

Grand Traverse County Solid Waste Management Plan Update

As Approved By Local Municipalities

March 31, 1999

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

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DATE SUBMITTED TO THE DEQ: April 9, 1999

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

**DESIGNATED PLANNING AGENCY
PREPARING THIS PLAN UPDATE:** Grand Traverse County Solid Waste
and Recycling Office

CONTACT PERSON: Randy Smith

ADDRESS: 400 Boardman
Government Center
Traverse City, MI 49684

PHONE: 616-922-4576

FAX: 616-922-4427

E-MAIL: rsmith2@co.grand-traverse.mi.us

CENTRAL REPOSITORY LOCATION(S): County Clerk's Office
400 N. Boardman Ave, Traverse City, MI

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I-1 EXECUTIVE SUMMARY

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

OVERVIEW OF THE COUNTY

Grand Traverse County is approximately 466 square miles in size and features a wealth of natural resources, including lakes, forests, agricultural land and urban areas. Grand Traverse County consists of rolling hills, forested uplands and extensive wetlands. The County's beauty at the same time is resulting in rapid growth in tourism, housing and commerce.

Current population by town is characterized in the chart below. In addition to the projected growth of year-round residents, the population of the county increases seasonally. By the height of the tourist season, (late summer), it has been estimated that the county experiences a population swell by an additional 50,000.

Section I-1 has been replaced by Amendment 2011-2, pages 7-9

Municipality	1998 pop	Peak Gain/Mo. (+39%)	Peak Population
Acme township	4,171	1,927	5,798
Blair township	6,347	2,475	8,823
East Bay township	10040	3,915	13,955
Fife Lake village	466	182	647
Balance of Fife Lake township	1022	399	1421
Garfield township	12,810	4,996	17,806
Grant township	902	352	1,254
Green Lake township	4,510	1,759	6,269
Long Lake township	7,231	2,820	10,051
Mayfield township	1,164	454	1,618
Kingsley village	886	345	1,231
Balance of Paradise township	2,139	834	2,973
Peninsula township	5,251	2,048	7,300
Traverse City (pt.)	15,019	5,857	20,876
Union township	309	120	429
Whitewater township	2208	861	3069
<i>Grand Traverse County Total</i>	<i>74,476</i>	<i>29,045</i>	<i>103,521</i>

Sources: U.S. Bureau of Census data, USA Counties - Grand Traverse.

Employment, as reported to by the U.S Bureau of the Census, shows the civilian labor force in 1990 was 35,814 employees, an increase of 53% since 1975. Of total employees in 1990, Agriculture, Forestry and Fisheries accounted for only 3.3% of the total labor force.

Projected growth trends forecasts the population for the county to double over the next twenty five years. If total population does almost double in the next 25 years as has been estimated, it will add about 2,300 more people in the county on average per year. These new residents will need housing and other infrastructure services as well as jobs. In the recent past, new private housing unit permits were granted at an average rate of 528 per year from 1979 to 1994.

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If population continues to grow as projected, land not in use for agricultural services will be utilized to support the growing population. It has been estimated that development in the next twenty five years has the potential to sprawl over 188 square miles of the county. This would represent 40% of the total county area - contrasting with much lower allocation of land for development under current conditions as shown in the chart below.

Land Use Type	% County Land
Surface Water	6 %
Developed Land	18 %
Public Open Space	21 %
Agriculture	22 %
Private Open Space	33 %
<i>Grand Traverse County Total</i>	100 %

To address concerns for uncontrolled development, the county has outlined "Strategies to Manage Growth" in the document, Focus 2020: A County Master Plan, prepared by the Grand Traverse County Planning Department.

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,

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- 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

During Years 1 through 10 of the Planning Period the Plan's Enforceable Program provides for the implementation of the System Alternative 2 as described below, detailed further in Part III of this Plan with additional supporting material provided in Appendix A:

GRAND TRAVERSE COUNTY SYSTEM ALTERNATIVE 2 EXPANDED CLEAN COMMUNITY AND CURBSIDE RECYCLING PROGRAM

Key features include a Comprehensive Clean Community program, operating at a high level of effectiveness in all sectors. Bans on collection/disposal of certain materials as solid waste will kick recycling programs into high gear for increased tonnage and lower unit costs. Incentives to recycle boost program performance, increasing tons and lowering unit costs. The drop-off recycling system is optimized for some cost savings as more convenient recycling opportunities become common. Commercial recycling and C&D (Construction & Demolition) recycling begin to broaden business opportunities for diversion. Yard waste recovery approaches 100% through expanded collection programs and source reduction techniques. A Material Recovery Facility/Transfer Station maximizes system flexibility for cost savings and landfill diversion. Innovative techniques for increasing diversion or reducing system costs are explored building a strong foundation for significantly lower reliance on landfills as primary means of waste management.

Following is a more detailed description of the specific program elements that are part 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:

Clean Community:

Comprehensive solid waste collection services will be made available to all households and businesses in the County. Households in a curbside collection district will receive the service as defined in the County's solid waste ordinance. Strong illegal dumping and litter policing will continue. Spring/fall cleanup days will be provided in an urban service district with scavenging/trading/reuse encouraged. A permanent hazardous waste collection site will be

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provided that services households, agricultural hazardous waste generators and unregulated small quantity hazardous waste generators. Adopt a "____" programs will be organized with volunteers and business/service group sponsorship for periodic cleaning of roadsides, streambanks, lakeshores, parks and forests. Many of these programs are already in place in some parts of the County.

Recycling Incentives:

Proactive education and promotion strategies will encourage responsible solid waste management and strong reduce/reuse/recycle behavior. Pay As You Throw (PAYT) programs will be widespread throughout the County. Recycling collection programs will add more materials to encourage participation by more citizens and businesses. Selected materials (e.g. OCC and ONP) will be banned from collection and disposal as solid waste as part of the County's solid waste ordinance.

Drop-Off Residential Recycling:

The existing network of drop-off sites for recycling will be upgraded, made more permanent and be open 24-hours per day. One or more "flagship" drop-off sites will be staffed, have an educational component, and collect the largest number of types of materials. Small, satellite drop-offs will also be added in high-use tourist areas and parks.

Curbside Residential Recycling:

Two stream commingled curbside recycling will be provided to all residents in an expanded curbside collection district as defined in the County's solid waste ordinance. Steps will be taken to adjust program design and operation to significantly increase participation. Subscription service outside this district will be strongly encouraged.

Residential Yard Waste Composting:

Seasonal weekly yard waste collection as well as fall leaf collection will be provided in an urban service district. Backyard composting will be encouraged through distribution of backyard bins at discount rates expanding on programs that have been run in the past. A similar mulching mower program will encourage grass cycling. Permanent drop-off options for yard waste will be provided throughout the County with one "flagship" site taking all types of yard waste and providing finished compost for distribution to residents and area municipalities. Selected processing of food waste will be included.

Commercial Recycling:

A permanent site will be provided for businesses to drop-off a wide variety of recyclables including commingled containers and commingled paper. A business recycling service district will be established and development of services to businesses within the district will be facilitated (linked to bans on collection and disposal of selected materials as solid waste) through an umbrella contract for the collection services provided by licensed haulers. Services for recycling of construction and demolition waste will continue to grow.

Material Transfer and Processing:

A material recovery facility (MRF) will be made available to all recycling collectors in the system and be integrated with a transfer station for solid waste to allow longer distance waste transfer. The facility will be able to process commingled containers and commingled fibers as well as presorted recyclables like OCC. Commercial recyclables will be able to be tipped at the facility for a reasonable fee that is lower than the tipping fee at area landfills. Mixed loads of commercial solid waste that have a high percentage of recyclable materials will be sorted.

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The MRF will have full waste transfer capabilities for MSW at high compaction rates (900 to 1000 lbs per cy) and be permitted as such through MDEQ.

Disposal:

At the beginning of the planning period the current practice of direct haul to regional landfills will continue. Once construction of the MRF and waste transfer facility is complete, compacting collection vehicles will then primarily haul to the transfer station which then will initially ship waste to landfills in Northern Michigan that offer the most competitive rate. During this period there will be a competitive evaluation of landfill disposal options to service the County's needs, including potential for long term contracts for disposal at predetermined prices, potential "ownership" of a facility that already is in operation or development of a new "green fields" disposal facility either within the County's jurisdiction on a site already owned by the County and identified in this plan for this purpose or outside of the County's jurisdiction at a new site still to be identified. A network of drop-off facilities for solid waste will be available including a "flagship" site that takes other types of waste (bulky, C&D, etc.) with this system preferably located at the same sites as recycling drop-offs and the flagship site located at the MRF/Transfer Station.

AUTHORIZED MANAGEMENT COMPONENT

The Selected Alternative as described above is established by this Plan as the Plan's Enforceable Program defining the Grand Traverse 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 including the County's solid waste ordinance, system of intergovernmental agreements, contractual arrangements for plan implementation and all related features.

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 the selected alternative including the construction of the MRF/Transfer Station and other aspects 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.
- A supporting network of service contract arrangements will be used to achieve Plan goals, structured to be compatible with and supportive of the County's solid waste ordinance #17 and the licensing and facility designation features of that ordinance.

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- A supporting revenue generating system will be developed that provides an additional funding source for a system enterprise fund in order to cover strategic capital requirements of the Selected Alternative.
- Other supporting mechanisms will be used to organize and direct resources towards implementing the Selected Alternative and other aspects of the Plan's Enforceable Program.

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 implemented 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 Office of Solid Waste as Implementation Agency	1999
2) Designate Solid Waste Council as Imp. Oversight Committee	1999
3) Develop/Adopt Implementation Action Plan	1999
4) Amend Intergovernmental Agreements/Ordinance/Rules/Regs	1999
5) Preliminary Program Specifications for Planned Programs	1999
6) Establish Budgets for Planned Programs	1999
7) Determine Ownership/Operation Arrangements for MRF/TS	1999
8) Finalize Funding Structure and Mechanisms	1999
9) Engineer, design & construct transfer station/MRF	1999/2000
10) Initiate all outreach/education programs	1999/2000
11) Procure all other system improvements	1999/2000
12) Final Implementation of Funding Mechanisms	1999/2000
13) Trigger Ban on Selected Items from Landfill Disposal	2000-2008
14) Negotiate/Adhere to Contract for Disposal Capacity	2000-2003
15) Evaluation of Options for Long Term Disposal Capacity	2000-2003
16) Implement Options for Long Term Disposal Capacity	2002-2008
17) Data Tracking to Assess Program Performance	Annual/Ongoing
18) Update Implementation Action Plan	Annual/Ongoing

I-2 INTRODUCTION

To comply with Part 115 and its requirements, the Grand Traverse 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 Grand Traverse County Plan's Enforceable Program and Process as adopted by the Solid Waste Planning Committee follow.

Goal 1. Develop Capacity to manage 100% of the organic waste in Grand Traverse County.

replaced by Amendment

2011-2, pages 10-11

- Objective 1.1. Develop guidelines for optimum usage of sludge in the production of a ton post soil amendment.
- Objective 1.2. Determine the regulatory parameters for the development and operational needs of compost management
- Objective 1.3. Provide public education to citizens about what materials may be composted, the benefits and various opportunities for composting organic materials.
- Objective 1.4. Select a source with established timeframe/benchmarks success criteria that will indicate a finished quality compost and provide to the public.
- Objective 1.5. Determine ownership/operation of various composting facilities to adequately manage 100% of the County's organic residuals.
- Objective 1.6. Develop procurement specifications for the use of compost for a variety of applications.
- Objective 1.7. Develop organic waste handling strategies for business, institutional, and residential organic food waste materials.

Goal 2. Establish competitive waste management services for Grand Traverse residents and businesses.

- Objective 2.1. Research comparable community costs for trash and recycling collection and processing.
- Objective 2.2. Define what legal/management alternative options for the Grand Traverse County has to encourage competitive waste services.
- Objective 2.3. Facilitate cost effective partnership with the County/Municipalities and the waste handling industry.
- Objective 2.4. Assess if contracting for services will provide an adequate level of solid waste, recycling, composting, HHW, and bulk material collection to meet the needs of Grand Traverse County.
- Objective 2.5. Provide public education on available services.
- Objective 2.6. Implement a coordinated waste handling system.

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Goal 3. No Illegal Dumping - provide a system to eliminate illegal dumping and enforce litter regulations.

- Objective 3.1. Provide public education on the costs of illegal dumping, economical accessible options as well as fines and penalties.
- Objective 3.2. Identify locations of illegal dumping and what materials are most often discarded as well as what legal methods (recycling, composting, reuse or disposal) of material management exist.
- Objective 3.3. Ensure enforcement resources are available to preserve and protect our environment.
- Objective 3.4. Develop partnership with MDNR's adopt a forest program to minimize dumping of waste on public lands.
- Objective 3.5. Review and strengthen the County Solid Waste Ordinance with stiff penalties for non-compliance.

Goal 4. Provide opportunities to encourage local manufacturing

- Objective 4.1. Economic incentives - promote the procurement of recycled products purchased by local government and businesses by encouraging the option to adopt a policy which encourages the purchase of recycled products that meet building codes and performance standards, work with local economic development organizations to recruit local manufacturing business development.
- Objective 4.2. Develop construction specification requirements for commercial development, home buyers and builders which preference remanufactured products for remodeling and new construction.
- Objective 4.3. Identify the product categories and/or materials for reuse prior to recycling and composting.
- Objective 4.4. Provide public education - on recycled and reusable product procurement opportunities, specifications, and performance throughout the community.

Goal 5. Develop a method for establishing adequate Solid Waste Management Facilities.

- Objective 5.1. Develop siting criteria for landfills, transfer stations, recycling centers, and composting facilities.
- Objective 5.2. Identify primary/secondary designated disposal facilities, transfer stations, recycling processing
- Objective 5.3. Identify inventory of suitable sites.

Goal 6. Provide disposal opportunities for households, small quantity generators and agricultural hazardous materials.

