



JENNIFER M. GRANHOLM
GOVERNOR

STATE OF MICHIGAN
DEPARTMENT OF ENVIRONMENTAL QUALITY
LANSING



STEVEN E. CHESTER
DIRECTOR

August 4, 2008

Mr. Jeffrey S. Hagan, Interim Director
Eastern Upper Peninsula Regional
Planning and Development Commission
P.O. Box 520
Sault Ste. Marie, Michigan 49783

Dear Mr. Hagan:

The locally-approved Amendment to the Chippewa, Luce, and Mackinac Counties' Solid Waste Management Plan (Plan Amendment) received by the Department of Environmental Quality (DEQ) on March 24, 2008, is hereby approved.

The Plan Amendment adds the Elk Run Landfill in Presque Isle County for capacity and lists the landfill as a primary disposal facility in the Import and Export Authorization Table. Republic Waste System was also added as a service provider for the Elk Run Landfill. The Plan Amendment also adds the Hiawatha Shores Landfill in Schoolcraft County for capacity and lists the landfill as a contingency disposal facility in the Export Authorization Table. The DEQ has determined that the Plan Amendment complies with the provisions of Part 115, Solid Waste Management, of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended, and its administrative rules.

The DEQ would like to thank the Eastern Upper Peninsula Regional Planning and Development Commission for its efforts in addressing its solid waste management issues on behalf of Chippewa, Luce, and Mackinac Counties. If you have any questions, please contact Ms. Rhonda Oyer Zimmerman, Chief, Solid Waste Management Unit, Storage Tank and Solid Waste Section, Waste and Hazardous Materials Division, at 517-373-4750.

Sincerely,

Steven E. Chester
Director
517-373-7917

cc: Senator Jason Allen
Senator Michael Prusi
Representative Gary McDowell
Representative Steven Lindberg
Mr. Earl Kay, Chairman, Chippewa County Board of Commissioners
Mr. Terry H. Stark, Chair, Luce County Board of Commissioners
Ms. Dawn L. Nelson, Chair, Mackinac County Board of Commissioners
Mr. Jim Sygo, Deputy Director, DEQ
Ms. JoAnn Merrick, Chief of Staff, DEQ
Ms. Carol Linteau, Legislative Director, DEQ
Mr. George W. Bruchmann, DEQ
Mr. Steven Sliver, DEQ
Mr. Robert Schmeling, DEQ
Ms. Rhonda Oyer Zimmerman, DEQ
Ms. Becky Beauregard, DEQ
Chippewa County File
Luce County File
Mackinac County File



Eastern U.P. Regional Planning & Development Commission

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MEMO

Jeff Hagan, Executive Director 

June 4, 2008

TO: Becky Beuaregard, Environmental Quality Analyst

SUBJECT: EUP Solid Waste Plan Amendment - 2007

Please find the most current copy of the Eastern U.P. Regional Solid Waste Management Plan Amendment; I apologize for any delays this confusion may have caused. Also enclosed is the packet of information that was sent out to local municipalities regarding the amendment, per your request.

Waste & Hazardous
Materials Division

JUN 05 2008

1997 PLAN UPDATE COVER PAGE

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

Date submitted to the DEQ:

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

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

<u>Municipality</u>	<u>Original Planning County</u>	<u>New Planning County</u>
None		

DESIGNATED PLANNING AGENCY PREPARING THIS PLAN UPDATE:

Eastern Upper Peninsula Regional Planning & Development Commission

CONTACT: Jeff Hagan, Interim Director

ADDRESS: 524 Ashmun Street, P.O. Box 520, Sault Ste. Marie, MI 49783

PHONE: (906) 635-1581 FAX: (906) 632-4225 e-mail: eupregion@ighthouse.net

CENTRAL REPOSITORY LOCATION(S):

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EXECUTIVE SUMMARY

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

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

Township or Municipality Name	Population	% Land Use			% of Economic Base				
		Rural	Urban	Ag	For	Ind	Com	Other	
<u>Chippewa County</u>	<u>38,543</u>								
<u>Bay Mills Township</u>	<u>1,214</u>	<u>80</u>	<u>20</u>	<u>10</u>	<u>10</u>	<u>0</u>	<u>70</u>	<u>10</u>	
<u>Bruce Township</u>	<u>1,941</u>	<u>95</u>	<u>5</u>	<u>15</u>	<u>10</u>	<u>5</u>	<u>65</u>	<u>5</u>	
<u>Chippewa Township</u>	<u>238</u>	<u>100</u>	<u>0</u>	<u>25</u>	<u>15</u>	<u>0</u>	<u>55</u>	<u>5</u>	
<u>Dafter Township</u>	<u>1,304</u>	<u>95</u>	<u>5</u>	<u>10</u>	<u>15</u>	<u>5</u>	<u>65</u>	<u>5</u>	
<u>DeTour Township</u>	<u>894</u>	<u>80</u>	<u>20</u>	<u>10</u>	<u>10</u>	<u>10</u>	<u>60</u>	<u>10</u>	
<u>Drummond Township</u>	<u>992</u>	<u>90</u>	<u>10</u>	<u>0</u>	<u>5</u>	<u>35</u>	<u>55</u>	<u>5</u>	
<u>Hulburt Township</u>	<u>211</u>	<u>100</u>	<u>0</u>	<u>5</u>	<u>5</u>	<u>0</u>	<u>80</u>	<u>10</u>	
<u>Kinross Township</u>	<u>5,922</u>	<u>60</u>	<u>40</u>	<u>5</u>	<u>0</u>	<u>25</u>	<u>20</u>	<u>50</u>	
<u>Pickford Township</u>	<u>1,584</u>	<u>90</u>	<u>10</u>	<u>40</u>	<u>5</u>	<u>0</u>	<u>50</u>	<u>5</u>	
<u>Raber Township</u>	<u>670</u>	<u>100</u>	<u>0</u>	<u>30</u>	<u>15</u>	<u>5</u>	<u>45</u>	<u>5</u>	
<u>Rudyard Township</u>	<u>1,315</u>	<u>90</u>	<u>10</u>	<u>40</u>	<u>10</u>	<u>5</u>	<u>40</u>	<u>5</u>	
<u>Sault Ste. Marie City</u>	<u>16,542</u>	<u>0</u>	<u>100</u>	<u>0</u>	<u>0</u>	<u>25</u>	<u>65</u>	<u>10</u>	
<u>Soo Township</u>	<u>2,652</u>	<u>75</u>	<u>25</u>	<u>15</u>	<u>5</u>	<u>5</u>	<u>70</u>	<u>5</u>	
<u>Sugar Island Township</u>	<u>683</u>	<u>100</u>	<u>0</u>	<u>5</u>	<u>15</u>	<u>0</u>	<u>75</u>	<u>5</u>	
<u>Superior Township</u>	<u>1,329</u>	<u>80</u>	<u>20</u>	<u>20</u>	<u>15</u>	<u>5</u>	<u>55</u>	<u>5</u>	
<u>Trout Lake Township</u>	<u>465</u>	<u>85</u>	<u>15</u>	<u>5</u>	<u>20</u>	<u>0</u>	<u>75</u>	<u>0</u>	
<u>Whitefish Township</u>	<u>588</u>	<u>90</u>	<u>10</u>	<u>5</u>	<u>10</u>	<u>0</u>	<u>80</u>	<u>5</u>	
<u>Luce County</u>	<u>7,024</u>								
<u>Columbus Township</u>	<u>215</u>	<u>100</u>	<u>0</u>	<u>20</u>	<u>10</u>	<u>0</u>	<u>60</u>	<u>10</u>	
<u>Lakefield Township</u>	<u>1,074</u>	<u>100</u>	<u>0</u>	<u>15</u>	<u>10</u>	<u>0</u>	<u>60</u>	<u>15</u>	
<u>McMillan Township</u>	<u>3,947</u>	<u>60</u>	<u>40</u>	<u>10</u>	<u>10</u>	<u>5</u>	<u>60</u>	<u>15</u>	
<u>Pentland Township</u>	<u>1,788</u>	<u>75</u>	<u>25</u>	<u>5</u>	<u>10</u>	<u>5</u>	<u>70</u>	<u>10</u>	

