per person per day for rural areas, 2.6 pppd for urban areas.

2008 Estimated Seasonal Population	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Avg.
Bear Lake township	983	992	1001	983	1027	1214	1222	1231	1045	1036	1019	1010	1064
Blue Lake township	469	473	478	469	490	579	583	588	499	495	486	482	508
Boardman township	1660	1675	1689	1660	1734	2048	2063	2078	1764	1749	1719	1704	1795
Clearwater township	3021	3048	3075	3021	3157	3729	3756	3783	3212	3184	3130	3103	3268
Cold Spnngs township	1653	1668	1683	1653	1727	2040	2055	2070	1757	1742	1712	1698	1788
Excelsior township	1098	1108	1118	1098	1147	1355	1365	1375	1167	1157	1138	1128	1188
Garfield township	919	927	935	919	960	1134	1142	1150	976	968	952	943	994
Kalkaska village	2672	2696	2720	2672	2792	3298	3322	3346	2841	2816	2768	2744	2891
Balance of Kalkaska township	3571	3603	3635	3571	3732	4407	4440	4472	3796	3764	3700	3668	3863
Oliver township	447	451	455	447	467	551	555	559	475	471	463	459	483
Orange township	1367	1380	1392	1367	1429	1687	1700	1712	1453	1441	1417	1404	1479
Rapid River township	932	940	948	932	974	1150	1158	1167	990	982	965	957	1008
Springfield township	1122	1132	1143	1122	1173	1385	1395	1405	1193	1183	1163	1153	1214
Kalkaska County Total	*19913*	*20093*	*20272*	*19913*	*20810*	*24578*	*24757*	*24937*	*21169*	*20990*	*20631*	*20452*	*21543*

2008 Estimate Waste Generation, tons	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total, tpy
Bear Lake township	30	28	31	29	32	36	38	38	31	32	31	31	*388*
Blue Lake township	15	13	15	14	15	17	18	18	15	15	15	15	*185*
Boardman township	51	47	52	50	54	61	64	64	53	54	52	53	*656*
Clearwater township	94	85	95	91	98	112	116	117	96	99	94	96	*1194*
Cold Spnngs township	67	61	68	64	70	80	83	83	69	70	67	68	*849*
Excelsior township	34	31	35	33	36	41	42	43	35	36	34	35	*434*
Garfield township	28	26	29	28	30	34	35	36	29	30	29	29	*363*
Kalkaska village	108	98	110	104	113	129	134	135	111	114	108	111	*1372*
Balance of Kalkaska township	111	101	113	107	116	132	138	139	114	117	111	114	*1411*
Oliver township	14	13	14	13	14	17	17	17	14	15	14	14	*176*
Orange township	42	39	43	41	44	51	53	53	44	45	42	44	*540*
Rapid River township	29	26	29	28	30	34	36	36	30	30	29	30	*368*
Springfield township	35	32	35	34	36	42	43	44	36	37	35	36	*443*
Kalkaska County Total	*658*	*599*	*669*	*636*	*687*	*785*	*817*	*823*	*676*	*693*	*659*	*675*	*8380*

*Waste Gen. Multiplier is presently 2.0 pounds per person per day for rural areas, 2.6 ppppd for urban areas.

Permanent Population of Kalkaska County

Municipality	1990 pop	90-96 change	96/90 ratio	annual growth	1998 lin	2003 lin	2008 lin	98 projected	03 projected	08 projected
Bear Lake township	639	95	1.1487	1.0224	763	853	952	744	812	886
Blue Lake township	378	25	1.0661	1.0103	410	432	455	400	411	423
Boardman township	1076	161	1.1496	1.0226	1286	1438	1608	1255	1369	1495
Clearwater township	1959	293	1.1496	1.0226	2342	2618	2927	2284	2492	2722
Cold Springs township	1073	160	1.1491	1.0225	1282	1433	1601	1250	1364	1489
Excelsior township	714	106	1.1485	1.0224	852	952	1064	831	906	989
Garfield township	596	89	1.1493	1.0225	712	796	890	695	758	828
Kalkaska village	1952	201	1.1030	1.0158	2213	2393	2589	2159	2278	2407
Balance of Kalkaska township	2317	346	1.1493	1.0225	2769	3095	3459	2701	2946	3217
Oliver township	291	43	1.1478	1.0223	347	388	433	339	369	402
Orange township	865	133	1.1503	1.0227	1059	1184	1325	1033	1127	1232
Rapid River township	746	51	1.0684	1.0106	812	856	903	792	815	839
Springfield township	871	44	1.0505	1.0124	961	1022	1087	938	973	1011
Kalkaska County Total	*13497*	*1747*	*1.1294*	*1.0197*	*15808*	*17460*	*19291*	***15420***	***16620***	***17940***
Michigan DMB Estimates					15420	16620	17940			