- Objective 6.1. Provide facilities and/or services that manage disposal of household hazardous waste (HHW), small quantity generators (SQG), and agricultural pesticide materials.

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- Objective 6.2. Develop adequate funding for the disposal of hazardous waste.
- Objective 6.3. Provide public education throughout the community on non-hazardous alternatives, plus the hazards of improperly handling certain types of products.
- Objective 6.4. Identify material types that may cause hazards to individuals and the community if improperly handled.

Goal 7. Provide adequate revenues to fund County Solid Waste programs.

- Objective 7.1. Modify the County Ordinance to collect fines from illegal dumping that will support Solid Waste programs.
- Objective 7.2. Develop a system that will make people financially responsible for their waste materials.
- Objective 7.3. Increase surcharges at designated disposal facilities to meet the growing demand for services.
- Objective 7.4. Research other legal revenue sources.

Goal 8. Create an educated public where citizens are aware of, and understand Solid Waste Management issues.

- Objective 8.1. Promote waste reduction opportunities throughout the community.
- Objective 8.2. Promote reuse and resale opportunities throughout the community.
- Objective 8.3. Provide instructional training programs on solid waste management to all educators in the local school system.
- Objective 8.4. Provide solid waste management information to all students in the educational system.
- Objective 8.5. Develop a strategy to communicate information effectively through a variety of communication channels such as; public access, press, radio, television and outreach opportunities.
- Objective 8.6. Maintain an office and staff to adequately meet the public demand for information regarding solid waste issues.
- Objective 8.7. Implement plan.

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:

- County Business Patterns
- Northwest Michigan Council of Governments Population Study
- Grand Traverse County Planning Department
- Grand Traverse County Solid Waste and Recycling Office

RESIDENTIAL WASTE GENERATION

Residential solid waste data was calculated by the consultant, Resource Recycling Systems, Inc. using the rate of between 2.6 and 3.5 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. 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
Acme township	2,735	3,063	3,283
Blair township	2,774	3,105	3,327
East Bay township	5,704	6,383	6,837
Fife Lake village	204	225	237
Balance of Fife Lake township	447	465	463
Garfield township	8,398	9,444	10,166
Grant township	394	442	473
Green Lake township	1,971	2,226	2,406
Long Lake township	3,160	3,539	3,793
Mayfield township	509	568	607
Kingsley village	387	431	460
Balance of Paradise township	935	1046	1120
Peninsula township	2295	2570	2755
Traverse City *	12,471	12,347	11,701
Union township	135	151	162
Whitewater township	965	1081	1158
<i>Grand Traverse County Total</i>	43,483	47,084	48,949

**population numbers for Traverse City and thus solid waste generation rates were projected to decline, according to the population trends calculated from past experience; it should be noted, however, the actual numbers may increase as heavy growth in the area is experienced.*

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 Grand Traverse 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 United 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 by SIC

SIC	SIC Description	## of employees (1995)*	lbs/person/day	Tons/year (1995)
0700-0999	Agriculture, Forestry, Fishing	179	5	116
1000-1499	Mining	575	4	299
1500-1999	Construction	2,558	23	7,648
2000-3999	Manufacturing	5,680	19	14,030
4000-4999	Transportation/Public Utilities	1,344	5	874
5000-5199	Wholesale trade	1,628	12	2,540
5200-5999	Retail trade	9,825	12	15,327
6000-6999	Finance, Insurance, Real Estate	1,916	16	3,985
7000-7999	Services	12,949	8	13,467
99--	Unclassified establishments	168	6	131
		36,822	12.20	58,417
		<i>Total</i>	<i>Average</i>	<i>Total</i>

*from 1995 County Business Patterns Data

SPECIAL WASTE STREAMS

Sewage sludge is generated by the municipalities of Traverse City, Kingsley and Fife Lake. Currently, the Traverse City facility serves approximately 33 percent of the population of the County, with growth in treatment needs increasing by approximately 4% per year. Sludge generated by the facility is currently land applied (injection), although composting is a future consideration. Kingsley is currently formulating a plan for sludge management and is in the process of going out for bids. At present, none of the wastewater treatment plants has any plans to landfill or incinerate sludge.

Table II-3: Special Waste Streams

Source	Material	Tons per year	Tons landfilled
City of Traverse City	Sewage sludge	4 mil gal/year	0
Kingsley	Sewage sludge	n.a.	0
Fife Lake	Sewage sludge	n.a.	0

MAJOR WASTE GENERATORS

Grand Traverse County continue to experience growth in the business sector, particularly retail, while recycling opportunities remain somewhat limited. Local waste haulers do offer collection services for corrugated cardboard and office paper, however, these collection programs to date have not diverted a significant amount of waste. Some businesses provide their own recovery services through backhaul arrangements with distributors, including groceries and other retailers such as Target. A few small and medium sized businesses haul corrugated directly to the United Waste processing facility in Traverse City. Table II-4 a is a list of major business and industrial waste generators in the County.

Table II-4 a: Major Waste Generators in Grand Traverse County

Generator	Location	Type
Cherry Growers	Traverse City	Growers coop
United Technologies	Traverse City	Manufacturer
Munson Medical Center	Traverse City	Hospital
Record Eagle	Traverse City	Printer
Noverr Publishing Inc.	Traverse City	Printer
Northwestern Michigan College	Traverse City	University
Traverse City Area Public Schools	Traverse City	Schools
Grand Traverse Mall	Garfield Twp.	Retail
Sara Lee	Garfield Twp.	Manufacturer

WASTE GENERATION

Waste generation is shown in Table II-4 b below. 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-4 b: Total Quantity of Solid Waste Generated

Sector	1998 Tons Generated	2003 Tons Generated	2008 Tons Generated
Residential	43,483	37,543	39,194
Commercial	46,531	49,955	53,390
Industrial	14,707	15,789	16,875
<i>Grand Traverse County Total</i>	104,722	112,828	119,215

DATA BASE

Total waste generation for 1998 was projected and compared to actual 1997 landfill disposal statistics for Grand Traverse County waste plus actual recovery (recycling plus composting). Recovery (recycling and composting) was projected for the future by 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. Actual recovery for 1997 was reported to be 5,959 tons of residential recyclables (through drop-off and curbside programs); 6,000 tons of commercial/industrial recovery, and 2,510 tons of yard waste composted.

Table II-5: Total Quantity of Solid Waste Needing Disposal

Sector	1998 Tons Disposed	2003 Tons Disposed	2008 Tons Disposed
Residential	35,014	33,384	31,324
Commercial/Industrial	55,238	52,595	52,699
<i>Grand Traverse County Total</i>	90,252	85,979	84,023

II-2 SOLID WASTE DISPOSAL AREAS

The following is an inventory and description of all solid waste disposal areas within the County or to be utilized by the County to meet its disposal needs for the planning period.

- Peninsula Township Transfer Station
- East Bay Township Transfer Station
- Ken's Transfer Station (WMI aka USA/United)
- Ken's Type III Landfill (WMI aka USA/United)
- Cedar Ridge Landfill (WMI)
- Manistee County Landfill (Allied/aka Harland's)
- Glen's Landfill (WMI aka USA/United)

Descriptions of these facilities follow.

Note that additional facilities outside the region have been identified for potential use and are included in the export authorization tables in Section III.

**Section II-2 has been
replaced by Amendment
2011-2, page 12**

II-3 SOLID WASTE FACILITY DESCRIPTIONS**FACILITY DESCRIPTIONS**Facility Type: Type B Transfer StationFacility Name: East Bay Township Transfer StationCounty: Grand Traverse Location: Town T27N Range R10W Section(s) 34Map identifying location included in Attachment Section: Yes NoIf facility is an Incinerator or a Transfer Station, list the final disposal site and location for
Incinerator ash or Transfer Station waste: YES Waters Landfill or Clerk's Landfill

**Section II-3 has been
replaced by Amendment
2011-2, pages 13-29**

x Public Private Owner: East Bay Township (on state land)

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

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

Total area of facility property:	<u>30</u>	acres
Total area sited for use:	<u>not avail.</u>	acres
Total area permitted:	<u> </u>	acres
Operating:	<u> </u>	acres
Not excavated:	<u> </u>	acres

Current capacity:	<u> </u>	
Estimated lifetime:	<u> </u>	years
Estimated days open per year:	<u>150</u>	days
Estimated yearly disposal volume:	<u>5,140</u>	compacted cubic yards
	<u>+ 2,906</u>	loose C&D cubic yards

(if applicable)

Annual energy production:

Landfill gas recovery projects:	<u>N.A.</u>	megawatts
Waste-to-energy incinerators:	<u>N.A.</u>	megawatts

DATA BASE

FACILITY DESCRIPTIONS

Facility Type: Type B Transfer Station

Facility Name: Peninsula Township Transfer Station

County: Grand Traverse Location: Town T29N Range R10W Section(s) NE1/4 of 28

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

x Public Private Owner: Peninsula Township

Operating Status (check) Waste Types Received (check all that apply)

<u>x</u> _____	open	<u>x</u> _____	residential
<u> </u> _____	closed	<u> </u> _____	commercial
<u> </u> _____	licensed	<u> </u> _____	industrial
<u>NA</u> _____	unlicensed	<u> </u> _____	construction & demolition
<u> </u> _____	construction permit	<u> </u> _____	contaminated soils
<u> </u> _____	open, but closure pending	<u> </u> _____	special wastes *
			other: <u> </u>

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

Site Size:

Total area of facility property: 2.1 acres
Total area sited for use: not avail. acres
Total area permitted:
 Operating: acres
 Not excavated: acres

Current capacity:
Estimated lifetime: years
Estimated days open per year: 104 days
Estimated yearly disposal volume: not avail.

(if applicable)

Annual energy production:
 Landfill gas recovery projects: N.A. megawatts
 Waste-to-energy incinerators: N.A. megawatts

DATA BASE

FACILITY DESCRIPTIONS

Facility Type: Type A Transfer Station (operated as Type B)

Facility Name: Ken's Landfill Transfer Station

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

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

 Public x Private Owner: Waste Management, Inc.

Operating Status (check) Waste Types Received (check all that apply)

<u> x </u>	open	<u> x </u>	residential
<u> </u>	closed	<u> x </u>	commercial
<u> x </u>	licensed	<u> </u>	industrial
<u> </u>	unlicensed	<u> </u>	construction & demolition
<u> </u>	construction permit	<u> </u>	contaminated soils
<u> </u>	open, but closure pending	<u> </u>	special wastes *
		<u> </u>	other: <u> </u>

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

Site Size:

Total area of facility property: part of landfill site acres

Total area sited for use: acres

Total area permitted: acres

Operating: acres

Not excavated: acres

Current capacity:

Estimated lifetime: years

Estimated days open per year: 240 days

Estimated yearly disposal volume: not avail.

(if applicable)

Annual energy production:

Landfill gas recovery projects: N.A. megawatts

Waste-to-energy incinerators: N.A. 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)

X open
 closed
X licensed
 unlicensed
 construction permit
 open, but closure pending

Waste Types Received (check all that apply)

 residential
 commercial
 industrial
X construction & demolition
 contaminated soils
 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:
 Operating: 6.0 acres
 Not excavated: 1.0 acres

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

(if applicable)

Annual energy production:
 Landfill gas recovery projects: N.A. megawatts
 Waste-to-energy incinerators: N.A. megawatts

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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)

open
 closed
 licensed
 unlicensed
 construction permit
 open, but closure pending

Waste Types Received (check all that apply)

residential
 commercial
 industrial
 construction & demolition
 contaminated soils
 special wastes *
 other:

* Explanation of special wastes, including a specific list and/or conditions:
Asbestos (non-friable)

Site Size:

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

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

(if applicable)

Annual energy production:

Landfill gas recovery projects:	<u>N.A.</u>	megawatts
Waste-to-energy incinerators:	<u>N.A.</u>	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)

X open
 closed
X licensed
 unlicensed
 construction permit
 open, but closure pending

Waste Types Received (check all that apply)

X residential
X commercial
X industrial
X construction & demolition
X contaminated soils
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:	<u>120</u>	acres
Total area sited for use:	<u>40</u>	acres
Total area permitted:	<u>40</u>	acres
Operating:	<u>21</u>	acres
Not excavated:	<u>0</u>	acres

Current capacity:	<u>370,000</u>	bank cubic yards
Estimated lifetime:	<u>2.5</u>	years
Estimated days open per year:	<u>260</u>	days
Estimated yearly disposal volume:	<u>311,000</u>	gate cubic yards

(if applicable)

Annual energy production:		
Landfill gas recovery projects:	<u>N.A.</u>	megawatts
Waste-to-energy incinerators:	<u>N.A.</u>	megawatts

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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)

x open
 closed
x licensed
 unlicensed
x construction permit
 open, but closure pending

Waste Types Received (check all that apply)

x residential
x commercial
x industrial
x construction & demolition
x contaminated soils
x special wastes *
 other:

* Explanation of special wastes, including a specific list and/or conditions:
not avail.

Site Size:

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

Current capacity:	<u>8,200,000</u> bank cubic yards
Estimated lifetime:	<u>>20</u> years
Estimated days open per year:	<u>313</u> days
Estimated yearly disposal volume:	<u>320,000</u> gate cubic yards

(if applicable)

Annual energy production:	
Landfill gas recovery projects:	<u>NA</u> megawatts
Waste-to-energy incinerators:	<u>NA</u> megawatts

II-4 SOLID WASTE COLLECTION SERVICES AND TRANSPORTATION INFRASTRUCTURE

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

Grand Traverse County in 1992, adopted an ordinance governing the management of solid waste in the County. It requires the licensing of waste haulers as well as the designation, development, and utilization of certain facilities to be used for the recovery, processing, composting, recycling and disposal of solid waste and other materials. By Ordinance, the BPW issues long term designated facility agreements and annual operating licenses for waste hauling. It requires haulers to provide regularly scheduled curbside pickup services for yard waste and recyclables on a "targeted materials list" from all residences with a designated curbside recycling district (primarily the greater Traverse City area). Haulers may charge for this service, however, meaning individual households must subscribe to receive service. Haulers must also provide recycling collection services to businesses wishing to recycle. Fees for service must be volume-based.