<u>Mackinac County</u>	<u>11,943</u>							
<u>Bois Blanc Township</u>	<u>71</u>	<u>100</u>	<u>0</u>	<u>5</u>	<u>10</u>	<u>0</u>	<u>80</u>	<u>5</u>
<u>Brevort Township</u>	<u>649</u>	<u>95</u>	<u>5</u>	<u>5</u>	<u>30</u>	<u>0</u>	<u>60</u>	<u>5</u>
<u>Clark Township</u>	<u>2,200</u>	<u>70</u>	<u>30</u>	<u>10</u>	<u>15</u>	<u>5</u>	<u>65</u>	<u>5</u>
<u>Garfield Township</u>	<u>1,251</u>	<u>90</u>	<u>10</u>	<u>20</u>	<u>10</u>	<u>0</u>	<u>60</u>	<u>10</u>
<u>Hendricks Township</u>	<u>183</u>	<u>100</u>	<u>0</u>	<u>5</u>	<u>5</u>	<u>0</u>	<u>85</u>	<u>5</u>
<u>Hudson Township</u>	<u>214</u>	<u>100</u>	<u>0</u>	<u>15</u>	<u>10</u>	<u>0</u>	<u>70</u>	<u>5</u>
<u>Mackinac Island City</u>	<u>523</u>	<u>70</u>	<u>30</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>95</u>	<u>5</u>
<u>Marquette Township</u>	<u>659</u>	<u>90</u>	<u>10</u>	<u>25</u>	<u>5</u>	<u>0</u>	<u>65</u>	<u>5</u>
<u>Moran Township</u>	<u>1,080</u>	<u>90</u>	<u>10</u>	<u>5</u>	<u>10</u>	<u>0</u>	<u>80</u>	<u>5</u>
<u>Newton Township</u>	<u>356</u>	<u>100</u>	<u>0</u>	<u>10</u>	<u>15</u>	<u>0</u>	<u>75</u>	<u>5</u>
<u>Portage Township</u>	<u>1,055</u>	<u>90</u>	<u>10</u>	<u>5</u>	<u>10</u>	<u>0</u>	<u>75</u>	<u>10</u>
<u>St. Ignace City</u>	<u>2,678</u>	<u>5</u>	<u>95</u>	<u>0</u>	<u>0</u>	<u>5</u>	<u>85</u>	<u>10</u>
<u>St. Ignace Township</u>	<u>1,024</u>	<u>80</u>	<u>20</u>	<u>0</u>	<u>20</u>	<u>0</u>	<u>60</u>	<u>20</u>

Total Population 57,510

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

2000 Population Figures, U.S. Census Bureau (April 2001)

EXECUTIVE SUMMARY

CONCLUSIONS

The Eastern Upper Peninsula Solid Waste Planning Committee (Committee) reviewed and discussed various alternatives of solid waste management options, including continuation of the current operating systems, continuation and expansion of recycling and composting and household hazardous waste programs, improvement and expansion of solid waste educational programs, and the development and implementation of a regional solid waste management policy.

The alternatives were evaluated based on their consistency with solid waste management goals and objectives, economic feasibility, and public approval. Private and public investments made to the existing components of the solid waste management system were also major considerations in the selection for this plan update.

SELECTED ALTERNATIVES

Utilize five primary landfills as disposal sites for household and commercial wastes generated in the eastern U.P. □ Dafter Sanitary Landfill, Inc. (a Waste Management Inc. company) (Chippewa County), Wood Island Waste Management Landfill (owned by Great American Environmental Services, Inc.) (Alger County), City Environmental Services/Waters Landfill (a Waste Management Inc. company) (Crawford County), Elk Run Sanitary Landfill (a Republic Waste Systems Company) (Presque Isle County) and Hiawatha Shores Landfill (owned by Stanley Zellar) (Schoolcraft County).

Continue and expand current recycling operations and encourage development of similar programs in counties throughout the eastern U.P.

Continue current composting programs and encourage development of new programs in other areas of the eastern U.P.

Continue to contract for private collection services.

Expand household hazardous waste collection programs throughout the region and assist entities involved in the development of these programs.

Develop new solid waste management information programs. Also, improve and expand the existing informational/educational programs that deal with solid waste issues.

INTRODUCTION

GOALS AND OBJECTIVES

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

- (1) To utilize to the maximum extent possible the resources available in Michigan's solid waste stream through source reduction, source separation, and other means of resource recovery and;
- (2) To prevent adverse effects on the public health and the environment resulting from improper solid waste collection, transportation, processing, or disposal, so as to protect the quality of the air, the land, and ground and surface waters.

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

Goal 1: To provide essential solid waste services to the eastern Upper Peninsula in the most efficient and cost-effective manner.

Objective 1a. Provide solid waste disposal options to communities that are the most cost-effective for the long-term.

Objective 1b. Encourage competition among service providers (whenever possible) for the collection and disposal of solid waste, and between public and private management of facilities.

Objective 1c. Ensure that landfill owners/operators have appropriate and adequate funds in place for the proper maintenance, expansion, and closure activities, as outlined in the DEQ rules.

Objective 1d. Ensure that landfill owners/operators maintain accurate, up-to-date operating records as directed in the DEQ rules.

Goal 2: To utilize (to the maximum extent possible) the resources available in the eastern U.P. waste stream, through source reduction, recycling, source separation, and other means of resource recovery.

Objective 2a. Fund (annually) a minimum of three, full-time and two, part-time positions for the purposes of developing and implementing programs dealing with waste reduction, recycling and composting.

Objective 2b. Develop and implement a program that will inform citizens of issues regarding waste reduction, recycling and composting through the use of various media (radio, TV, newspapers, flyers, etc.)

Objective 2c. Support educational programs for grades K-12, including tours of area solid waste operation facilities, and provide information about local facilities to schools for use in their curricula.

Goal 3: To prevent adverse effects on the public health and the environment resulting from improper solid waste collection, transportation, processing or disposal in order to protect the quality of air, land, ground and surface waters.

Objective 3a. Improve enforcement against illegal dumping of waste in unauthorized areas by enacting county ordinances which deliver fines and other penalties to violators, and encourage witnesses to report offenders by offering cash rewards.

Objective 3b: Develop and implement household hazardous waste collection programs, with assistance from the area health departments, schools and universities, business, and government.

Objective 3c: Ensure that all solid waste handlers follow DEQ rules in their daily operating procedures.

Objective 3d: Ensure that solid waste handlers have all necessary licenses and permits, and operating plans (including remedial action plans) in place.

Goal 4: To inform communities and visitors to the area of solid waste issues and concerns.