1998 Estimated Seasonal Population	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Avg.
Seasonal Multiplier	*1.11*	*1.12*	*1.13*	*1.11*	*1.16*	*1.37*	*1.38*	*1.39*	*1.18*	*1.17*	*1.15*	*1.14*	*1.20*
Bear Lake township	826	834	841	826	863	1020	1027	1035	878	871	856	848	894
Blue Lake township	444	448	452	444	464	548	552	556	472	468	460	456	481
Boardman township	1393	1405	1418	1393	1455	1719	1731	1744	1480	1468	1443	1430	1507
Clearwater township	2535	2558	2581	2535	2650	3129	3152	3175	2695	2672	2627	2604	2743
Cold Springs township	1388	1400	1413	1388	1450	1713	1726	1738	1476	1463	1438	1425	1502
Excelsior township	923	931	940	923	964	1139	1147	1156	981	973	956	948	998
Garfield township	771	778	785	771	806	952	959	966	820	813	799	792	834
Kalkaska village	2396	2418	2439	2396	2504	2957	2979	3000	2547	2525	2482	2461	2592
Balance of Kalkaska township	2998	3025	3052	2998	3133	3700	3727	3754	3187	3160	3106	3079	3243
Oliver township	376	379	383	376	393	464	467	471	400	396	389	386	407
Orange township	1146	1157	1167	1146	1198	1415	1425	1435	1219	1208	1188	1177	1240
Rapid River township	879	887	895	879	919	1085	1093	1101	934	927	911	903	951
Springfield Township	1041	1050	1059	1041	1088	1285	1294	1303	1106	1097	1078	1069	1126
Kalkaska County Total	17116	17270	17425	17116	17887	21125	21280	21434	18196	18041	17733	17579	18517

1998 Estimate Waste Generation, tons	mult.*	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total, tpy
Bear Lake township	2.0	26	23	24	25	27	31	32	32	26	27	26	26	*324*
Blue Lake township	2.0	14	13	13	13	14	16	17	17	14	15	14	14	*174*
Boardman township	2.0	43	39	40	42	45	52	54	54	44	46	43	44	*546*
Clearwater township	2.0	79	72	72	76	82	94	98	98	81	83	79	81	*994*
Cold Springs township	2.6	56	51	51	54	58	67	70	70	58	59	56	57	*707*
Excelsior township	2.0	29	26	26	28	30	34	36	36	29	30	29	29	*362*
Garfield township	2.0	24	22	22	23	25	29	30	30	25	25	24	25	*302*
Kalkaska village	2.6	97	88	89	93	101	115	120	121	99	102	97	99	*1221*
Balance of Kalkaska township	2.0	93	85	85	90	97	111	116	116	96	98	93	95	*1175*
Oliver township	2.0	12	11	11	11	12	14	14	15	12	12	12	12	*147*
Orange township	2.0	36	32	33	34	37	42	44	44	37	37	36	36	*449*
Rapid River township	2.0	27	25	25	26	28	33	34	34	28	29	27	28	*345*
Springfield township	2.0	32	29	30	31	34	39	40	40	33	34	32	33	*408*
Kalkaska County Total	2.10	*566*	*516*	*520*	*548*	*591*	*676*	*703*	*709*	*582*	*596*	*567*	*581*	*7155*

*Waste Gen. Multiplier is presently 2.0 pounds per person per day for rural areas, 2.6 pppd for urban areas.

ATTACHMENT F

RETURN TO
APPROVAL
LETTER

SPECIAL CONDITIONS

THIS PAGE INTENTIONALLY LEFT BLANK

ATTACHMENT F: Special Conditions

Flows of solid waste between counties including those covered by the Inter-County Agreements that the County may negotiate must be consistent with the following special conditions affecting import or export of solid waste and must be consistent with all other aspects of the Plan.

Section III Table 2-A Attachments Section

CONDITIONS FOR CURRENT EXPORT VOLUME AUTHORIZATION OF SOLID WASTE

* Condition for Current Exports:

Export of Type II and Type III waste will be allowed to the identified counties only if such waste collected for export is collected in compliance with all applicable laws, ordinances, rules and regulations of the Kalkaska County Solid Waste Management System, Ordinance and Intergovernmental Agreements consistent with the Plan's Enforceable Program. Special Industrial Waste shall be exempt from these conditions. All other wastes will be exempt from these conditions only on a temporary basis in the event of a temporary shutdown of any solid waste facilities provided for in the Selected Alternative and then only until such time that those facilities again begin to operate. The export of solid waste out of the State of Michigan shall be allowed as provided by federal or state law.

Section III Table 2-B Attachments Section

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

* Condition for Future Exports:

Export of Type II and Type III waste will be allowed to the identified counties only if such waste collected for export is collected in compliance with all applicable laws, ordinances, rules and regulations of the Kalkaska County Solid Waste Management System, Ordinance and Intergovernmental Agreements consistent with the Plan's Enforceable Program. Special Industrial Waste shall be exempt from these conditions. All other wastes will be exempt from these conditions only on a temporary basis in the event of a temporary shutdown of any solid waste facilities provided for in the Selected Alternative and then only until such time that those facilities again begin to operate. The export of solid waste out of the State of Michigan shall be allowed as provided by federal or state law.