Section II-4 has been replaced by Amendment 2011-2, pages 30-31

Table II-6: Solid Waste Collection Services

Service Provider	Service Type	Service Area	Disposal Facility
Waste Management, Inc. (aka: USA Waste, United Waste Systems)	Residential, Commercial, Industrial	County-wide	Glen's LF (WMI)
Dave's Pickup	Residential	SW County	Glen's LF (WMI)
Northern Disposal	Commercial	Countywide	Glen's LF (WMI)

Table II-7: Recycling Collection Services

Service Provider	Service Type	Service Area	Recycling Facility
Waste Management, Inc. (aka: USA Waste, United Waste Systems)	Subscription curbside, drop-off; some commercial corrugated and office paper routes	Curbside district and county-wide drop-off system	Waste Management, Inc. MRF
Construction Waste Recycling	Recycling services for construction and demolition sites	County-wide	CWR
Grand Traverse County Drop-off Network - Serviced by Waste Management, Inc. aka United Waste	Drop-offs @ Peninsula Township, Acme Township, East Bay Township, Kingsley, Blair Township, Ken's Pick-up Service, Fife Lake Township, Record-Eagle Production Facility	County-wide	Waste Management, Inc. MRF
Builder's Waste Recycling	Construction/demolition recycling	County-wide	BWR

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Table II-8: Yard Waste Collection Services

Service Provider	Service Type	Compost Facility
Anderson Outdoor Services	Landscaping	
Anderson's A-Z	Landscaping	
Authentic Lawn & Tree Services	Landscaping	
Zimmerman Landscaping	Landscaping	
Cherryland Lawncare	Landscaping	
Clearbrook Companies	Landscaping	
Grand Traverse Organic	Landscaping	
Green Grasshoppers	Landscaping	
Landscape Management/USA	Landscaping	
Lawn Jockey	Landscaping	
Livengood Outdoor Service	Landscaping	
Northern Green Lawn	Landscaping	
Rainbow Maintenance	Landscaping	
Thorpe-Lehman	Landscaping	
Amon Farm Market	Yard waste drop-off	Land applied
Waste Management (aka USA/United)	Yard waste drop-off	Private compost site
Ken's Pickup Service	Yard waste drop-off	Private compost site
Garden Goods	Yard waste drop-off	Private compost site
Grand Traverse Co. Drop-off	Yard waste drop-off	County compost facility
Peninsula Twp Drop-off	Yard waste drop-off	Farm site
East Bay Township Compactor Station	Yard waste drop-off	Land applied

Traverse City currently operates a yard waste compost facility, where it processes approximately 50,000 cubic yards of yard waste each year. The site consists of yard waste placed in windrows which are turned by a wildcat turner. Finished compost (about 4-8,000 cubic yards per year) is screened on the site and sold wholesale to three local retail outlets. Grand Traverse County also owns and operates a tub grinder, processing brush, and other contract wood such as demolition and construction materials. Material from the county's network of public drop-off sites is also processed at the County site.

II-5 EVALUATION OF DEFICIENCIES AND PROBLEMS

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

Overall, the County has experienced a dramatic decline in the availability of competitive solid waste collection services, with one hauler providing more than 98% of all service in the County. This is due in part to recent acquisitions of smaller haulers, as well as continued consolidation of the larger, traditional waste management companies.

This lack of competitive services has resulted in higher costs of service to the residential, commercial, industrial and institutional sectors in the County. Although the County's solid waste ordinance provides a sound foundation for maintaining a prescribed level of service it is not well equipped as it currently is structured to address the problem of lack of competition. A related deficiency is the way that volume-based fees are handled locally, which has meant residents lack a strong incentive to reduce waste.

Section II-5 has been replaced by Amendment 2011-2, page 32

Access to recycling services is a concern, in spite of the establishment of the designated curbside district. Contrary to intent of the ordinance, residents still must sign up and pay extra for this service and many elect to use drop-off stations instead of curbside recycling despite the availability of the service.

The ability of the existing recycling processing facility to handle growing volumes of recyclables is also an area of considerable deficiency. The facility is at or near capacity and also lacks basic capabilities to sort commingled fibers, to store tipped material prior to processing and to store finished product prior to shipping. These deficiencies will constrain expansion of recycling programs, preventing access to certain end-markets, limiting the addition of any new materials and limiting capability to service additional residential and commercial customers as well as special event recycling (such as at the National Cherry Festival). Population growth in the region will further aggravate this problem.

Traverse City's compost facility may also be unable to grow with the local population, and certainly lacks the ability to service any communities beyond what it currently handles. While some local orchards and landscapers have absorbed some of the yard waste collected beyond the scope of Traverse City, a good long-term approach to regional composting is lacking.

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

Table II-9 below shows the permanent population of Grand Traverse County projected through the planning period. These figures include additional adjustments for seasonal population change were made (but not shown here) using a monthly multiplier for each jurisdiction ranging from 1.1 (January) to 1.36 (August). Adjusted population totals were multiplied by a per capita generation rate as shown in Table II-1.

Table II-9: Grand Traverse County Permanent Population

Municipality	1990 Population	1998 Projected	2003 Projected	2008 Projected
Acme township	3447	4157	4571	4991
Blair township	5249	6326	6951	7587
East Bay township	8307	10005	10991	11992
Fife Lake village	394	464	503	541
Balance of Fife Lake township	950	1019	1041	1056
Garfield township	10516	12766	14094	15454
Grant township	745	899	988	1080
Green Lake township	3677	4495	4983	5488
Long Lake township	5977	7206	7922	8649
Mayfield township	967	1160	1272	1384
Kingsley village	738	883	965	1049
Balance of Paradise township	1770	2131	2341	2554
Peninsula township	4340	5233	5753	6282
Traverse City *	15116	14967	14547	14043
Union township	255	308	338	369
Whitewater township	1825	2201	2419	2641
<i>Grand Traverse County Total</i>	64273	74220	79680	85160

**although past population trends showed an actual decrease in Traverse City's population, local planners predict population through infill will actually increase*

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Table II-10 below shows how the population of the county increases seasonally. By the height of the tourist season, (late summer), it has been estimated that the county experiences a population swell by an additional 39%.

Table II-10: Seasonal population change

Municipality	1998 pop	Peak Gain/Mo. (+39%)	Peak Population
Acme township	4,171	1,627	5,798
Blair township	6,347	2,475	8,823
East Bay township	10040	3,915	13,955
Fife Lake village	466	182	647
Balance of Fife Lake township	1022	399	1421
Garfield township	12,810	4,996	17,806
Grant township	902	352	1,254
Green Lake township	4,510	1,759	6,269
Long Lake township	7,231	2,820	10,051
Mayfield township	1,164	454	1,618
Kingsley village	886	345	1,231
Balance of Paradise township	2,139	834	2,973
Peninsula township	5,251	2,048	7,300
Traverse City (pt.)	15,019	5,857	20,876
Union township	309	120	429
Whitewater township	2208	861	3069
<i>Grand Traverse County Total</i>	<i>74,476</i>	<i>29,045</i>	<i>103,521</i>

Sources; U.S. Bureau of Census data, USA Counties - Grand Traverse.

II-7 LAND DEVELOPMENT

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

Grand Traverse County is approximately 466 square miles in size and features a wealth of natural resources, including lakes, forests, agricultural land and urban areas. The County's beauty has resulted in rapid growth in tourism, housing and commerce.

It has been estimated that development in the next twenty five years has the potential to sprawl over 188 square miles of the county. This represents 40% of the total county area. Much of this is due to an estimated growth trend, which estimates the population for the county will double over that same time frame. New private housing unit permits were granted at an average rate of 528 per year from 1979 to 1994. Other changes include the County as a growing commerce center for the entire northern Michigan region. This growth is having an impact on land use, as well as the generation of solid waste.

If total population does almost double in the next 25 years as has been estimated, it will add about 2,300 more people in the county on average per year. These new residents will need housing and other infrastructure services as well as jobs. Employment, as reported to by the U.S Bureau of the Census, shows the civilian labor force in 1990 was 35,814 employees, an increase of 53% since 1975. Accordingly, unemployment dropped from 10.4% in 1975 to 7.0% in 1990. Of total employees in 1990, Agriculture, Forestry and Fisheries accounted for only 3.3% of the total labor force. If population continues to grow as projected, land not in use for agricultural services will be utilized to support the growing population. The county has outlined "Strategies to Manage Growth" in the document, Focus 2020: A County Master Plan, prepared by the Grand Traverse County Planning Department.

According to the U.S. Census bureau, land in farms as a percent of that total is 22%, or approximately 93 square miles of farm land. The total number of farms declined 16% from 1978 to 1994, from 487 farms to 409. Overall the change in agricultural land use over that period was a loss in 14 square miles.

Following is a characterization of land use for the County under current conditions.

Land Use Type	% County Land
Surface Water	6 %
Developed Land	18 %
Public Open Space	21 %
Agriculture	22 %
Private Open Space	33 %
<i>Grand Traverse County Total</i>	100 %

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. Certain waste management technologies, incineration, for example, were determined based on historical data for the region to not be economically and technically appropriate for further analysis.

The DPA and SWPC then reviewed a set of remaining 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 Grand Traverse 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,

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- be enforceable, and
- set measurable goals that can be tracked to determine progress.

System Alternatives "A" , "B" & "C" were 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 significant diversion of solid waste from landfill disposal during the planning period. System Alternative "F" was 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 ("D" and "E") were further developed as GTC System Alternative 1 and GTC System Alternative 2, as described below, for further consideration in the strategic planning process.

GRAND TRAVERSE COUNTY SYSTEM ALTERNATIVE 1:

Expanded Clean Community and Curbside Recycling Program is adapted from System Option D. 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 at a flagship site increase options for recovering more materials. Curbside programs for cities, villages and towns increase convenience for a large sector of population. Commercial recycling and recycling processing capabilities mature and increase diversion. Organics management options exist throughout year with addition of drop-offs for yard waste.

GRAND TRAVERSE COUNTY SYSTEM ALTERNATIVE 2:

Expanded Clean Community and Comprehensive Recycling Program is adapted from System Option E. Key features include a comprehensive Clean Community program operating at high level of effectiveness in all sectors. Bans of certain materials at landfill (or transfer station) kick recycling programs into high gear for increased tonnage and lower unit costs. Incentives to recycle will boost program performance, increasing tons and lowering unit costs. Drop-off recycling system optimized for some cost savings as more convenient recycling opportunities become common. Commercial recycling and C&D recycling begin to broaden business opportunities for diversion. 100% of yard waste is diverted from landfill disposal through collection programs or source reduction techniques. Material Recovery Facility/Transfer Station maximized system flexibility for cost savings and landfill diversion. Innovative techniques for increasing diversion or reducing system costs are explored building a strong foundation for significantly lower reliance on landfills as primary means of waste management.

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 "GTC System Alternative 2" was the optimum choice as the Selected Alternative for the Plan's Enforceable Program. This Selected Alternative is described briefly below and in the balance of the Plan with further detail provided in Appendix A of the

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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.

THE PLAN'S SELECTED ALTERNATIVE

During Years 1 through 10 of the Planning Period the Plan's Enforceable Program provides for the implementation of the System Alternative 2 as described below, detailed further in Part III of this Plan with additional supporting material provided in Appendix A:

GRAND TRAVERSE COUNTY SYSTEM ALTERNATIVE 2 EXPANDED CLEAN COMMUNITY AND CURBSIDE RECYCLING PROGRAM

Key features include a Comprehensive Clean Community program, operating at a high level of effectiveness in all sectors. Bans on collection/disposal of certain materials as solid waste will kick recycling programs into high gear for increased tonnage and lower unit costs. Incentives to recycle boost program performance, increasing tons and lowering unit costs. The drop-off recycling system is optimized for some cost savings as more convenient recycling opportunities become common. Commercial recycling and C&D recycling begin to broaden business opportunities for diversion. Yard waste recovery approaches 100% through expanded collection programs and source reduction techniques. A Material Recovery Facility/Transfer Station maximizes system flexibility for cost savings and landfill diversion. Innovative techniques for increasing diversion or reducing system costs are explored building a strong foundation for significantly lower reliance on landfills as primary means of waste management.

III-1 THE SELECTED SOLID WASTE MANAGEMENT SYSTEM

The Selected Solid Waste Management System (Selected System) is a comprehensive approach to managing Grand Traverse 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 rules 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 the County has selected a system alternative that builds off of Alternative 2, modified to tailor the program specific to the County's needs and phased in to allow system development to take place for the complete 10 year planning period.

During Years 1 through 10 of the Planning Period the County will phase in System Alternative 2 modified as follows:

GRAND TRAVERSE COUNTY SYSTEM ALTERNATIVE 2 EXPANDED CLEAN COMMUNITY AND CURBSIDE RECYCLING PROGRAM

Key features include a Comprehensive Clean Community program, operating at a high level of effectiveness in all sectors. Bans on collection/disposal of certain materials as solid waste will kick recycling programs into high gear for increased tonnage and lower unit costs. Incentives to recycle boost program performance, increasing tons and lowering unit costs. The drop-off recycling system is optimized for some cost savings as more convenient recycling opportunities become common. Commercial recycling and C&D recycling begin to broaden business opportunities for diversion. Yard waste recovery approaches 100% through expanded collection programs and source reduction techniques. A Material Recovery Facility/Transfer Station maximizes system flexibility for cost savings and landfill diversion. Innovative techniques for increasing diversion or reducing system costs are explored building a strong foundation for significantly lower reliance on landfills as primary means of waste management.