Objective 4a: Ensure that the public is made aware of solid waste issues in a timely manner.

Objective 4b: Provide information about recycling, household hazardous waste collection, composting and proper waste disposal to the general public through radio and newspaper announcements, etc.

Data Base

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

Most of the waste generated in Chippewa, Luce and Mackinac counties is deposited in the Dafter Landfill in Chippewa County.

Eastern U.P. waste disposal in certified landfills, by county, is as follows:

DAFTER LANDFILL - Chippewa County

Chippewa County - 15,926 cu. yds. Type III
63,508 cu. yds. Type II

Luce County - 1,527 cu. yds. Type III
11,196 cu. yds. Type II

Mackinac County - 5,052 cu. yds. Type III
37,334 cu. yds. Type II

WOOD ISLAND LANDFILL Alger County

Luce County - 6,522 cu. yds. Type II

WATERS LANDFILL Crawford County

Chippewa County - 810 cu. yds. Type II
Mackinac County - 170 cu. yds. Type II

EUP TOTALS 119,150 cu. yds. Type II
22,505 cu. yds. Type III

Note: These figures include all commercial, residential and industrial waste as approved. Certain Type III wastes are allowed for disposal at the Waters Landfill and the Dafter Landfill and are included here for general information purposes. Records of amounts are maintained by the individual landfills in accordance with DEQ rules and were provided to the EUP Regional Planning staff for the purposes of including them in the document.

TOTAL QUANTITY OF SOLID WASTE GENERATED:

150,196 Tons or Cubic Yards in 1 yr. (identify unit of time)

TOTAL QUANTITY OF SOLID WASTE NEEDING DISPOSAL:

141,655 Tons or Cubic Yards in 1 yr. (identify unit of time)

DATA BASE

SOLID WASTE DISPOSAL AREAS

Dafter Sanitary Landfill, Inc. (a Waste Management Inc. Company) A Type II landfill located in T46N RIW Sec. 33 of Dafter Township in Chippewa County. The total facility area is 87 acres, with 43.5 acres sited for use, 33 acres permitted and 29.5 acres currently operational. The landfill accepts residential, commercial and industrial Type II and Type III special wastes. The estimated life of this less than six years.

Future expansion of this landfill must be consistent with all State requirements in Part 115 of Public Act 451 of 1994, as amended, and with the provisions of the site Review Procedures as set forth in the Eastern Upper Peninsula Solid Waste Management Plan five year update.

Great American Environmental Services, Inc./Wood Island Waste Management Landfill: A Type II landfill located in T46 N R18W Sec. 18 of Munising Township in Alger County. The landfill has a total area of 325 acres, of which 67 acres are sited for use. Residential, commercial, and industrial wastes are accepted at the site.

City Environmental Services/Waters Landfill (a Waste Management Inc. Company) A Type II landfill located in Maple Forest Township, Crawford County. The landfill has a total area of 252 acres, of which 140 acres are sited for use and 25 are operational. This facility accepts residential, commercial, and industrial wastes. The estimated life of the landfill is 15 years.

Elk Run Sanitary Landfill (a Republic Waste System Company): A Type II landfill located in T33NR2ES5, Presque Isle County. The landfill has a total area of 99.1 acres, of which 99.1 acres are sited for use and 15.1 acres are operational. This facility accepts residential, commercial and industrial waste. The estimated life of the landfill is 23 years.

Hiawatha Shores Landfill (owned by Stan Zellar): A Type II landfill located in the Village of Gulliver, Schoolcraft County. The Landfill has a total area of 44.5 acres, of which 28 acres are sited for use and 5 acres are operational. This facility accepts residential, commercial, and industrial waste. The estimated life of the landfill is 20 years.

↑ Not reversed yet?

DATA BASE

FACILITY DESCRIPTIONS

Facility Type: Transfer Station

Facility Name: City of St. Ignace Transfer Station

County: Mackinac Location: T40N R3W S7

Map identifying location included in Attachment section: Yes

If facility is an incinerator or a transfer station, list the final disposal site and location for incinerator ash or transfer station wastes: Dafter Landfill

[] Public Private Owner: Waste Management of the Eastern U.P.

Operating Status (mark all that apply)

- Open
- Closed
- Licensed
- Unlicensed
- Construction permit
- Open w/closure pending

Waste Types Received (mark all that apply)

- Residential
- Commercial
- Industrial
- 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

Total area sited for use

Total area permitted

Operating

Not excavated

Current capacity

Estimated lifetime

Unlimited

Estimated days open per year

49

Estimated yearly disposal volume

1200 cubic yards

If applicable...

Annual energy production (in megawatts)

Landfill gas recovery projects

Waste-to-energy incinerators

FACILITY DESCRIPTIONS

Facility Type: Type II Sanitary Landfill

Facility Name: City Environmental Services/Waters Landfill (a Waste Management Inc. company)

County: Crawford Location: T28 N R03W S4

Map identifying location included in Attachment section: Yes

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: City Environmental Services/Waters Landfill (a Waste Management Inc. company)

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

- | | |
|---|---|
| <input checked="" type="checkbox"/> Open | <input checked="" type="checkbox"/> Residential |
| <input type="checkbox"/> Closed | <input checked="" type="checkbox"/> Commercial |
| <input checked="" type="checkbox"/> Licensed | <input checked="" type="checkbox"/> Industrial |
| <input type="checkbox"/> Unlicensed | <input checked="" type="checkbox"/> Construction & demolition |
| <input type="checkbox"/> Construction permit | <input checked="" type="checkbox"/> Contaminated soils |
| <input type="checkbox"/> Open w/closure pending | <input checked="" type="checkbox"/> Special wastes * |
| | <input type="checkbox"/> Other _____ |

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

- Contaminated soils, non-friable

Site Size:

Total area of facility property	252.2 acres
Total area sited for use	252.2 acres
Total area permitted	79.07 acres
Operating	9.7 acres
Not excavated	64.87 acres
Current capacity	8.2 million cubic yards
Estimated lifetime	+ 20 years
Estimated days open per year	313
Estimated yearly disposal volume	185k to 200k cubic yards

If applicable . . .

Annual energy production (in megawatts)

Landfill gas recovery projects

Waste-to-energy incinerators

FACILITY DESCRIPTIONS

Facility Type: Type II Landfill

Facility Name: Dafter Sanitary Landfill, Inc. (a Waste Management Inc. company)

County: Chippewa Location: T46N R1W S33

Map identifying location included in Attachment section: Yes

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: Dafter Sanitary Landfill, Inc. (a Waste Management Inc. company)

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

- | | |
|---|---|
| <input checked="" type="checkbox"/> Open | <input checked="" type="checkbox"/> Residential |
| <input type="checkbox"/> Closed | <input checked="" type="checkbox"/> Commercial |
| <input checked="" type="checkbox"/> Licensed | <input checked="" type="checkbox"/> Industrial |
| <input type="checkbox"/> Unlicensed | <input checked="" type="checkbox"/> Construction & demolition |
| <input type="checkbox"/> Construction permit | <input checked="" type="checkbox"/> Contaminated soils |
| <input type="checkbox"/> Open w/closure pending | <input checked="" type="checkbox"/> Special wastes * |
| | <input type="checkbox"/> Other |

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

Those approved for disposal in Type II landfill as per DEQ rules and regulations.