THIS PAGE INTENTIONALLY LEFT BLANK

ATTACHMENT G

KALKASKA COUNTY NUISANCE ORDINANCE

THIS PAGE INTENTIONALLY LEFT BLANK

KALKASKA COUNTY NUISANCE ORDINANCE
Ordinance No. 1 of 1998

AN ORDINANCE TO REPEAL KALKASKA COUNTY ORDINANCE NO. 1972-1, AS AMENDED; TO ADOPT A NEW NUISANCE ORDINANCE WHICH DECLARES CERTAIN MATTERS TO BE NUISANCES, PROHIBITS NUISANCES, AND PROVIDES FOR ENFORCEMENT OF THE ORDINANCE THROUGH MUNICIPAL CIVIL INFRACTIONS, AND ALLOWS THE COUNTY TO ABATE OR ELIMINATE NUISANCES AND TO COLLECT THE COSTS OF THE ABATEMENT OR ELIMINATION FROM RESPONSIBLE PARTIES.

THE COUNTY OF KALKASKA ORDAINS:

A. The Kalkaska County Ordinance No. 1 of 19 72, *as amended*, is repealed *in its entirety*.

B. The following sections 1 through 10 shall be collectively known as "The Kalkaska County Nuisance Ordinance".

Section 1 – Definitions

As used in this Ordinance the following terms shall have the meanings prescribed in this section.

A. "Building materials" includes but is not limited to lumber, bricks, concrete or cinder blocks, plumbing or heating materials, electrical wiring or equipment, shingles, mortar, concrete or cement, nails, screws, or any other materials used in construction of any structure.

B. "Garbage" means rejected food wastes, including waste accumulation of animal, fruit or vegetable matter used or intended for food or that relate to the preparation, use, cooking, dealing in, or storing of meat, fish, fowl, fruit or vegetables. "Garbage" does not include one (1) compost pile consisting of decaying organic substances intended for fertilizing land; provided, however, that the compost pile is no larger than five feet (5') square and is located on the property so that it cannot be seen from any public highway or seen from any adjoining land owned by another person

C. "Junk" – By way of example and not limitation the term shall include used or salvaged metals and their compounds or combinations, used or salvaged rope, rubber, tires or car parts.

D. "Liquid industrial wastes" means any liquid brine, by-product, industrial wastewater, leachate, off-specification commercial product, sludge, grease-trap clean-out residue, used oil, or other liquid waste produced by, incident to or resulting from industrial or commercial activity except any liquid brine normally used or stored in regard to oil or gas extraction on a site permitted by the Michigan Supervisor of Wells.

E. "Rubbish" means nonputrescible solid wastes including ashes and may consist of both combustible and noncombustible wastes, such as paper, cardboard, metal containers, glass, bedding, crockery, bags, rags, and demolished materials.

F. "Person" means an individual, firm, corporation, association, partnership, or limited liability company.

G. "Sealed container" means a covered, closable container which is rodent-proof, insect-proof and watertight such as garbage cans with properly fitting tops or plastic garbage bags which have been closed or twisted shut.

H. "Totally closed structure" means a building capable of being sealed on all sides such as a house, garage or storage shed with a roof, floor and walls or closable doors around its perimeter.

Section 2 – *Nuisances*

The following are hereby declared to be nuisances:

A. The keeping or storage of building materials outside on private property six (6) months after an occupancy permit is issued by the Kalkaska County Zoning Administrator. This subsection, however, shall not apply to building materials kept or stored outside on private property if the building material is kept or stored in an orderly fashion. As used in this subsection, the phrase "building material kept or stored in an orderly fashion" shall mean that all building material of the same type, including but not limited to lumber (both stick and sheet wood), cement blocks, bricks, roofing material, and siding shall be kept or stored together and not kept or stored intermingled with building material of a different type and shall be stacked in an organized fashion customary for that type of building material. By way of example and not limitation, stick lumber shall be piled with all sticks substantially parallel to one another, sheet wood shall be piled one on top of another with the area of one sheet covering as much as possible the area of the sheet beneath it, cement blocks and bricks shall be stacked in the shape of a cube in such a manner that they will not fall off the stack, and siding shall be piled with each piece substantially parallel to one another.

B. The keeping or storage of ashes, junk, garbage or rubbish outside of a totally enclosed structure on private property except in a sealed container designed for the purpose of holding such ashes, junk, garbage, or rubbish.

C. The placing of ashes, junk, garbage or rubbish on private property without the owner's permission or on public property. This provision applies regardless of whether the ashes, junk, garbage or rubbish is in a sealed container.