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 Grand Traverse 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:

Clean Community:

Comprehensive solid waste collection services will be made available to all households and businesses in the County. Households in a curbside collection district will receive the service as defined in the County's solid waste ordinance. Strong illegal dumping and litter policing will continue. Spring/fall cleanup days will be provided in an urban service district with scavenging/trading/reuse encouraged. A permanent hazardous waste collection site will be provided that services households, agricultural hazardous waste generators and unregulated

SELECTED SYSTEM

small quantity hazardous waste generators. Adopt a "____" programs will be organized with volunteers and business/service group sponsorship for periodic cleaning of roadsides, streambanks, lakeshores, parks and forests. Many of these programs are already in place in some parts of the County.

Recycling Incentives:

Proactive education and promotion strategies will encourage responsible solid waste management and strong reduce/reuse/recycle behavior. Pay As You Throw (PAYT) programs will be widespread throughout the County. Recycling collection programs will add more materials to encourage participation by more citizens and businesses. Selected materials (e.g. OCC and ONP) will be banned from collection and disposal as solid waste as part of the County's solid waste ordinance.

Drop-Off Residential Recycling:

The existing network of drop-off sites for recycling will be upgraded, made more permanent and be open 24-hours per day. One or more "flagship" drop-off sites will be staffed, have an educational component, and collect the largest number of types of materials. Small, satellite drop-offs will also be added in high-use tourist areas and parks.

Curbside Residential Recycling:

Two stream commingled curbside recycling will be provided to all residents in an expanded curbside collection district as defined in the County's solid waste ordinance. Steps will be taken to adjust program design and operation to significantly increase participation. Subscription service outside this district will be strongly encouraged.

Residential Yard Waste Composting:

Seasonal weekly yard waste collection as well as fall leaf collection will be provided in an urban service district. Backyard composting will be encouraged through distribution of backyard bins at discount rates expanding on programs that have been run in the past. A similar mulching mower program will encourage grass cycling. Permanent drop-off options for yard waste will be provided throughout the County with one "flagship" site taking all types of yard waste and providing finished compost for distribution to residents and area municipalities. Selected processing of food waste will be included.

Commercial Recycling:

A permanent site will be provided for businesses to drop-off a wide variety of recyclables including commingled containers and commingled paper. A business recycling service district will be established and development of services to businesses within the district will be facilitated (linked to bans on collection and disposal of selected materials as solid waste) through an umbrella contract for the collection services provided by licensed haulers. Services for recycling of construction and demolition waste will continue to grow.

Material Transfer and Processing:

A material recovery facility (MRF) will be made available to all recycling collectors in the system and be integrated with a transfer station for solid waste to allow longer distance waste transfer. The facility will be able to process commingled containers and commingled fibers as well as presorted recyclables like OCC. Commercial recyclables will be able to be tipped at the facility for a reasonable fee that is lower than the tipping fee at area landfills. Mixed loads of commercial solid waste that have a high percentage of recyclable materials will be sorted. The MRF will have full waste transfer capabilities for MSW at high compaction rates (900 to 1000 lbs per cy) and be permitted as such through MDEQ.

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Disposal:

At the beginning of the planning period the current practice of direct haul to regional landfills will continue. Once construction of the MRF and waste transfer facility is complete, compacting collection vehicles will then primarily haul to the transfer station which then will initially ship waste to landfills in Northern Michigan that offer the most competitive rate. During this period there will be a competitive evaluation of landfill disposal options to service the County's needs, including potential for long term contracts for disposal at predetermined prices, potential "ownership" of a facility that already is in operation or development of a new "green fields" disposal facility either within the County's jurisdiction on a site already owned by the County and identified in this plan for this purpose or outside of the County's jurisdiction at a new site still to be identified. A network of drop-off facilities for solid waste will be available including a "flagship" site that takes other types of waste (bulky, C&D, etc.) with this system preferably located at the same sites as recycling drop-offs and the flagship site located at the MRF/Transfer Station.

The remainder of the descriptions that follow cover, as required by the Plan Format, 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 Efforts, 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

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

III-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

IMPORTING COUNTY	EXPORTING COUNTY	FACILITY NAME ¹	AUTHORIZED QUANTITY/ DAILY	AUTHORIZED QUANTITY/ ANNUAL	AUTHORIZED CONDITIONS ²
Grand Traverse	Mecosta	NA			HHW and recycling in place
Grand Traverse	Leelanau	NA	NA	NA	HHW and recycling in place
Grand Traverse	Manistee	NA	NA	NA	HHW and recycling in place
Grand Traverse	Crawford	NA	NA	NA	HHW and recycling in place
Grand Traverse	Benzie	NA	NA	NA	HHW and recycling in place
Grand Traverse	Antrim	NA	NA	NA	HHW and recycling in place

_____ 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
Grand Traverse	Leelanau	Ken's Landfill	NA	NA	*
Grand Traverse	Manistee	Ken's Landfill	NA	NA	*
Grand Traverse	Crawford	Ken's Landfill	NA	NA	*
Grand Traverse	Mecosta	Ken's Landfill	NA	NA	*
Grand Traverse	Antrim	County Selected Site	*	*	*
Grand Traverse	Benzie	County Selected Site	*	*	*
Grand Traverse	Charlevoix	County Selected Site	*	*	*
Grand Traverse	Crawford	County Selected Site	*	*	*
Grand Traverse	Emmet	County Selected Site	*	*	*
Grand Traverse	Kalkaska	County Selected Site	*	*	*
Grand Traverse	Leelanau	County Selected Site	*	*	*
Grand Traverse	Manistee	County Selected Site	*	*	*
Grand Traverse	Missaukee	County Selected Site	*	*	*
Grand Traverse	Wexford	County Selected Site	*	*	*
Grand Traverse	Montmorency	County Selected Site	*	*	*
Grand Traverse	Oscoda	County Selected Site	*	*	*
Grand Traverse	Cheboygan	County Selected Site	*	*	*
Grand Traverse	Otsego	County Selected Site	*	*	*

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

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Table 1-B Attachments Section

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

* Condition for Future Imports to Ken's Landfill:

Only Type III construction and demolition waste may be imported for disposal at Ken's Landfill.

* Condition for Future Imports to the County Selected Site:

Up to 100% of Type II and Type III solid waste will be able to be imported from a listed county to a future landfill to be located at the County Selected Site (see Siting Review Procedures Section) and then only if the exporting county and Grand Traverse County sign an intergovernmental contract that includes two key provisions; 1) exporting county must have arranged to provide comprehensive waste management services to their residential households and businesses including recycling services, composting services, household hazardous waste collection services and business waste assessment services; and 2) a specific authorized daily and annual quantity of waste to be imported is negotiated, potentially up to 100% of the Type II and Type III solid waste generated in the exporting county.

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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	Grand Traverse	CES Waters	NA	NA	P *
Leelanau	Grand Traverse	NA	NA	NA	P *
Manistee	Grand Traverse	NA	NA	NA	P *
Antrim	Grand Traverse	NA	NA	NA	P *
Benzie	Grand Traverse	NA	NA	NA	P *
Kalkaska	Grand Traverse	NA	NA	NA	P *
Emmet	Grand Traverse	NA	NA	NA	P *
Missaukee	Grand Traverse	NA	NA	NA	P *
Mecosta	Grand Traverse	NA	NA	NA	P *
Chippewa	Grand Traverse	NA	NA	NA	P *
Presque Isle	Grand Traverse	NA	NA	NA	P *
Charlevoix	Grand Traverse	NA	NA	NA	P *
Montmorency	Grand Traverse	NA	NA	NA	P *
Wexford	Grand Traverse	NA	NA	NA	P *
Bay	Grand Traverse	NA	NA	NA	P *
Clare	Grand Traverse	NA	NA	NA	P *
Osceola	Grand Traverse	NA	NA	NA	P *
Muskegon	Grand Traverse	NA	NA	NA	P *
Saginaw	Grand Traverse	NA	NA	NA	P *
Sanilac	Grand Traverse	NA	NA	NA	P *
Ottawa	Grand Traverse	NA	NA	NA	P *
Kent	Grand Traverse	NA	NA	NA	P *
Clinton	Grand Traverse	NA	NA	NA	P *
Shiawasee	Grand Traverse	NA	NA	NA	P *
Genesee	Grand Traverse	NA	NA	NA	P *
Kalamazoo	Grand Traverse	NA	NA	NA	P *
Barry	Grand Traverse	NA	NA	NA	P *
Ingham	Grand Traverse	NA	NA	NA	P *
Oakland	Grand Traverse	NA	NA	NA	P *
Macomb	Grand Traverse	NA	NA	NA	P *
Calhoun	Grand Traverse	NA	NA	NA	P *
Jackson	Grand Traverse	NA	NA	NA	P *
Washtenaw	Grand Traverse	NA	NA	NA	P *

X Additional authorizations and 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

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Table 2-A: Cont.: CURRENT EXPORT VOLUME AUTHORIZATION OF SOLID WASTE

IMPORTING COUNTY	EXPORTING COUNTY	FACILITY NAME ¹	AUTHORIZED QUANTITY/ DAILY	AUTHORIZED QUANTITY/ ANNUAL	AUTHORIZED CONDITIONS ²
Wayne	Grand Traverse	NA	NA	NA	P *
Berrien	Grand Traverse	NA	NA	NA	P *
St. Joseph	Grand Traverse	NA	NA	NA	P *
Lenawee	Grand Traverse	NA	NA	NA	P *
Monroe	Grand Traverse	NA	NA	NA	P *
Midland	Grand Traverse	NA	NA	NA	P *
Montcalm	Grand Traverse	NA	NA	NA	P*
Menominee	Grand Traverse	NA	NA	NA	P*
Delta	Grand Traverse	NA	NA	NA	P*
Ontonagon	Grand Traverse	NA	NA	NA	P*

Table 2-A Attachments Section: 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 Grand Traverse County Solid Waste Management System, Ordinance and Intergovernmental Agreement consistent with the Plan's Enforceable Program.

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	Grand Traverse	CES Waters	NA	NA	P *
Leelanau	Grand Traverse	NA	NA	NA	P *
Manistee	Grand Traverse	NA	NA	NA	P *
Antrim	Grand Traverse	NA	NA	NA	P *
Missaukee	Grand Traverse	NA	NA	NA	P *
Mecosta	Grand Traverse	NA	NA	NA	P *
Chippewa	Grand Traverse	NA	NA	NA	P *
Presque Isle	Grand Traverse	NA	NA	NA	P *
Charlevoix	Grand Traverse	NA	NA	NA	P *
Montmorency	Grand Traverse	NA	NA	NA	P *
Wexford	Grand Traverse	NA	NA	NA	P *
Bay	Grand Traverse	NA	NA	NA	P *
Clare	Grand Traverse	NA	NA	NA	P *
Osceola	Grand Traverse	NA	NA	NA	P *
Muskegon	Grand Traverse	NA	NA	NA	P *
Saginaw	Grand Traverse	NA	NA	NA	P *
Sanilac	Grand Traverse	NA	NA	NA	P *
Ottawa	Grand Traverse	NA	NA	NA	P *
Kent	Grand Traverse	NA	NA	NA	P *
Clinton	Grand Traverse	NA	NA	NA	P *
Shiawasee	Grand Traverse	NA	NA	NA	P *
Genesee	Grand Traverse	NA	NA	NA	P *
Kalamazoo	Grand Traverse	NA	NA	NA	P *
Barry	Grand Traverse	NA	NA	NA	P *
Ingham	Grand Traverse	NA	NA	NA	P *
Oakland	Grand Traverse	NA	NA	NA	P *
Macomb	Grand Traverse	NA	NA	NA	P *
Calhoun	Grand Traverse	NA	NA	NA	P *
Jackson	Grand Traverse	NA	NA	NA	P *
Washtenaw	Grand Traverse	NA	NA	NA	P *
Wayne	Grand Traverse	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

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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
Berrien	Grand Traverse	NA	NA	NA	P *
St. Joseph	Grand Traverse	NA	NA	NA	P *
Lenawee	Grand Traverse	NA	NA	NA	P *
Monroe	Grand Traverse	NA	NA	NA	P *
Midland	Grand Traverse	NA	NA	NA	P *
Montcalm	Grand Traverse	NA	NA	NA	P*
Menominee	Grand Traverse	NA	NA	NA	P*
Delta	Grand Traverse	NA	NA	NA	P*
Ontonagon	Grand Traverse	NA	NA	NA	P*
Kalkaska	Grand Traverse	NA	NA	NA	P*
Emmet	Grand Traverse	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 Grand Traverse County Solid Waste Management System, Ordinance and Intergovernmental Agreement consistent with the Plan's Enforceable Program.

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 Grand Traverse County for the next five years and, if possible, the next ten years. Descriptions of those facilities are included on Pages III-11 through III-20. Additional facilities which may be used during the planning period are included in the export authorization tables on Pages III-5 to III-8. Additional facilities within the County with applicable permits and licenses may be utilized as they are stated by this Plan, or intended into this Plan, and become available for disposal. Facilities outside of Michigan may also be used if legally available for such use.

Section III-4 has been

Type II Landfill:

Glen's Sanitary Landfill (WMI)

Manistee County Landfill (Allied/Varlands)

Montmorency-Oscoda Sanitary Landfill

2011-2,

Type III Landfill:

Ken's PS Type III Landfill (WMI)

Incinerator:

n/a

Waste-to-Energy Incinerator:

n/a

Type A Transfer Facility:

Amendment

Type B Transfer Facility:

East Bay Township Transfer Station

Peninsula Township Transfer Station

Ken's Landfill Transfer Station (WMI)

Processing Plant:

Waste Piles:

n/a

Other:

n/a

Letters from or agreements with the listed disposal areas owners/operators stating their facility capacity and willingness to accept Grand Traverse County's solid waste are in the Attachments Section.