Site Size

Total area of facility property	87	acres
Total area sited for use acres	43.5	acres
Total area permitted	33	acres
Operating	29.5	acres
Not excavated	4	acres
Current capacity	351,900	cubic yards
Estimated lifetime	5.2	years
Estimated days open per year	260	
Estimated yearly disposal volume	67,133	cubic yards

If applicable . . .

Annual energy production (megawatts)

 Landfill gas recovery projects

 Waste-to-energy incinerators

FACILITY DESCRIPTION

Facility Type: Transfer Station

Facility Name: Newberry Transfer Station

County: Luce Location: T46N R10W S36

Map identifying location included in Attachment section: Yes

If facility is an incinerator or a transfer station, list the final disposal site and location for incinerator ash or transfer station wastes: Dafter Landfill

Public Private Owner: Waste Management of the Eastern U.P.

Operating Status (check)

Waste Types Received (check all that apply)

Open

Closed

Licensed

Unlicensed

Construction Permit

Open w/Closure Pending

Residential

Commercial

Industrial

Construction & Demolition

Contaminated Soils

Special Wastes*

Other

List special wastes and other, including conditions:

Site Size:

Total area of facility property 5 acres

Total area sited for use

Total area permitted:

 Operating

 Not excavated

Current capacity 65 cubic yards

Estimated lifetime Unlimited years

Estimated days open/year 260

Estimated yearly disposal volume 5000+ tons

Please complete the following, if applicable:

Annual energy production (in megawatts)

 Landfill gas recovery

 Waste-to-energy incinerators

FACILITY DESCRIPTION

Facility Type: Type II Landfill

Facility Name: Wood Island Waste Management Landfill

County: Alger Location: T46N R18W S18, 19

Map identifying location included in Attachment section: Yes

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: Great American Environmental Services, Inc.

Operating Status (mark all that apply)

Waste Types Received (mark all that apply)

Open

Closed

Licensed

Unlicensed

Construction permit

Open w/closure pending

Residential

Commercial

Industrial

Construction & demolition

Contaminated soils

Special wastes*

Other

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

-Type III wastes as approved in DEQ rules and regulations.

Site Size

Total area of facility property	325 acres
Total area sited for use	67 acres
Total area permitted	28 acres
Operating	164 acres
Not excavated	17.6 acres
Current capacity	1,500,000 cubic yards
Estimated lifetime	20 years
Estimated days open/year	316
Estimated yearly disposal volume	78,000 cubic yards

If applicable . . .

Annual energy production (in megawatts)

 Landfill gas recovery projects

 Waste-to-energy incinerators

FACILITY DESCRIPTION

Facility Type: Transfer Station

Facility Name: Sault Ste. Marie Transfer Station

County: Chippewa Location: 639 West Spruce, Sault Ste. Marie, MI (Parcel: 17-051-157-647-00)

Map identifying location included in Attachment section: Yes

If facility is an incinerator or a transfer station, list the final disposal site and location for incinerator ash or transfer station wastes: Dafter Landfill

Public Private Owner: Waste Management of the Eastern U.P., Inc.

Operating Status (mark all that apply)

Types Received (mark all that apply)

- | | |
|---|---|
| <input checked="" type="checkbox"/> Open | <input checked="" type="checkbox"/> Residential |
| <input type="checkbox"/> Closed | <input checked="" type="checkbox"/> Commercial |
| <input type="checkbox"/> Licensed | <input type="checkbox"/> Industrial |
| <input checked="" type="checkbox"/> Unlicensed | <input checked="" type="checkbox"/> Construction & demolition |
| <input type="checkbox"/> Construction permit | <input type="checkbox"/> Contaminated soils |
| <input type="checkbox"/> Open w/closure pending | <input type="checkbox"/> Special wastes* |
| | <input type="checkbox"/> Other |

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

For approximately ten days each spring, the transfer station offers free disposal for residents of Sault Ste. Marie. Estimated waste received is 500/tons, annually.

Site Size

Total area of facility property 2 acres
Total area sited for use
Total area permitted
Operating
Not excavated

Current capacity
Estimated lifetime
Estimated days open per year 49
Estimated yearly disposal volume 1,000 tons

If applicable . . .

Annual energy production (megawatts)
Landfill gas recovery projects
Waste-to-energy incinerators

FACILITY DESCRIPTION

Facility Type: Type II Landfill

Facility Name: Elk Run Landfill

County: Presque Isle Location: 33N Range: 2E Section(s): 5

Map identifying location included in Attachment section: Yes

If facility is an incinerator or a transfer station, list the final disposal site and location for incinerator ash or transfer station waste: Dafter Landfill

Public Private Owner:

Operating Status (mark all that apply)

Waste Types Received (mark all that apply)

- | | |
|---|---|
| <input checked="" type="checkbox"/> Open | <input checked="" type="checkbox"/> Residential |
| <input type="checkbox"/> Closed | <input checked="" type="checkbox"/> Commercial |
| <input checked="" type="checkbox"/> Licensed | <input checked="" type="checkbox"/> Industrial |
| <input type="checkbox"/> Unlicensed | <input checked="" type="checkbox"/> Construction & demolition |
| <input type="checkbox"/> Construction permit | <input checked="" type="checkbox"/> Contaminated soils |
| <input type="checkbox"/> Open w/closure pending | <input checked="" type="checkbox"/> Special wastes* |
| | <input type="checkbox"/> Other |

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

Capacity listed as bank yards & estimated yrly volume reported as gate yards

Site Size

Total area of facility:	99.1 acres
Total area sited for use:	99.1 acres
Total area permitted:	39.2 acres
Operating	15.1 acres
Not excavated	24.1 acres

Current capacity	2,700,000 yds ³
Estimated lifetime	23 years
Estimated days open per year	286 days
Estimated yearly disposal volume	288,000 yds ³

If applicable. . .

Annual energy production (megawatts)

Landfill gas recovery projects	N/A megawatts
Waste-to-energy incinerators	N/A megawatts

FACILITY DESCRIPTION

Facility Type: Municipal Solid Waste Landfill

Facility Name: Hiawatha Shores Landfill ID# 470402

County: Schoolcraft Location: 42N Range: 14W Section(s): 4

Map identifying location included in Attachment section: Yes

If facility is an incinerator or a transfer station, list the final disposal site and location for incinerator ash or transfer station waste: Duffer Landfill

Public Private Owner: Stanley Zellar

Operating Status (mark all that apply)

Waste Types Received (mark all that apply)

- | | |
|---|---|
| <input type="checkbox"/> Open | <input checked="" type="checkbox"/> Residential |
| <input type="checkbox"/> Closed | <input checked="" type="checkbox"/> Commercial |
| <input type="checkbox"/> Licensed | <input checked="" type="checkbox"/> Industrial |
| <input type="checkbox"/> Unlicensed | <input checked="" type="checkbox"/> Construction & demolition |
| <input checked="" type="checkbox"/> Construction permit | <input type="checkbox"/> Contaminated soils |
| <input type="checkbox"/> Open w/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:	44.5 acres
Total area sited for use:	28.0 acres
Total area permitted:	28.0 acres
Operating	5.0 acres
Not excavated	23.0 acres
Current capacity:	5.0 acres
Estimated lifetime	20 years
Estimated days open per year	250 days
Estimated yearly disposal volume	50,000 ton

If applicable . . .

Annual energy production (megawatts)
Landfill gas recovery projects
Waste-to-energy incinerators

DATA BASE
SOLID WASTE COLLECTION SERVICES AND TRANSPORTATION FRASTRUCTURE

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

Service Provider	Public/Private	Service Area	Payment	Disposal Facility
Waste Management of the Eastern U.P.	Private	Residential, commercial and industrial collection in all areas of the tri-county Eastern U.P. Waste Management also has residential contracts with the City of Sault Ste. Marie, the City of St. Ignace, Moran Township, and Kinross Township, and an exclusive contract with Drummond Island Township	Customer	Dafter Sanitary Landfill, Inc.
Beaudoin Disposal	Private	Trout Lake, Eckerman & Hulbert	Customer	Dafter Landfill
Smith Sanitation	Private	Rudyard & Pickford	Customer	Dafter Landfill
Great American Environmental Services, Inc.	Private	State Correctional Facility in Newberry, Portions of Luce, West Mackinac and Chippewa Counties	Customer	Wood Island Landfill
Village of Newberry	Public	Village of Newberry	Village Special Fee	Dafter Landfill
Republic Waste Systems	Private	Eastern U.P.	Customer	Elk Run Landfill

DATA BASE

EVALUATION OF DEFICIENCIES AND PROBLEMS

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

The notable deficiencies in the current operating system are a lack of recycling and composting programs in a number of areas within the tri-county area.

Chippewa County has a very good recycling program that is easily accessible to all residents and visitors. The City of St. Ignace (Mackinac County) offers periodic curbside collection for most recyclables. The City of Mackinac Island has a good program. The remainder of the tri-county area has no recycling services.

Problems in the existing solid waste system:

1. One company, Waste Management, Inc. provides the majority of waste disposal services for Chippewa and Mackinac counties and the eastern half of Luce County.
2. There is no legislation in place which provides a means of controlling waste coming in from other states and nations into area landfills.
3. Two former landfill sites have been inactive for years and have never been properly closed - the former Superior Sanitation Landfill (Rudyard Township) and Three Mile Landfill (Sault Ste. Marie).

DATABASE

DEMOGRAPHICS

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

Area	1990 Census	2000 Census
Chippewa County	34,604	38,543
Bay Mills Township	787	1,214
Bruce Township	1,610	1,940
Chippewa Township	279	238
Dafter Township	1,083	1,304
Detour Village	407	Included w/twp total
Detour Township	399	894
Drummond Township	835	992
Hulburt Township	208	211
Kinross Township	6,566	5,922
Pickford Township	1,360	1,584
Raber Township	569	670
Rudyard Township	1,270	1,315
Sault Ste. Marie (city)	14,689	16,542
Soo Township	2,165	2,652
Sugar Island Township	441	683
Superior Township	990	1,329
Trout Lake Township	429	465
Whitefish Township	517	588
Luce County	5,763	7,024
Columbus Township	218	215
Lakefield Township	869	1,074
Newberry Village	1,873	Included w/McMillan twp.
McMillan Township	1,088	3,947
Pentland Township	1,715	1,788

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Mackinac County	10,674	11,097
Bois Blanc Township	59	
Brevort Township	484	480
Clark Township	2,012	2,093
Garfield Township	1,156	1,235
Hendricks Township	161	153
Hudson Township	197	187
Mackinac Island	469	453
Marquette Township	550	566
Moran Township	838	987
Newton Township	358	376
Portage Township	890	934
St. Ignace City	2,568	2,557
St. Ignace Township	932	1,013

Source: Bureau of the Census, U.S. Department of Commerce, April 2001

County Population Density Projections
(Per Square Mile)

County	1990 Census	2000	2005	2010
Chippewa County	21.96	24.96	26.58	28.34
Luce County	6.33	6.14	6.13	6.11
Mackinac County	9.90	10.50	11.00	11.77

Population Projections

Area	1990 Census	2000	2005	2010
Chippewa County	34,604	39,323	41,883	44,646
Luce County	5,763	5,591	5,579	5,556
Mackinac County	10,674	11,331	11,867	12,691

DATA BASE

LAND DEVELOPMENT

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

The eastern Upper Peninsula encompasses Chippewa, Luce, and Mackinac counties. In 1990, the region had a total population of 51,041 and in 2000, 57,510 residents.

According to population projections to 2005 and 2010, Chippewa and Mackinac counties would continue on a modest growth pattern; but Luce County would not. However, Luce County did experience a growth trend, most likely as a result of a State correctional facility opening in Pentland Township.

RESIDENTIAL

The overall analysis indicates a continuing modest population growth throughout the eastern Upper Peninsula for the next few years, with most of the growth occurring in the following areas:

Chippewa County

- City of Sault Ste. Marie
- Soo Township
- Kinross Township (Kincheloe)
- Brimley
- Bay Mills
- Pickford
- Rudyard
- Drummond Island
- Detour Village

Luce County

- Pentland Township

Mackinac County

- Moran Township
- St. Ignace Township
- Cedarville/Hessel
- Garfield Township
- City of St. Ignace

DATA BASE

COMMERCIAL

Significant commercial development is expected to occur in the following areas during the next ten years:

Chippewa County

- City of Sault Ste. Marie
- Soo Township (within 3 miles of Sault Ste. Marie)
- Kinross Township (Kincheloe)
- Brimley
- Bay Mills

Luce County

- Pentland Township (along M-123 & M-28)

Mackinac County

- City of St. Ignace
- St. Ignace Township (near St. Ignace along the I-75 Business Spur & H-63)
- Moran Township (west of St. Ignace along US-2)
- Cedarville/Hessel

INDUSTRIAL

Most industrial development is expected to occur in the region's industrial parks:

- Sault Ste. Marie Industrial Parks (2)
- Chippewa County Industrial Park (Kincheloe)
- Luce County Industrial Park (Newberry)
- Clark Township Industrial Park (Hessel)

DATA BASE

SOLID WASTE MANAGEMENT ALTERNATIVES

The following briefly describes all solid waste management systems considered by the Eastern U.P. Solid Waste Planning Committee.

Alternative 1: (selected alternative for this Plan update)

- **Five primary landfills:** Household and commercial wastes that are not recycled or composted would be disposed in the Dafter Landfill (Chippewa County), Wood Island Landfill (Alger County), Waters Landfill (Crawford County), Elk Run Landfill (Presque Isle County), Hiawatha Shores Landfill (Schoolcraft County).
- **County-wide recycling programs:** Chippewa County's recycling program would be continued and expanded and similar county-wide programs would be developed in Mackinac and Luce counties.
- **Region-wide composting programs:** Programs in Sault Ste. Marie and Mackinac Island would continue. Communities throughout the eastern U.P. would be encouraged to develop additional composting programs.
- **Collection services:** Continue to contract for private collection services.

Alternative 2:

- **Regional solid waste system:** Form a multi-county regional solid waste management authority to accomplish the following:
 - Develop a regional landfill owned and operated by an authority.
 - Develop, operate, and maintain a regional composting program.
 - Develop, operate, and maintain a regional recycling program.
 - Contract with private haulers for solid waste collection services
 - Investigate the feasibility of the operation of a regional incinerator.