SELECTED SYSTEM

FACILITY DESCRIPTIONS

Facility Type: Type B Transfer Station

Facility Name: East Bay Township Transfer Station

County: Grand Traverse Location: Town T27N Range R10W Section(s) 34

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: CES Waters Landfill or Glen's Landfill

Public Private Owner: East Bay Township (on state land)

Operating Status (check) Waste Types Received (check all that apply)

<input checked="" type="checkbox"/>	open	<input checked="" type="checkbox"/>	residential
<input type="checkbox"/>	closed	<input type="checkbox"/>	commercial
<input checked="" type="checkbox"/>	licensed	<input type="checkbox"/>	industrial
<u>NA</u>	unlicensed	<input type="checkbox"/>	construction & demolition
<input type="checkbox"/>	construction permit	<input type="checkbox"/>	contaminated soils
<input type="checkbox"/>	open, but closure pending	<input type="checkbox"/>	special wastes *
		<input type="checkbox"/>	other: <u>_</u>

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

Site Size:

Total area of facility property: 30 acres

Total area sited for use: not avail. acres

Total area permitted: _____ acres

Operating: _____ acres

Not excavated: _____ acres

Current capacity: _____

Estimated lifetime: _____ years

Estimated days open per year: 150 days

Estimated yearly disposal volume: 5,140 compacted cubic yards
+ 2,906 loose C&D 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: Type B Transfer Station

Facility Name: Peninsula Township Transfer Station

County: Grand Traverse Location: Town T29N Range R10W Section(s) NE1/4 of 28

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: Glen's Landfill

Public _____ Private Owner: Peninsula Township

Operating Status (check) Waste Types Received (check all that apply)

<input checked="" type="checkbox"/>	open	<input checked="" type="checkbox"/>	residential
<input type="checkbox"/>	closed	<input type="checkbox"/>	commercial
<input type="checkbox"/>	licensed	<input type="checkbox"/>	industrial
<u>NA</u>	unlicensed	<input type="checkbox"/>	construction & demolition
<input type="checkbox"/>	construction permit	<input type="checkbox"/>	contaminated soils
<input type="checkbox"/>	open, but closure pending	<input type="checkbox"/>	special wastes *
			other: _

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

Site Size:

Total area of facility property: 2.1 acres

Total area sited for use: not avail. acres

Total area permitted: _____ acres

Operating: _____ acres

Not excavated: _____ acres

Current capacity: _____

Estimated lifetime: _____ years

Estimated days open per year: 104 days

Estimated yearly disposal volume: not avail.

(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 (operated as Type B)

Facility Name: Ken's Landfill Transfer Station

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

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: Glen's Landfill

Public Private Owner: Waste Management Inc.

Operating Status (check) Waste Types Received (check all that apply)

<input checked="" type="checkbox"/>	open	<input type="checkbox"/>	residential
<input type="checkbox"/>	closed	<input checked="" type="checkbox"/>	commercial
<input checked="" type="checkbox"/>	licensed	<input type="checkbox"/>	industrial
<input type="checkbox"/>	unlicensed	<input type="checkbox"/>	construction & demolition
<input type="checkbox"/>	construction permit	<input type="checkbox"/>	contaminated soils
<input type="checkbox"/>	open, but closure pending	<input type="checkbox"/>	special wastes *
		<input type="checkbox"/>	other: <u>_</u>

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

Site Size:

Total area of facility property: part of landfill site acres

Total area sited for use: _____ acres

Total area permitted: _____ acres

Operating: _____ acres

Not excavated: _____ acres

Current capacity: _____

Estimated lifetime: _____ years

Estimated days open per year: 240 days

Estimated yearly disposal volume: not avail.

(if applicable)

Annual energy production:

Landfill gas recovery projects: NA megawatts

Waste-to-energy incinerators: NA megawatts

SELECTED SYSTEM

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: 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)

<input checked="" type="checkbox"/>	open	<input type="checkbox"/>	residential
<input type="checkbox"/>	closed	<input type="checkbox"/>	commercial
<input checked="" type="checkbox"/>	licensed	<input type="checkbox"/>	industrial
<input type="checkbox"/>	unlicensed	<input checked="" type="checkbox"/>	construction & demolition
<input type="checkbox"/>	construction permit	<input type="checkbox"/>	contaminated soils
<input type="checkbox"/>	open, but closure pending	<input type="checkbox"/>	special wastes *
		<input type="checkbox"/>	other: _

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

Site Size:

Total area of facility property:	<u>16.8</u>	acres
Total area sited for use:	<u>13.5</u>	acres
Total area permitted:	<u>13.5</u>	acres
Operating:	<u>6.0</u>	acres
Not excavated:	<u>1.0</u>	acres

Current capacity:	<u>150,000</u>	bank cubic yards
Estimated lifetime:	<u>2.0</u>	years
Estimated days open per year:	<u>240</u>	days
Estimated yearly disposal volume:	<u>70,000</u>	gate cubic yards

(if applicable)

Annual energy production:

Landfill gas recovery projects:	<u>NA</u>	megawatts
Waste-to-energy incinerators:	<u>NA</u>	megawatts

SELECTED SYSTEM

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 x Private Owner: Waste Management, Inc.

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

* 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 bank 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

SELECTED SYSTEM

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

Operating Status (check) Waste Types Received (check all that apply)

<u>x</u>	open	<u>x</u>	residential
<u> </u>	closed	<u>x</u>	commercial
<u>x</u>	licensed	<u>x</u>	industrial
<u> </u>	unlicensed	<u>x</u>	construction & demolition
<u>x</u>	construction permit	<u>x</u>	contaminated soils
<u> </u>	open, but closure pending	<u>x</u>	special wastes *
			other: <u> </u>

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

Site Size:

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

Current capacity:	<u>1,700,000</u>	bank cubic yards
Estimated lifetime:	<u>14</u>	years
Estimated days open per year:	<u>250</u>	days
Estimated yearly disposal volume:	<u>200,000</u>	gate cubic yards

(if applicable)

Annual energy production:

Landfill gas recovery projects:	<u>NA</u>	megawatts
Waste-to-energy incinerators:	<u>NA</u>	megawatts

SELECTED SYSTEM

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/Alpena Counties

Operating Status (check) Waste Types Received (check all that apply)

<u>x</u> _____	open	<u>x</u> _____	residential
<u> </u> _____	closed	<u>x</u> _____	commercial
<u>x</u> _____	licensed	<u>x</u> _____	industrial
<u> </u> _____	unlicensed	<u>x</u> _____	construction & demolition
<u>x</u> _____	construction permit	<u> </u> _____	contaminated soils
<u> </u> _____	open, but closure pending	<u> </u> _____	special wastes *
		<u> </u> _____	other: <u> </u>

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

Site Size:

Total area of facility property:	<u>80</u>	acres
Total area sited for use:	<u>80</u>	acres
Total area permitted:	<u>80</u>	acres
Operating:	<u>3-4</u>	acres
Not excavated:	<u>37</u>	acres

Current capacity:	<u>3,500,000</u>	bank cubic yards
Estimated lifetime:	<u>30</u>	years
Estimated days open per year:	<u>310</u>	days
Estimated yearly disposal volume:	<u>145,000</u>	gate cubic yards

(if applicable)

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

III-5 SOLID WASTE COLLECTION SERVICES & 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 the Plan's Enforceable Program comprehensive solid waste collection services will be made available to all households and businesses in the County. Illegal dumping and litter will be policed with enforcement of violations. Spring/fall cleanup days will be provided on a local governmental service district with scavenging/trading/reuse encouraged and arrangements made for recycling of as many materials left as possible. A permanent hazardous waste collection site will be provided that services households, agricultural hazardous waste generators and unregulated small quantity hazardous waste generators. Adopt a "___" programs will be organized with volunteers and business/service group sponsorship for periodic cleaning of roadsides, streambanks, lakeshores, parks and forests. Many of these programs are already in place for all or some of the County and will be expanded as described above.

Section III-5 has been replaced by Amendment 2011-2, page 37

Proactive education and promotion strategies will encourage responsible solid waste management and strong reduce/reuse/recycle behavior. Pay As You Throw (AYT) programs will be widespread throughout the County with current AYT programs redesigned for increased effectiveness. Recycling collection programs will add more materials to encourage participation by more citizens and businesses. Selected materials will be banned from landfill and transfer station disposal.

During the first few years of the planning period, existing landfills in the region will be used with direct haul by compacting collection vehicles being the primary method of transportation to the landfills. During this same time period a combination material recovery facility/solid waste transfer station (MRF/TS) will be made available to all solid waste and recycling collectors in the system. The MRF/TS will be equipped with a high density (900 to 1,000 lbs/cy) solid waste compaction system to allow longer distance waste transfer.

Once the MRF/TS has opened (during years 2-4 of the planning period), compacting vehicles collecting solid waste will primarily haul to the transfer station which then will ship waste to landfills under contract and in compliance with the export provisions of this plan and under terms that will provide the most favorable rates and guarantees of long term price stability and capacity availability. Waste export by other sources within the County will then be authorized as a primary disposal option only if the material is exempt under the terms of this solid waste plan (special industrial waste) or if the material is first tipped at the MRF/TS. Bans on landfill disposal of certain materials will also take effect as provided for in the ordinance, rules and regulations of the County's solid waste management system.

The conditions for export read specifically as follows:

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 Grand Traverse County Solid Waste Management System, Ordinance and Intergovernmental Agreement consistent with the Plan's Enforceable Program.

SELECTED SYSTEM

During the first five years of the planning period there will be a competitive evaluation of landfill disposal options to service the County's needs, that includes analysis of 1) potential for long term contracts for disposal at predetermined prices, 2) potential "ownership" of a facility that already is in operation or 3) development of a new "green fields" disposal facility either within the County's jurisdiction on a site already owned by the County and identified in this plan for this purpose or outside of the County's jurisdiction at a new site still to be identified. This evaluation will, to the degree possible, take into consideration the larger regional needs for cost competitive disposal options that could be impacted by the disposal strategy that the County finally selects. Based on the results of this landfill disposal option evaluation, the County will then take implementation steps as appropriate either during the first five years of the planning period or at a later time.

A network of drop-off facilities for solid waste will be made available with these services preferably located in conjunction with recycling drop-offs. One or more of the drop-off's will be "flagship" sites that take other types of waste (bulky, C&D, etc.). At least one of these sites will be located at the MRF/TS.

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'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

Effort Description	Est. Diversion Tons/Yr		
	<u>Current</u>	<u>5th yr</u>	<u>10th yr</u>
Recycling Drop-off	3,198	4,200	6,125
Curbside recycling	2,761	2,500	4,500
Commercial recycling	6,001	13,150	17,566
Yard waste collection	2,510	7,000	7,000
Household hazardous waste collection	23	25	50
<i>Grand Traverse County Totals</i>	14,493	26,875	35,241

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 Grand Traverse 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 (adjusted for seasonal population variation) 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 (25+ percent for 2003 and 30+ 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 PROGRAMS

The following is a brief analysis of the recycling and composting programs selected for the County in this Plan. Additional information on operation of recycling and composting programs is included in Appendix A. The analysis covers various factors within the County and the impacts of these factors on recycling and composting. Following the written analysis Tables III-3, III-4 and III-5 list the existing recycling, composting, and source separation of hazardous

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materials programs that are currently active in the County and which will be continued as part of this Plan. The second group of tables, Tables III-6, III-7 and III-8, list the recycling, composting, and source separation of hazardous materials programs that are proposed in the future for the County. It is not this Plan update's intent to prohibit additional programs or expansions of current programs to be implemented beyond those listed.

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:

The following recycling systems would be developed:

Recycling Incentives:

Proactive education and promotion strategies will encourage responsible solid waste management and strong reduce/reuse/recycle behavior. Pay As You Throw (PAYT) programs will be widespread throughout the County and existing PAYT programs redesigned as needed to increase effectiveness. Recycling collection programs will add more materials to encourage participation by more citizens and businesses. An ambitious outreach and education program will promote all aspects of the expanded system and its improvements. Selected materials (e.g. OCC and ONP) will be banned from collection and disposal as solid waste to further encourage recovery.

Drop-Off Residential Recycling:

The existing network of drop-off sites for recycling will be upgraded, made more permanent and be open 24-hours per day. One or more "flagship" drop-off sites will be staffed, have an educational component, and collect the largest number of types of materials. Small, satellite drop-offs will also be added in high-use tourist areas and parks. Material will be collected in a commingled form to make use of the facilities easier. The range of recyclable materials collected at each of the drop-off sites will become standardized between all sites.

Curbside Residential Recycling:

Two stream commingled curbside recycling will be automatically provided to all residents in an expanded curbside service district. Steps will be taken to adjust program design and operation to significantly increase participation (linked to bans on collection and disposal of selected materials as solid waste). Subscription service outside this district will be strongly encouraged.

Commercial Recycling:

A permanent site will be provided for businesses to drop-off a wide variety of recyclables including commingled containers and commingled paper. A business recycling service district will be established and development of services to businesses within the district will be facilitated (linked to bans on landfilling selected materials) through an umbrella contract for the collection services provided by licensed haulers. Existing programs for recovery of construction and demolition materials will be expanded.

Material Transfer and Processing:

A material recovery facility (MRF) will be made available to all recycling collectors in the system and be integrated with a transfer station for solid waste to allow longer distance waste

SELECTED SYSTEM

transfer. The facility will be able to process commingled containers and commingled fibers as well as presorted recyclables like OCC. Commercial recyclables will be able to be tipped at the facility for a reasonable fee that is lower than the tipping fee at area landfills. Mixed loads of commercial solid waste that have a high percentage of recyclable materials will be sorted. The MRF will have full waste transfer capabilities for MSW at high compaction rates (900 to 1000 lbs per cy) and be permitted as such through MDEQ.

SELECTED SYSTEM

Composting

- 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:

The following composting systems would be developed:

Residential Yard Waste Composting:

Seasonal yard waste collection including fall leaf collection will be automatically provided in an urban service district. Backyard composting will be encouraged through distribution of backyard bins at discount rates building off of successful efforts in the past. A similar mulching mower program will encourage grass cycling. Permanent drop-off options for yard waste will be provided throughout the County with at least one "flagship" site taking all types of yard waste and providing finished compost for distribution to residents and area municipalities. Selected processing of food waste will be included.