DATA BASE

COLLECTION ALTERNATIVES

- **Private sector collection of solid waste:** Waste collection is currently handled by private waste collection companies or individuals. The entire three-county region is being served. The individual user pays for the service through a bag system, tag system, or service fee for weekly or bi-weekly pick-up.
- **Public sector financing of waste collection:** Individual units of government or a regional solid waste management authority would contract with private companies or individuals for refuse collection and disposal. Funding could come from a special millage.
- **Public sector collection of solid waste:** A regional solid waste management authority could operate a waste collection service. The financing of the operation could come from a special millage.
- **Household hazardous waste collection:** Household hazardous waste collection programs are currently being conducted on an annual or semi-annual basis in each county. Financing of these programs is made possible through campaign donations collected from each county, municipality, and local environmental groups. Local public health departments are also closely involved.
- **Commercial/industrial hazardous waste collection:** A private hazardous waste collection firm currently provides this service on a quarterly basis. Local commercial and industrial firms are billed individually for waste collected.
- **Voluntary recycling/composting collection:** All recycling and composting collection operations in the eastern U.P. are being conducted on a voluntary basis.

THE SELECTED SOLID WASTE MANAGEMENT SYSTEM

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

Waste Disposal

- **Five Primary Landfills:** The three-county eastern U.P. region will continue to rely on five privately-owned landfills for primary disposal of type II and type III solid waste. The five landfills are: (1) Dafter Sanitary Landfill, Inc. (a Waste Management Company), located in Dafter Township, Chippewa County; (2) Great American Environmental Services, Inc./Wood Island Waste Management Landfill in Alger County (near the City of Munising); (3) City Environmental Services/Waters Landfill (a Waste Management Inc. company), located near the Village of Waters in Crawford County; (4) Elk Run Sanitary Landfill (a Republic Waste Systems Company), located near the Village of Onaway in Presque Isle County; (5) Hiawatha Shores Landfill (owned by Stanley Zellar), located near the Village of Gulliver in Schoolcraft County.

Solid Waste importation is authorized from Alger, Schoolcraft, Crawford, Menominee, Grand Traverse, Houghton, and Presque Isle counties for primary disposal and from Marquette and Delta counties for contingency disposal.

Acceptance of waste into certified eastern U.P. landfills is contingent upon provisions of the exporting county's acceptance of Chippewa, Luce, and Mackinac counties' waste in its Solid Waste Plan.

SELECTED SYSTEM

Solid waste exportation is authorized to Crawford, Alger, Grand Traverse, Houghton, Schoolcraft, Menominee, and Presque Isle counties for primary disposal and to Marquette and Delta counties for contingency disposal.

- **County-wide Recycling Programs:** Chippewa County's county-wide recycling program should be continued and expanded. Similar county-wide recycling programs should be implemented in Luce and Mackinac counties.
- **Composting Programs Throughout Region:** Composting programs in Sault Ste. Marie and Mackinac Island should be continued. Communities throughout the Eastern U.P. should be encouraged and provided assistance in the development of composting programs.
- **Collection Services:** Private firms should be contracted for the collection of solid waste throughout the Region. This is a continuation of current collection services.
- **Source Reduction:** Source reduction information should be developed and educational programs initiated.
- **Household Hazardous Waste Collection:** Annual household hazardous waste collection programs should continue in each county on an annual basis, at a minimum. Local governments should become more involved in setting up programs in their own communities.
- **Commercial/Industrial Hazardous Waste Collection:** The current program should be continued. A private firm from downstate Michigan currently provides this service on a quarterly basis. Local commercial and industrial firms pay on an individual basis. Cost is determined by weight or volume of waste generated.
- **Educational Programs:** A number of Eastern U.P. schools have initiated solid waste and hazardous waste educational programs. These programs, and others aimed at the adult population, should be encouraged and implemented by the local environmental organizations with assistance from the solid waste industry representatives and the Solid Waste Planning Committee.

SELECTED SYSTEM

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	Authorized Daily Quantity	Authorized Annual Quantity	Authorized Conditions
Chippewa	Alger			100%	P
Chippewa	Luce			100%	P
Chippewa	Mackinac			100%	P
Chippewa	Schoolcraft			100%	P
Chippewa	Crawford			100%	P
Chippewa	Marquette			100%	C
Chippewa	Delta			100%	C
Chippewa	Menominee			100%	P
Chippewa	Grand Traverse			100%	P
Chippewa	Houghton			100%	P
Chippewa	Presque Isle			100%	P
Luce	Alger			100%	P
Luce	Chippewa			100%	P
Luce	Mackinac			100%	P
Luce	Schoolcraft			100%	P
Luce	Crawford			100%	P
Luce	Marquette			100%	C
Luce	Delta			100%	C

SELECTED SYSTEM

Luce	Menominee	100%	P
Luce	Grand Traverse	100%	P
Luce	Houghton	100%	P
Luce	Presque Isle	100%	P
Mackinac	Alger	100%	P
Mackinac	Schoolcraft	100%	P
Mackinac	Crawford	100%	P
Mackinac	Marquette	100%	C
Mackinac	Delta	100%	C
Mackinac	Menominee	100%	P
Mackinac	Grand Traverse	100%	P
Mackinac	Houghton	100%	P
Mackinac	Presque Isle	100%	P

Facility Name used if the exporting county is restricted to using specific facilities within the importing county.

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

SELECTED SYSTEM

IMPORT AUTHORIZATION

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
NA	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____

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

EXPORT AUTHORIZATIONS

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

Table 2-A

CURRENT EXPORT VOLUME AUTHORIZATION OF SOLID WASTE

EXPORTING COUNTY	IMPORTING COUNTY	FACILITY NAME	AUTHORIZED QUANTITY/DAILY	AUTHORIZED QUANTITY/ANNUAL	AUTHORIZED CONDITIONS
Chippewa	Crawford				P
Chippewa	Alger				P
Chippewa	Houghton				P
Chippewa	Delta				C
Chippewa	Marquette				C
Chippewa	Menominee				P
Chippewa	Schoolcraft				P
Chippewa	Grand Traverse				P
Chippewa	Presque Isle				P
Luce	Crawford				P
Luce	Alger				P
Luce	Houghton				P
Luce	Delta				C
Luce	Marquette				C
Luce	Menominee				P
Luce	Schoolcraft				P
Luce	Grand Traverse				P

SELECTED SYSTEM

Luce	Presque Isle				P
Mackinac	Crawford				P
Mackinac	Alger				P
Mackinac	Houghton				P
Mackinac	Delta				C
Mackinac	Marquette				C
Mackinac	Schoolcraft				P
Mackinac	Grand Traverse				P
Mackinac	Menominee				P
Mackinac	Presque Isle				P

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

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**

EXPORTING COUNTY	IMPORTING AUTHORIZED COUNTY QUANTITY/ ANNUAL	FACILITY AUTHORIZED NAME ¹ CONDITIONS ²	AUTHORIZED QUANTITY/ DAILY
NA	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____

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

SOLID WASTE DISPOSAL AREAS

The following identifies the names of existing disposal areas which will be utilized to provide the required capacity and management needs for the solid waste generated within the County for the next five years and, if possible, the next ten years. Pages III-10 through III-16 contain descriptions of the solid waste disposal facilities which are located within the County and the disposal facilities located outside of the County which will be utilized by the County for the planning period. Additional facilities within the County with applicable permits and licenses may be utilized as they are sited by this Plan, or amended into this Plan, and become available for disposal. If this Plan update is amended to identify additional facilities in other counties outside the County, those facilities may only be used if such import is authorized in the receiving County's Plan. Facilities outside of Michigan may also be used if legally available for such use.