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:

The following clean community systems would be developed:

Clean Community Programs:

A permanent hazardous waste collection site will be provided that services households, agricultural hazardous waste generators and unregulated small quantity hazardous waste generators. The County will also participate in the Department of Agriculture's Clean Sweep program for pesticides and fertilizers.

Table III-3: RECYCLING: Based on Current Programs

Program Name	Service Area	Public or Private	Collection Point ²	Collection Frequency ³	Materials ⁴	Program Management Responsibilities ¹
6-station drop-off	County-wide	Private	d	d	A, B, C D, E	Development Operation Evaluation
Subscription curbside	Designated Service Area as well as County-wide	Private	c	w	A, B, C D, E, G	1
Subscription commercial	County-wide	Private	c	w	c	5

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-4: COMPOSTING: Based on Current Programs

Program Name	Service Area	Public or Private	Collection Point ²	Collection Frequency ³	Materials ⁴	Program Management Responsibilities ¹
Fall leaf pickup	Urban areas	Public/Private	S	Ea	L_BR	5.6
Yard waste drop-off	County-wide	Public	d	L_BR_W	1.5.6	5.6
Yard waste collection	County-wide	Public/private	d	Gr_L_Br_W	5	1.5
Compost processing	County-wide	P	c	Ea_Su	L_BR	1.6
					3.6	1.6

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=Board of Public Works; 4= Environmental Group; 5=Private Owner/Operator; 6=Other=Municipality

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-5. 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	Program Management Responsibilities ¹		
					Development	Operation	Evaluation
County Household Hazardous Waste Program	County-wide	Public	Sp. Su. Fa	1	AN.A.P. PS.PH. OT.AR.	1	1.5
					BL.B2.C		
					H.P.PS		

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=Board 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 Polishes; H=Hobby and Art Supplies; OF=Used Oil Filters; P=Paints and Solvents; PS=Pesticides and Herbicides; PH=Personal and Home Products; U=Used Oil; OT=Other Materials and identified

Table III-6: PROPOSED RECYCLING:

Program Name	Service Area	Public or Private	Collection Point ²	Collection Frequency ³	Materials ⁴	Program Management Responsibilities ¹
12-station drop-off	County-wide	Public/ Private	d	d	A.B.C. D.E.G.L. El.H.L.L	Development Operation Evaluation
Subscription curbside (years: 1-5)	Outside of Urban Service Area	Private	c	w	A.B.C. D.E.G.L	1
Contract curbside	Urban Service Area	Public/ Private	c	w	A.B.C. D.E.G.L El	5
Expanded commercial collection	Urban Business districts	Public/ Private	o	w.bi.m	B.C.D. El.H.L.L I	1

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=Board of Public Works; 4= Environmental Group; 5=Private Owner/Operator; 6=Other = Public sector

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

³Collection 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=Food & food processing; K=Tires; L=Total metals

Table III-7: PROPOSED COMPOSTING:

Program Name	Service Area	Public or Private	Collection Point ²	Collection Frequency ³	Program Management Responsibilities ¹		
					Development	Operation	Evaluation
Seasonal and Fall leaf pickup	Urban areas	Public/Private	S	Ea	L, BR	6	5.6
Yard waste drop-off	County-wide	Public/Private	d	d	L, Br, W	1	1.5
Food waste drop-off	Selected Sources	Public/Private	d	d	E	1	1
Compost processing - County site	County-wide	Public	d	d	L, Br, W	1	3
Compost processing- Traverse City site	Traverse City area	Public	S	Ea	L, Br	6	6
Yard waste collection	County-wide	Public/private	o	W	G, L, E Br, W, A	1	5

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

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

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-8: PROPOSED SOURCE SEPARATION OF POTENTIALLY HAZARDOUS MATERIALS:

Program Management Responsibilities ¹						
Program Name	Service Area	Public or Private	Collection Point ²	Collection Frequency ³	Materials ⁴	Program Management Responsibilities ¹
County Household Hazardous Waste Collection Program	County-wide	Public	d	Sp. Su. Fa	AR, AN, BL, B2, C, H, A, P, PS, PH, OT	3
Battery collection	County-wide	Public	d	d	B2	3
Clean Sweep Ag Waste	County-wide	Public	d	m	PS	3.5

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=Department of Agriculture

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=Paints and Herbicides; PH=Personal and Health Products; U=Used Oil; OT=Used Oil; OT=Other Materials and identified

SELECTED SYSTEM

IDENTIFICATION OF RESOURCE RECOVERY MANAGEMENT ENTITIES:

The following identifies those current 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) and Renewable Waste, Inc.

These private sector and non-profit sector service providers will deliver solid waste and recycling services under the terms of the Plan's Enforceable Program as contained in the Grand Traverse County Solid Waste Management System and organized under the County Ordinance, Rules/Regulations and related contracts. Resource recovery management services from these entities are expected to include corrugated and office paper collection routes for businesses throughout the county; servicing of recycling drop-off facilities; recycling processing facility operations; curbside recycling collection in designated service district; curbside recycling collection for out-county subscribers; yard waste collection.

Various Service Providers including Construction Waste Recycling and Builder's Waste

These private sector and non-profit sector service providers will deliver on-site collection of construction and demolition material throughout the county

Various Landscaping/nursery companies

These private sector and non-profit sector service providers will deliver yard waste collection services and serve as hosts for yard waste drop-off sites

City of Traverse City

Operation of yard waste compost facility; fall leaf collection

Grand Traverse County Solid Waste and Recycling Office

Administration of the Plan's Enforceable Program and resource recovery efforts including promotion and education for all resource recovery programs; operation of household hazardous waste collection program; oversight of county recycling and yard waste drop-off sites

SELECTED SYSTEM

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 in years five and ten as a result of the Plan's Enforceable Program.

Table III-9: Projected Diversion

<u>Collected Material:</u>	<u>Projected Annual Tons Diverted:*</u>			<u>Collected Material:</u>	<u>Projected Annual Tons Diverted:*</u>		
	Year 0	Year 5	Year 10		Year 0	Year 5	Year 10
A. TOTAL PLASTICS:	239	397	564	G. GRASS AND LEAVES:	2,510	7,000	7,000
B. NEWSPAPER:	2,392	3,970	5,638	H. WOOD WASTE:			
C. CARDBOARD:	5,143	8,535	12,122	I. CONSTR. & DEMO.	3,250	5,000	7,500
D. OTHER PAPER	2,272	3,771	5,356	J. FOOD PROCESSING			
E. GLASS	957	1,588	2,255	K. TIRES:			
F. OTHER MATERIALS:	598	992	1,410	L. TOTAL METALS:	359	595	846
				TOTAL ALL MATERIAL:	17,720	31,848	42,691

*numbers are for residential/commercial recycling only, i.e. do not include industrial recovery programs

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 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.

Table III-10: Market Availability

<u>Collected Material:</u>	<u>In-State Markets</u>	<u>Other Markets</u>	<u>Collected Material</u>	<u>In-State Markets</u>	<u>Other Markets</u>
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 %	
E. GLASS	100 %		K. TIRES:	100 %	
F. OTHER MATERIALS:	100%		L. TOTAL METALS:	100 %	

SELECTED SYSTEM

EDUCATIONAL AND INFORMATIONAL PROGRAMS:

Following is a listing of the programs offered or proposed to be offered in Grand Traverse County.

<u>Program Topic</u>	<u>Delivery Medium</u>	<u>Targeted Audience</u>	<u>Program Provider</u>
Recycling	NPI phone book tips page/information hotline covering 75 subjects	General public, businesses	<u>Designated Planning Agency (DPA)</u>
Recycling/general solid waste education	Display at shopping mall, public events	General public	<u>DPA</u>
Recycling, Composting	Radio ads	General public	<u>DPA</u>
Recycling, Composting	Newspaper ads	General public	<u>DPA</u>
Recycling/ general solid waste education	Public access television	General public	<u>DPA</u>
General solid waste education	School presentations (40-80 per year) and educational tools, include "Trash Can Quiz" and papermaking kit	School-age children	<u>DPA</u>
General solid waste education	Teacher Training/WISE curriculum	Teachers	<u>DPA and Math, Science and Technology Center</u>
Resource conservation	Presentations/ workshops	Businesses/ public	<u>DPA</u>
Buy Recycled	Guidebook; workshops; web page	Builders; general public	<u>DPA</u>
All programs	Brochures, flyers	General public; businesses	<u>DPA, Cooperative Extension, Realtors Association, area Environmental Groups</u>

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 Office of Solid Waste as Implementation Agency	1999
2) Designate Solid Waste Council as Imp. Oversight Committee	1999
3) Develop/Adopt Implementation Action Plan	1999
4) Amend Intergovernmental Agreements/Ordinance/Rules/Regs	1999
5) Preliminary Program Specifications for Planned Programs	1999
6) Establish Budget for Planned Programs	1999
7) Determine Ownership/Operation Arrangements for MRF/TS	1999
8) Finalize Funding Structure and Mechanisms	1999
9) Engineer, design & construct transfer station/MRF	1999/2000
10) Initiate all outreach/education programs	1999/2000
11) Procure all other system improvements	1999/2000
12) Final Implementation of Funding Mechanisms	1999/2000
13) Trigger Ban on Selected Items from Landfill Disposal	2000-2008
14) Negotiate/Adhere to Contract for Disposal Capacity	2000-2003
15) Evaluation of Options for Long Term Disposal Capacity	2000-2003
16) Implement Options for Long Term Disposal Capacity	2002-2008
17) Data Tracking to Assess Program Performance	Annual/Ongoing
18) Update Implementation Action Plan	Annual/Ongoing

Section III-8 has been replaced by Amendment 2011-2, page 38

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 solid 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 ten 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: Facilities Included in this Plan:

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: Type II Landfill Disposal Area: A Type II Landfill disposal area, as described in the Plan's Enforceable Program and sponsored by the County on land owned by the County, is included in the Plan for the 160 acre site that Grand Traverse County has secured in Whitewater Township (SE 1/4, Section 20, Town 27 North, Range 9 West). The site has been set aside for the purposes of constructing a Type II Landfill. No other Type II or Type III Landfill disposal areas may be sited by this Plan.

A.2: Solid Waste Transfer Station Disposal Area: 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 or long term lease (10 years or more) 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.

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B: Exempt Facilities:

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

B.1: Solid Waste Transfer Facility Disposal Area: 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 to 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 of 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 in 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

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Application Fee to:

Grand Traverse County
Solid Waste and Recycling Office
400 S. Boardman
Traverse City, MI 49684
616 922-4576

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
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, 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.

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- 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

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- 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.

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- 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

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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. In the absence of an appointed SWFSC the County Board shall serve in its place.

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 (or, in the case of a Type B Transfer Station Disposal Area, the facility receives its building permits and all required inspections from the local government with jurisdiction over the site). 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;

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

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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 of Public Works (BPW) for the final consistency determination. If an Application is 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

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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
- 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 (or, in the case of a Type B Transfer Station Disposal Area, the facility receives its building permits and all required inspections from the local government with jurisdiction over the site).

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 Utility Easements, Public Right of Way
I			Distance from Water, Beaches
J			Distance from Water Well Serving a Dwelling
K			Distance from Specified Building Types
L			Distance from Land Conservancy Parcels
M			Distance from Schools and Educational Establishments
N			Distance from Certain Recreational Facilities
O			Distance from MDEQ Natural Features Inventory Lands
P			Distance from Specified Types of Natural Resource Lands
Q			Distance from Certain Additional Recreational Lands
R			Distance from a Licensed Public Use Runway
S			Design Incorporates Certain Setback Requirements w/Signed Statement
T			Analysis Submitted Documenting Availability of Required Public Services
U			Signed Statement to Abide by Certain Regulatory Requirements
V			Written Agreement to Abide by Certain Non-locational Zoning Requirements

MINIMUM STANDARD 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.

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- C. No part of the site and respective parcel(s) is located within or less than 100 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 as shown in the Grand Traverse County Wetlands and Steep Slopes Map, aka "the Composite Wetlands Map" (Map available from County).
- D. No part of the site and respective parcel(s) is located within or less than 100 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 100 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 100 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 100 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 100 feet from the boundary edge of:
 1. Existing public utility easements; and
 2. Existing public rights-of-way.
- I. No part of the site and respective parcel(s) is located within or less than 300 feet from the boundary edge of:
 1. Any surface water (as identified by Michigan DNR surface water maps and as defined in the Part 115 Administrative Rules);
 2. Beach contiguous to a lake or stream
- J. No part of the site and respective parcel(s) is located within or less than 300 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.
- K. No part of the site and respective parcel(s) is located within or less than 300 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.
- L. No part of the site and respective parcel(s) is located within or less than 300 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.

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- M. No part of the site and respective parcel(s) is located less than one half mile from the boundary edge of schools and education establishments in existence on the date the disposal area application was found complete.
- N. No part of the site and respective parcel(s) is located less than one half mile from the boundary edge of certain recreation facilities, unless the proposed facility is only an enclosed solid waste transfer station or processing facility disposal area in which case the required distance will be 300 feet:
 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.
- O. No part of the site and respective parcel(s) is located within or less than one half mile 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, unless the proposed facility is only an enclosed solid waste transfer station or processing facility disposal area in which case the required distance will be 300 feet.
- P. No part of the site and respective parcel(s) is located within or less than one half mile 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.*), unless the proposed facility is only an enclosed solid waste transfer station or processing facility disposal area in which case the required distance will be 300 feet.
- Q. No part of the site and respective parcel(s) is located less than one mile from the boundary edge of certain recreation lands, unless the proposed facility is only an enclosed solid waste transfer station or processing facility disposal area in which case the required distance will be 300 feet:
 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;

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5. State designated natural river's water's edge; and
 6. The parcel boundary of arboretums, sanctuaries established under statute.
- R. 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.
- S. 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. Submittal by the applicant of this signed statement is required to meet this criteria.
- 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

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- 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.
- T. 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. Submittal by the Applicant of this analysis is required to satisfy this criteria. The adequacy of the submittal will not be used to determine if this criteria has been satisfied.
- 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 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. Submittal by the Applicant of this signed statement is required to satisfy this criteria. The adequacy of the submittal will not be used to determine if this criteria has been satisfied.
- V. 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, Local Ordinances and Regulations but not subject to zoning regulation of location of a solid waste disposal area as a land use. Submittal by the Applicant of this signed statement is required to satisfy this criteria. The adequacy of the submittal will not be used to determine if this criteria has been satisfied.