Type II Landfill:

Dafter Sanitary Landfill (Chippewa Co.)
Wood Island Landfill (Alger Co.)
Waters Landfill (Crawford Co.)
Elk Run Landfill (Presque Isle Co.)
Hiawatha Shores Landfill (Schoolcraft Co.)

Transfer Facility:

St. Ignace T.S. (Mackinac Co.)
Village of Newberry T.S. (Luce Co.)
Sault Ste. Marie T.S. (Chippewa Co.)
Clark Township T.S. (Mackinac Co.)

Type III Landfill:

Dafter Sanitary Landfill (Chippewa Co.)
Waters Landfill (Crawford Co.)

Processing Plant:

Incinerator:

Waste Piles:

Waste-to-Energy Incinerator:

Other:

City of Sault Ste. Marie Composting
(Chippewa Co.)
City of Mackinac Island Composting
(Mackinac Co.)

SELECTED SYSTEM

FACILITY DESCRIPTIONS

Facility Type: Transfer Station

Facility Name: Newberry Transfer Station

County: Luce Location: T 46NR 10W S36 _____

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: Dafter Landfill

Public Private Owner: Waste Management of the Eastern U.P.

Operating Status (mark all that apply)

- Open
- Closed
- Licensed
- Unlicensed
- Construction Permit
- Open w/Closure Pending

Waste Types Received (mark all that apply)

- Residential
- Commercial
- Industrial
- 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	5 acres
Total area sited for use	
Total area permitted	
Operating	
Not excavated	
Current capacity	65 cubic yards
Estimated lifetime	Unlimited
Estimated days open per year	260 days
Estimated yearly disposal volume:	5000+ tons

Please complete the following, if applicable. . .

Annual energy production (megawatts)
Landfill gas recovery projects
Waste-to-energy incinerators

SELECTED SYSTEM

FACILITY DESCRIPTIONS

Facility Type: Type II Landfill

Facility Name: Wood Island Waste Management

County: Alger Location: T 46N R18W S18, 19

Map identifying location included in Attachment section: Yes

If the 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: Great American Environmental Services, Inc.

Operating Status (mark all that apply)

Waste Types Received (mark all that apply)

- Open
- Closed
- Licensed
- Unlicensed
- Construction Permit
- Open w/Closure Pending

- Residential
- Commercial
- Industrial
- Construction & Demolition
- Contaminated Soils
- Special Wastes *
- Other

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

Type III wastes

Site Size

Total area of facility property	325 acres
Total area sited for use	67 acres
Total area permitted	28 acres
Operating	164 acres
Not excavated	17.6 acres
Current capacity	1,500,000 cubic yards
Estimated lifetime:	20 years
Estimated days open per year:	316 days
Estimated yearly disposal volume:	78,000 cubic yards

If applicable . . .

Annual energy production (megawatts)

Landfill gas recovery projects

Waste-to-energy incinerators

SELECTED SYSTEM

FACILITY DESCRIPTIONS

Facility Type: Type II Landfill

Facility Name: Dafter Sanitary Landfill, Inc. (a Waste Management Inc. company)

County: Chippewa Location: T46N R1W S33

Map identifying location included in Attachment section: Yes

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: A Waste Management Inc. Company

Operating Status (mark all that apply)

Waste Types Received (mark all that apply)

- Open
- Closed
- Licensed
- Unlicensed
- Construction Permit
- Open w/Closure Pending

- Residential
- Commercial
- Industrial
- Construction & Demolition
- Contaminated soils
- Special wastes *
- Other

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

Those approved for disposal in Type II landfill as per DEQ rules and regulations.

Site Size

Total area of facility property	87 acres
Total area sited for use	43.5 acres
Total area permitted	33 acres
Operating	29.5 acres
Not excavated	4 acres
Current capacity	351,900 cubic yards
Estimated lifetime	5.2 years
Estimated days open per year	260
Estimated yearly disposal volume	67,133 cubic yards

If applicable . . .

Annual energy production (megawatts)
Landfill gas recovery projects
Waste-to-energy incinerators

SELECTED SYSTEM

FACILITY DESCRIPTION

Facility Type: Transfer Station

Facility Name: City of St. Ignace Transfer Station

County: Mackinac Location: T40N R3W S7

Map identifying location included in Attachment section: Yes

If facility is an incinerator or a transfer station, list the final disposal site and location for incinerator ash or transfer station wastes : Dafter Landfill_____

Public Private Owner: Waste Management of the Eastern U.P.

Operating Status (mark all that apply)

Waste Types Received (mark all that apply)

- Open
- Closed
- Licensed
- Unlicensed
- Construction Permit
- Open w/Closure Pending

- Residential
- Commercial
- Industrial
- 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
 Total area sited for use
 Total area permitted
 Operating
 Not excavated

Current capacity
 Estimated lifetime Unlimited years
 Estimated days open per year 49
 Estimated yearly disposal volume: 1200 cubic yards

If applicable . . .

Annual energy production (megawatts)
 Landfill gas recovery projects
 Waste-to-energy incinerators

SELECTED SYSTEM

FACILITY DESCRIPTIONS

Facility Type: Type II Sanitary Landfill

Facility Name: City Environmental Services/Waters Landfill

County: Crawford Location: T28N R03W S4

Map identifying location included in Attachment section: Yes

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: A Waste Management Inc. company

Operating Status (mark all that apply)

Waste Types Received (mark all that apply)

- | | |
|---|---|
| <input checked="" type="checkbox"/> Open | <input checked="" type="checkbox"/> Residential |
| <input type="checkbox"/> Closed | <input checked="" type="checkbox"/> Commercial |
| <input checked="" type="checkbox"/> Licensed | <input checked="" type="checkbox"/> Industrial |
| <input type="checkbox"/> Unlicensed | <input checked="" type="checkbox"/> Construction & Demolition |
| <input type="checkbox"/> Construction Permit | <input checked="" type="checkbox"/> Contaminated Soils |
| <input type="checkbox"/> Open w/Closure Pending | <input checked="" type="checkbox"/> Special wastes* |
| | <input type="checkbox"/> Other |

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

Contaminated soils/non-friable

Site Size

Total area of facility property	252.2 acres
Total area sited for use	252.2 acres
Total area permitted	79.02 acres
Operating	9.7 acres
Not excavated	64.87 acres
Current capacity	8.2 million cubic yards
Estimated lifetime:	+ 20 years
Estimated days open per year:	313
Estimated yearly disposal volume:	185,000 <input type="checkbox"/> 200,000 cubic yards

If applicable . . .

Annual energy production (megawatts)

Landfill gas recovery projects

Waste-to-energy incinerators

SELECTED SYSTEM

FACILITY DESCRIPTION

Facility Type: Transfer Station

Facility Name: Sault Ste. Marie Transfer Station

County: Chippewa

Map identifying location included in Attachment section: Yes

If facility is an incinerator or a transfer station, list the final disposal site and location for incinerator ash or transfer station wastes: Dafter Landfill

Public Private Owner: Waste Management of the Eastern U.P.

Operating Status (mark all that apply)

Types Received (mark all that apply)

Open

Closed

Licensed

Unlicensed

Construction Permit

Open w/Closure Pending

Residential

Commercial

Industrial

Construction & Demolition

Contaminated Soils

Special Wastes*

Other

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

Site Size

Total area of facility property - 2

Total area sited for use

Total area permitted

Operating

Non-excavated

Current capacity

Estimated lifetime

Estimated days open per year 49

Estimated yearly disposal 1,000 tons

If applicable . . .