III-10 SOLID WASTE MANAGEMENT COMPONENTS

The following identifies the management responsibilities and institutional arrangements necessary for the implementation of the Plan's Enforceable Program and Process. 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 Plan's Enforceable Program and Process.

Section III-10 has been replaced by Amendment 2011-2, pages 41-44

- 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 for 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 service 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, 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 the Plan's Enforceable Program and Process include all organizational mechanisms deemed necessary to enable the above two funding mechanisms to work.

STRENGTHS OF THE CURRENT MANAGEMENT SYSTEM

Some key components of the organizational and management structure required to develop a suitable funding mechanism to implement the Plan's Enforceable Program and Process are already in place and include:

- The County Solid Waste and Recycling Office as the designated implementation agency with its Director and staff and supporting County administrative leadership.
- The County Solid Waste Council of the Board of Public Works (BPW) as the oversight committee and as an official body with fiduciary responsibility to oversee the details of development and operation of the County's current system including responsibility for development and adoption of an annual strategic plan and budget and submittal of that plan to the BPW for final implementation authorization.
- The statutory authorities and powers of the County Department of Public Works as provided for by Michigan law, enabling it to support implementation of the selected alternative with appropriate legal, management and financial capabilities.
- The County Board of Public Works (BPW) serving as the representational committee responsible for fiduciary matters and oversight of the solid waste operations.
- The existing intergovernmental contracts assigning certain powers and responsibilities to the County BPW by all of the local units of government in the County.

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- The Grand Traverse County Solid Waste Ordinance No. 17 that takes these powers and responsibilities and structures the basic framework of the solid waste and recycling system for the County solid waste management system.
- The Administrative Rules for the Grand Traverse County Solid Waste Ordinance No. 17 that prescribes in greater detail the specific components of the system.
- The Hauler Licensing Agreements authorized by the Ordinance and Administrative Rules.
- The Landfill and Material Recycling Facility Designation Agreements authorized by the Ordinance and Administrative Rules.
- The County Solid Waste Office's management/operational staff that oversee County programs.
- The County's contracting capability for operating programs (e.g. household hazardous waste services).
- The County's to negotiate and adhere to Resolutions adopted as part of its program implementation role, as it has with its resolution adopted on June 19, 1995 with an expiration date of October 1, 1998 that resolved the dispute between the County and what was then United Waste Systems of Northern Michigan regarding payment of the landfill surcharge and the issue of recycling processing and drop-off station operations.

The current organizational and management structure as just described is automatically incorporated into the Plan's Enforceable Program and Process and is 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's Enforceable Program and Process.

FURTHER DEVELOPMENT OF THE MANAGEMENT COMPONENT

The Authorized Management Component builds on the County's current organizational and management structure including the County's solid waste ordinance, system of intergovernmental agreements, contractual arrangements for plan implementation and all related features. Further development of the Plan's Authorized Management Component is provided for as part of the Plan's Enforceable Program and Process.

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 the selected alternative including the construction of the MRF/Transfer Station and other aspects of the Selected Alternative.

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.

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,

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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) will be covered along with profit (if applicable), 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 the disposal facility (i.e.: the Transfer Station and/or Landfill 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 disposal 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 will be tiered to acknowledge that a larger volume user (e.g. a major hauler or a major industry) will get some price advantages. However, the major hauler will have to pay this published rate, even if they are the same company that has some involvement in ownership/operation of these disposal 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 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 BPW/Solid Waste Council. It will then be used for funding some operating costs (e.g. 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. 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.

Second, 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

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BPW/Solid Waste Council. 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 possible the system of Agreements provided for in the County's Solid Waste Licensing System (Hauler License 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 Ordinance #17 licensing and facility designation requirements. Amendments to the ordinance are authorized by this Plan as needed to enable these contracts and to enable designation of specific facilities to receive solid waste.

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. The participants in the County's Ordinance #17 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 for the System Enterprise Fund in order to address strategic capital requirements for the system (e.g. development of the MRF/TS) and to develop a mechanism for further strengthening the designation agreements. The latter will be accomplished through what is often referred to as "economic flow control" in which the competitiveness of the published rate structures for designated facilities in the marketplace is maintained by recovering some of the capital and/or operating costs through other mechanisms. Three 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

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- 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; and 3) the use of P.A. 138 funding mechanism in combination with the others (noting that P.A. 138 is limited to residential households, unlike the first two which can be applied to all sectors).
- D: Leveraging of contributed resources will be encouraged in order to reduce program budget requirements. Green Lake, Fife Lake, Kingsley/Paradise, Peninsula Township, and local governmental units with potential facilities/services contracting for selected programs. These approaches will be used to reduce costs and to build the connection 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. Area businesses and foundations will be approached for long term commitments (project sponsors, etc.) with appropriate recognition provided. Collaboration with workplace experience programs will be pursued and expanded (recognizing that this used to be one of the area's key strengths with the GTP Industries program). Public and private service agencies as well as school groups will be asked to get involved even more than they are already. Arrangements for drop-off sites should be assessed and carefully maintained in order to assure their availability for the future.
- E: Private bank financing will be available for capital improvements made by private companies and non-profits that are involved in the system -- especially if the contracting framework described above is well structured with long term service arrangements.
- F: 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 may be part of ongoing operational cost areas that are already part of municipal budgets (e.g. current operations to collect and process yard waste that are part of some municipal budgets). In addition, these agency funds may be able to assist in part with capital requirements for some of the projects.
- G: Bond financing will be an option that will be investigated depending on the final details of how the overall system is structured to raise the required capital for solid waste, recycling, and composting system improvements.
- H: Further steps will be taken to access the fundraising capabilities of private giving and foundations. A "friends of Grand Traverse County recycling" or equivalent will be enabled in order to leverage additional private donations from individuals, estates, and foundations as well as corporations and other granting agencies that can strengthen the overall program across the County. These efforts will also be targeted at providing support for education and promotion of clean community initiatives, reduce/reuse/recycle programming and, in some cases, capital funds for informational exhibits, displays, educational facilities and school programs. As well this structure will be used 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.

IMPLEMENTATION OF THE MANAGEMENT COMPONENT

The following key steps will be taken to further develop the Management Component as needed to implement the selected alternative:

- A: The Solid Waste and Recycling Office of Grand Traverse 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 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. The Solid Waste Office

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- and BPW, as currently structured, will be modified as needed to give appropriate "implementation agency" status. 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 multi-governmental Authority organized as provided for in Michigan law; 2) a quasi-governmental consortium with staff provided by its member agencies (County and Cities); 3) a newly created non-profit agency; or 4) an existing non-profit agency.
- B: The role, powers and authority of the Solid Waste Council will be further defined as a committee to the BPW that functions as the Plan's "implementation oversight committee" and is assigned the responsibility to facilitate program development through public and private sector channels, advising the BPW, the County Board of Commissioners and key stakeholders on the implementation process and advising for the enterprise fund. 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: The current annual "strategic plan" will be expanded into a more comprehensive "Implementation Action Plan" covering all aspects of implementation of the Plan's Enforceable Program and Process where specific milestones will be identified for the coming years -- serving as a road map to guide the Implementation Oversight Committee and the designated implementation agency. 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, all consistent with the Plan's Enforceable Program and Process as provided by statute, but at a level of detail required for actual task assignments with coordination and accountability for measurable 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: The intergovernmental contracts between the County DPW and participating local units of government will be amended to allow implementation of the next steps in the system development as described above. Ordinance changes will follow as required for implementation of the Plan's Enforceable Program. Amendments to the Intergovernmental Agreements and Ordinance are authorized by this Plan, which will not need to be updated to reflect the amendments to the Agreements and Ordinance as long as such amendments are in compliance with relative provisions of Part 115 of NREPA.
- 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 amended 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 also will involve negotiations with nearby counties interested in working with the County on various program areas (e.g. recycling processing) on a regional basis so that these details can be worked out and incorporated into the Implementation Action Plan.
- E: System improvements, new services, required contract/licensing structures and processing

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- 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 updating 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

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

Grand Traverse 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 Board of Public Works and Solid Waste and Recycling Office (SWRO).

Board of Public Works: This board is appointed by the County Commissioners and ultimately has responsibility for oversight of regulatory responsibilities within the County solid waste ordinance. This includes oversight of hauler licensing arrangements, collection of the solid waste disposal surcharge and provision of private sector recycling services as required by the ordinance. The BPW also oversees operations of the wastewater treatment plant, including disposition of sludge.

Solid Waste and Recycling Office: This office, which has a full-time staff person reporting to the Board of Public Works, provides day-to-day management of County solid waste management programs. This includes providing recycling and composting outreach and education; coordinating operation of the household hazardous waste collection and County yard waste handling programs; implementation and administration of the County solid waste ordinance; and providing general information to the public.

Solid Waste Council: This nine-member council is appointed by the Board of Commissioners and has the first point of review for fiduciary responsibility regarding operations of County recycling, solid waste, household hazardous waste and composting programs.

Solid Waste Management Planning Committee (SWMPC): The Grand Traverse 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.

Municipal and Township Governments: All local units of government have entered into an intergovernmental agreement, for certain solid waste handling and designation provisions.

Private Solid Waste Haulers: Private sector waste haulers provide for collection of solid waste and management of certain facilities as defined in the County solid waste licensing ordinance.

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

Resource Conservation:

Source or Waste Reduction -
Product Reuse -
Reduced Material Volume -
Increased Product Lifetime -
Decreased Consumption -

Responsible Parties

Solid Waste and Recycling Office (SWRO)
SWRO/private/non-profit and waste generators
SWRO and waste generators
SWRO and waste generators
SWRO and waste generators

Resource Recovery Programs

Composting -
Recycling -
Energy Production -

Responsible Parties

Traverse City Department of Public Works
SWRO, Public Agencies & Private waste companies
SWRO, Public Agencies & Private waste companies
not applicable

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<u>Volume Reduction Techniques:</u>	SWRO and waste generators
<u>Collection Processes:</u>	SWRO, Public Agencies & Private waste companies
<u>Transportation:</u>	SWRO, Public Agencies & Private waste companies
<u>Disposal Areas:</u>	
Processing Plants -	SWRO, Public Agencies & Private waste companies
Incineration -	not applicable
Transfer Stations -	SWRO
Sanitary Landfills -	SWRO, Public Agencies & Private waste companies
<u>Ultimate Disposal Area Uses:</u>	Board of Public Works
<u>Local Responsibility for Plan Update Monitoring & Enforcement:</u>	SWRO
<u>Educational & Informational Programs:</u>	SWRO

Documentation of acceptance of responsibilities is contained in Appendix D.

III-12 LOCAL ORDINANCES AND REGULATIONS AFFECTING SOLID WASTE DISPOSAL

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

- 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:

- 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, the Ordinance 17 in current and future amended form, its administrative rules and regulations and the 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.

SELECTED SYSTEM

- X 2. This Plan recognizes and incorporates as enforceable the following specific provisions based on existing zoning ordinances:
- | | |
|--|--|
| A. Geographic area/Unit of government: | Whitewater Township |
| Type of disposal area affected: | Landfill Disposal Areas |
| Ordinance or other legal basis: | Township Ordinance |
| Requirement/restriction: | Buffer, Operations, Balance of Items on List in "1" above. |
- 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:
- 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.

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

Section III-13 has been replaced by Amendment 2011-2, page 47

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. Attachment B includes a letter from one of these facilities, Glen's Landfill (WMI) in Leelanau County, that indicates that they can supply Grand Traverse County with 10 years of landfill capacity.

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.

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:

The following table shows estimated total waste composition and volumes by material type. Totals include all sectors (residential, commercial, industrial). 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 Grand Traverse County.

Table A-1: Total Waste Composition (tons per year)

	Percent of Total Waste	1998 Tons	2003 Tons	2008 Tons
Totals		104,722	112,828	119,215
Newsprint (ONP)	6%	6,556	7,063	7,463
Mixed Office	7%	7,561	8,146	8,607
Old Corrugated Containers (OCC)	17%	17,782	19,158	20,243
Mixed Other Paper	12%	12,609	13,584	14,353
All Metals	7%	7,833	8,440	8,917
All Textiles	2%	2,471	2,663	2,813
All Glass	5%	5,571	6,002	6,342
All Plastic	7%	7,812	8,417	8,893
All Yard Waste	16%	16,567	17,849	18,860
Food Waste	11%	11,519	12,411	13,114
Wood Waste	4%	3,749	4,039	4,268
Misc. Bio-degradable	3%	2,848	3,069	3,243
Misc. Non Bio-degradable	2%	1,843	1,986	2,098

The table below projects estimates of material recovery by program type.

Table A-2: Program Recovery Estimates (tons per year)

	1997	2003	2008
Drop-off system	3,198	4,200	6,125
Curbside recycling	2,761	2,500	4,500
Commercial recycling	6,001	13,150	17,566
Yard waste	2,510	7,000	7,000
Total Recovery	14,470	26,850	35,191

APPENDIX A

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.

Existing Programs:

Drop-off recycling stations - The eight existing drop-off recycling services are provided by licensed waste haulers as provided for in the County ordinance. Equipment is selected, provided and operated by the waste hauler, and consists of divided roll-off containers, serviced by a hook-lift truck.

Curbside Collection: Waste collectors operating in the urban curbside district are required to offer curbside collection to residential customers. The operators are able to select the equipment that they use for this service. Curbside collection bins are provided to customers who select that service option.

Commercial Collection: Waste collectors operating in the County are required to offer collection of OCC and office paper to customers. The operators are able to select the equipment that they use for this service.

Recycling Processing - The new Waste Management, Inc. (aka: USA/United Waste) currently operates the only local recycling processing facility, located on the south side of Traverse City. Equipment in the facility is selected, provided and operated by WMI. It consists primarily of a sorting line for mixed containers (plastic, cans and glass), a paper baler, and equipment used to move material around the facility, such as loaders and fork lifts.

Composting - Traverse City and Grand Traverse County each operate composting sites. Between these sites all needed grinding, screening and windrow turning equipment is available. If new equipment is required, either the City or County will select it as needed.

Proposed Programs:

Drop-off recycling stations - Grand Traverse County plans to continue using private contractors to operate drop-off stations with the contractor providing equipment as specified by the County. If contractors are unable to provide adequate and reasonable service, the County may choose to operate some portion of the drop-off collection system. In that case the County BPW would be responsible for selection of new equipment as needed.

Curbside Collection: Waste collectors operating in the urban curbside district continue to be required to offer curbside collection to residential customers. The operators are able to select the equipment that they use for this service. When service contracts are bid, it is expected that private collectors will continue to select and provide their own equipment. The bid language may include requirements that would affect equipment selected.

Commercial Collection: Waste collectors operating in the County continue to be required to offer collection of OCC and office paper to customers. The operators are able to select the equipment that they use for this service. In the future, the County may choose to assist businesses in bundling a service agreement that could include designation of certain bags, bins, carts, dumpsters or other collection containers.

Recycling Processing - The new Waste Management, Inc. (aka: USA/United Waste) currently operates the only local recycling processing facility. Equipment in the facility is selected, provided and operated by WMI. If that facility is expanded to handle more material or types of

APPENDIX A

material, WMI will select the equipment.

Grand Traverse County may also choose to build a recycling processing/transfer facility or work with another firm that will engineer, construct and operate such a facility. In that event, the County DPW with the aid of consultant advisors and/or the facility developer will select facility and equipment as needed to provide desired services.

Composting - No new programs are planned.

Site Availability & Selection

Existing Programs:

Drop-offs - Existing sites will continue to operate. Location of new drop-off sites operated through the County drop-off program will be approved through the County BPW based on need and population growth.

Recycling Processing/Transfer - Existing programs will continue to use existing facilities, until such time as the County develops a new recycling processing and waste transfer facility.

Composting - Existing programs will continue to use existing facilities.

Proposed Programs:

Drop-offs - Existing sites will continue to operate. Additional sites will be added through Ordinance #17 by the County BPW..

Recycling Processing/Transfer - The County may choose to build a new facility that includes transfer capability, a site selection committee will be convened and the Plan site selection process will be followed. If the facility is a recycling processing facility only, the County BPW will identify suitable sites.

Composting - No new site needs have been identified.

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.

Existing Programs:

Program Name	pH Range	Heat Range	Stability
Traverse City compost site	ph: 5.0-8.5	140-160 degrees during active composting	Finished compost shall be a mature, stabilized, humus-like material, capable of supporting plant growth without the addition of fertilizers or other soil amendments; should contain less than 1% of plastic, glass, metal and other physical contaminants
Grand Traverse county compost site	Same as above	Same as above	Same as above

Proposed Programs:

Any new compost programs (public or private) should meet the parameters stated above.

APPENDIX A

COORDINATION OF 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.

The Office of Solid Waste and Recycling of the Department of Public Works will have responsibility for program implementation as the designated implementation agency. The Solid Waste Council will oversee the Office and have fiduciary responsibility for the County solid waste management system, while reporting to the Board of Public Works which shall retain final accountability to the County Board of Commissioners. The County Administration will work with these department staff and appointed committee operations to track performance against planned milestones contained in both the Solid Waste Plan and in the Implementation Action Plan.

The County, through intergovernmental agreements with participating communities will administer a comprehensive solid waste management system that includes funding mechanisms, a county-wide ordinance, administrative rules, hauler licensing and facility designation agreements, import/export conditions, contractual arrangements for MRF/Transfer Station development and service contracts for other supporting programs. Participating communities as well as private solid waste management companies will work with the County in developing and operating the selected alternative.

APPENDIX A

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
<u>Clean Community:</u> Solid Waste Collection Spring/fall Cleanup HHHW Adopt a "____" programs Ag. Clean Sweep	\$3 million No estimate \$20,000/yr No budget \$10,000	Customer contract payments Local governmental unit/Contract agreement BPW SW budget/Landfill surcharge Volunteer efforts Dept of Agriculture
<u>Recycling Incentives:</u> Promotion and Education Pay as You Throw	\$60-120,000/yr Approx. \$2.00/bag	BPW SW budget/Landfill surcharge Paid by users
<u>Residential Recycling:</u> Drop-offs Super Drop-off Subscription Curbside Contract Curbside C&D processing	\$150,000/year (collection and processing) \$80-120,000 (capital) \$24,000-77,500/yr (operating) \$36,000 (capital) \$4/hhld/mo \$2/hhld/mo \$0-140,000	BPW SW budget/Landfill surcharge/contract agreement BPW SW budget/Landfill surcharge Paid by users Paid by user via service fee, bill, municipality User fees/Landfill surcharge
<u>Yard Waste Recovery:</u> Yard Waste Drop-off Sites Backyard Composting Seasonal YW collection	\$20,000/yr \$10,000/yr \$60,000/yr	Landfill surcharge / user fees Landfill surcharge / user fees Municipalities / user fees
<u>Commercial Recycling:</u> Commercial Corrugated Routes Other Commercial Recycling	(collection and processing) \$420-540,000 \$110-200,000	User contract fees User contract fees
<u>Recycling / Compost Processing:</u> Recycling Processing Expansion Yard Waste Processing	\$350,000-\$3million (capital) included in above programs	Varies with ownership/type of facility, County BPW, private, bonds Municipal
<u>Solid Waste Transfer:</u> New Type A Transfer with sorting component	Possible future \$2.2 million (capital)	Bonds, user fees
<u>Management Arrangements</u>	Included in above programs	Primarily BPW solid waste budget

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.

Advantages:
<ul style="list-style-type: none"> • Clean community and education/promotion create stronger interest in responsible practices • Illegal dumping activity minimized • Most small quantity unregulated hazardous wastes diverted from landfill disposal • Recycling/composting starts to become the dominant method of waste management • Organics management system is an effective alternative to landfilling • Seasonal/Tourist population has option with recycling and solid waste drop-offs • Recycling processing/marketing system has very strong foundation • Less reliance on landfills for disposal especially with ramp up of commercial/C&D recycling • Alternatives landfills used should costs rise or availability be limited
Disadvantages:
<ul style="list-style-type: none"> • System costs still can be improved while maintaining or increasing level of diversion
Overall Performance:
<ul style="list-style-type: none"> • Source reduction impact will be observed both residential and commercial • Diversion through recycling/composting likely in the 30% +/- range • Landfill capacity less critical to long term system health
Overall Cost Impact:
<ul style="list-style-type: none"> • System costs increase (\$10.00 to \$14.00 per capita per year as general estimate) • Reduced overall solid waste collection costs begin to be realized • Some offsetting savings in reduced waste transport/disposal (\$30 - \$50 per ton or \$8 - \$10 per capita/yr)

APPENDIX B: ADDITIONAL INFORMATION REGARDING THE 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.

Over a period of five months, the Solid Waste Planning Committee met to consider goals and objectives for the solid waste planning period, and to evaluate system alternatives and how each alternative would meet goals and objectives as approved.

In addition, the County was presented with a "continuum" of system approaches, beginning with a base-level system of collection and disposal, through an extremely aggressive recovery and waste reduction approach.

- 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

APPENDIX B

- 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

Grand Traverse County evaluated its current achievements and goals for improved future solid waste management against these benchmarks. It was concluded that the County was already operating between the C and D levels. The County chose as a goal of the Solid Waste Plan to move toward the D to E level.

APPENDIX B

Programs of the Selected System were built upon existing successes and include every program category considered (as listed above) except those underlined.

The underlined programs were excluded as explained below:

SYSTEM COMPONENTS:

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

COLLECTION PROCESSES:

Mobile Drop-offs - for Sorted Recyclables (Grand Traverse County has outgrown this approach in favor of permanent 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

The three above programs require extensive capital investment without providing significant advantages over the Selected System programs.

PROCESSING:

Stand-Alone Recycling Processing Facilities (MRF)

Mixed Waste Recycling and Compost Processing Facility

A mixed waste composting program requires extensive capital investment without providing significant advantages over the Selected System programs.

DISPOSAL AREAS:

Smaller Solid Waste Landfills Serving Counties

Grand Traverse County has chosen to consider a landfill ownership option.

Municipal Solid Waste Incineration

Adequate landfill capacity is available. Incineration provides no obvious advantages at significant capital risk.

In selecting a waste management system, Grand Traverse County separated the system management and financial considerations from the cost/benefit evaluation of individual programs. Once it was decided that the 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.

The County chose to continue using its powers under its Ordinance and Intergovernmental Agreement as the primary means to finance future programs.

INSTITUTIONAL ARRANGEMENTS:

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 processing contracts with neighboring counties
- Shared C&D processing facilities between counties
- Public/private C&D processing arrangements
- County/Municipality operated compost site

CAPITAL, OPERATIONAL, AND MAINTENANCE COSTS:

Millages, PA 138 and special assessments were not considered the best way to finance programs since the existing system is working well with existing means.

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.

ADVANTAGES AND DISADVANTAGES OF THE NON-SELECTED SYSTEM:

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

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. Grand Traverse 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

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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:

Attached at the end of this Appendix C 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.

PLANNING COMMITTEE APPOINTMENT PROCEDURE:

The County Board ran ads for the Solid Waste Planning Committee in the summer of 1997 immediately after filing with the Michigan DEQ its intent to prepare its own Plan. Completed applications were reviewed by the Legal and Administrative Committee of the County Board. Interviews were conducted when multiple qualified applicants applied for the same appointment. Recommendations were made to the County Board by the Legal and Administrative Committee. The County Board made appointments to fill vacancies as needed.

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. Charles Fiebing, Clearbrook Co.
2. Penny Lautner, Goodwill Ind.
3. Dave Knudsen, Waste Management, Inc.
4. David Martin, Dave's Pickup Service

One representative from an industrial waste generator:

1. Bruce Odom, Odom Reuse

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

1. David Krumlauf, Northern Michigan Environmental Action Council
2. Robert Russell, Neahtawanta Resource and Education Center

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

1. Anthony Buday, County Commissioner

APPENDIX C

One representative from township government:

1. Joe Bartko, East Bay Township

One representative from city government:

1. Linda Smyka, City Commissioner, Traverse City

One representative from the regional solid waste planning agency:

1. Peter Hembrough, Northwest Michigan Council of Governments Regional Environmental Planning Task Force

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

1. Tom Karas
2. Roger Mawby
3. Joel 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 Office of Solid Waste as Implementation Agency	1999
2) Designate Solid Waste Council as Imp. Oversight Committee	1999
3) Develop/Adopt Implementation Action Plan	1999
4) Amend Intergovernmental Agreements/Ordinance/Rules/Regs	1999
5) Preliminary Program Specifications for Planned Programs	1999
6) Establish Budgets for Planned Programs	1999
7) Determine Ownership/Operation Arrangements for MRF/TS	1999
8) Finalize Funding Structure and Mechanisms	1999
9) Engineer, design & construct transfer station/MRF	1999/2000
10) Initiate all outreach/education programs	1999/2000
11) Procure all other system improvements	1999/2000
12) Final Implementation of Funding Mechanisms	1999/2000
13) Trigger Ban on Selected Items from Landfill Disposal	2000-2008
14) Negotiate/Adhere to Contract for Disposal Capacity	2000-2003
15) Evaluation of Options for Long Term Disposal Capacity	2000-2003
16) Implement Options for Long Term Disposal Capacity	2002-2008
17) Data Tracking to Assess Program Performance	Annual/Ongoing
18) 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: Grand Traverse County Solid Waste Ordinance and Intergovernmental Agreement

Copy of the version of the Grand Traverse County Solid Waste Ordinance and Intergovernmental Agreement in effect at the time of Plan adoption.

ATTACHMENTS

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ATTACHMENT B

LISTED CAPACITY

ATTACHMENTS

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ATTACHMENT C
MAPS

ATTACHMENTS

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ATTACHMENT D

INTER-COUNTY AGREEMENTS

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ATTACHMENT E

DETAILED POPULATION DATA

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ATTACHMENT F

SPECIAL CONDITIONS

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ATTACHMENTS

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 1-B Attachments Section

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

* Condition for Future Imports to Ken's Landfill:

Only Type III construction and demolition waste may be imported for disposal at Ken's Landfill.

* Condition for Future Imports to the County Selected Site:

Up to 100% of Type II and Type III solid waste will be able to be imported from a listed county to a future landfill to be located at the County Selected Site (see Siting Review Procedures Section) and then only if the exporting county and Grand Traverse County sign an intergovernmental contract that includes two key provisions; 1) exporting county must have arranged to provide comprehensive waste management services to their residential households and businesses including recycling services, composting services, household hazardous waste collection services and business waste assessment services; and 2) a specific authorized daily and annual quantity of waste to be imported is negotiated, potentially up to 100% of the Type II and Type III solid waste generated in the exporting county.

Section III Table 2-A Attachments Section

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 Grand Traverse County Solid Waste Management System, Ordinance and Intergovernmental Agreement consistent with the Plan's Enforceable Program.

Section III 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 Grand Traverse County Solid Waste Management System, Ordinance and Intergovernmental Agreement consistent with the Plan's Enforceable Program.

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ATTACHMENT G

**GRAND TRAVERSE COUNTY
SOLID WASTE ORDINANCE**

AND

INTERGOVERNMENTAL AGREEMENT

ATTACHMENTS

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