Annual energy production (megawatts)

Landfill gas recovery projects

Waste-to-energy incinerators

SELECTED SYSTEM

FACILITY DESCRIPTION

Facility Type: Type II Landfill

Facility Name: Elk Run Landfill

County: Presque Isle Location: 33N Range: 2E Section(s): 5

Map identifying location included in Attachment section: Yes

If facility is an incinerator or a transfer station, list the final disposal site and location for incinerator ash or transfer station waste:

Public Private Owner:

Operating Status (mark all that apply)

Waste Types Received (mark all that apply)

Open

Closed

Licensed

Unlicensed

Construction permit

Open w/closure pending

Residential

Commercial

Industrial

Construction & demolition

Contaminated soils

Special wastes*

Other

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

Capacity listed as bank yards & estimated yrly volume reported as gate yards

Site Size

Total area of facility property:

99.1 acres

Total area sited for use:

99.1 acres

Total area permitted:

39.2 acres

Operating:

15.1 acres

Not excavated:

24.1 acres

Current capacity:

2,700,000 yds³

Estimated lifetime

23 years

Estimated days open per year

286 days

Estimated yearly disposal volume

288,000 yds³

If applicable . . .

Annual energy production:

Landfill gas recovery projects

N/A megawatts

Waste-to-energy incinerators

N/A megawatts

SELECTED SYSTEM

FACILITY DESCRIPTION

Facility Type: Municipal Solid Waste Landfill

Facility Name: Hiawatha Shores Landfill ID# 470402

County: Schoolcraft Location: 42N Range: 14W Section(s): 4

Map identifying location included in Attachment section: Yes

If facility is an incinerator or a transfer station, list the final disposal site and location for incinerator ash or transfer station waste:

Public Private Owner: Stanley Zellar

Operating Status (mark all that apply)

- Open
- Closed
- Licensed
- Unlicensed
- Construction permit
- Open w/closure pending

Waste Types Received (mark all that apply)

- Residential
- Commercial
- Industrial
- 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:	<u>44.5</u> acres
Total area sited for use:	<u>28.0</u> acres
Total area permitted:	<u>28.0</u> acres
Operating:	<u>5</u> acres
Not excavated:	<u>5</u> acres
Current capacity:	<u>5</u> acres
Estimated lifetime	<u>20</u> years
Estimated days open per year	<u>250</u> days
Estimated yearly disposal volume	<u>50,000</u> ton

If applicable . . .

Annual energy production:

Landfill gas recovery projects	N/A megawatts
Waste-to-energy incinerators	N/A megawatts

SELECTED SYSTEM

SOLID WASTE COLLECTION SERVICES AND TRANSPORTATION:

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

Waste Management of the Eastern U.P., Inc. owns and operates collection and transportation in Chippewa County and portions of Mackinac and Luce counties.

Great American Environmental Services, Inc. provides collection and transportation in portions of Luce and Mackinac counties.

Smith Sanitation provides collection and transportation in portions of Chippewa County.

~~Beaudoin Disposal provides collection and transportation in portions of Chippewa and Mackinac counties.~~

Republic Waste Systems provides collection and transportation for portions of Chippewa, Luce, and Mackinac Counties.

SELECTED SYSTEM

RESOURCE CONSERVATION EFFORTS:

The following describes the selected system 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 the intention to limit the efforts as defined in this Plan update. Instead citizens, businesses, and industries are encouraged to explore the options available to their lifestyles, practices, and processes which will reduce the amount of materials requiring disposal.

Effort Description	Est. Diversion Tons/Yr		
	Current	5 th yr	10 th yr
Increase community awareness of programs and services available for resource conservation through use of the media	NA		
Conduct feasibility studies <input type="checkbox"/> get ideas from residents/government. Develop new programs as a result of studies	NA		

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

SELECTED SYSTEM

WASTE REDUCTION, RECYCLING, & COMPOSTING PROGRAMS:

Volume Reduction Techniques

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

Technique Description	Est. Air Space Conserved Yds ³ /Yr		
	Current	5th yr	10th yr
Separation of materials at site (metals, construction/demolition, tires, etc.)	255 (metals)	332	431
Composting <input type="checkbox"/> include all materials as space is available	1,872	2,004	2,202
Household hazardous waste <input type="checkbox"/> expansion of this program for Chippewa County is underway	210	273	355
Commercial/Industrial <input type="checkbox"/> increase awareness and encourage recycling, composting, etc.			
Recycling <input type="checkbox"/> increase space/personnel at existing centers to handle more types of materials and greater quantities of items. Add centers to areas where none exist at present	6,414	8,775	11,400
Conduct feasibility study to determine volume reduction techniques appropriate for region.	N/A		

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

Overview of Resource Recovery Programs

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

There are no impediments to the current recycling or composting programs. However, both programs could be enhanced through facility expansion and development of programs in Luce and Mackinac counties.

- The Chippewa County Recycling Center takes in corrugated cardboard, newspapers, glass, plastics, office paper, catalogs and magazines, steel, aluminum and batteries. The Center experienced a growth of 17 percent in materials received. In the year 2000, the Center received and diverted 2,138 tons (rounded figure) of materials from landfills. They also provided tours to 726 children and adults in the year 2000. The drop-off Center is open year-round.
- The City of Sault Ste. Marie operates a composting center for residents. The center takes in leaves, grass clippings and brush. Twice a year the city provides curb-side pick up of leaves for its residents. The center is open from May through November each year. Residents may pick processed mulch from the center at no charge. In 1999, 273 tons of material were diverted from landfills.
- The Mackinac Island composting center is operated by the Department of Public Works on Mackinac Island. The center takes in leaves, grass clippings, small trees and brush, horse manure and restaurant kitchen slop. Materials are processed and sold to Island residents. The center is open year-round. An estimated 250 tons of material is diverted from landfills.
- The household hazardous waste collection for the region has been in operation for several years. Currently this program is being expanded through the combined efforts of the Lake Superior State University, area environmental groups and government.
- Dafter Landfill provides a drop off box for metals at its site as well as separates metals for recycling. Metals diverted from the landfill in 2000 totaled 83 gross tons.

SELECTED SYSTEM

RECYCLING AND COMPOSTING

The following is a brief analysis of the recycling and composting programs selected for the County in this Plan. Additional information on operation of recycling and composting programs is included in Appendix A. The analysis covers various factors within the County and the impacts of these factors on recycling and composting. Following the written analysis the tables on pages III-22, 23 & 24 list the existing recycling, composting, and source separation of hazardous materials programs that are currently active in the County and which will be continued as part of this Plan. The second group of three tables on pages III-25, 26 & 27 list the recycling, composting, and source separation of hazardous materials programs that are proposed in the future for the County. It is not the intent to prohibit additional programs or expansions of current programs to be implemented beyond those listed in this Plan update.

- Chippewa County Recycling Center (details on previous page)
- Mackinac Island Department of Public Works Composting Center (details on previous page)
- City of Sault Ste. Marie Composting Center (details on previous page)
- Hazardous Waste Collection □ regional efforts (details on previous page)
- Dafter Landfill (details on previous page)

SELECTED SYSTEM

TABLE III-1

RECYCLING:

<u>Program Name</u>	<u>Service Area</u>	<u>Public or Private</u>	<u>Collection Point</u>	<u>Collection Frequency</u>	<u>Materials Collected</u>	<u>Program Development</u>	<u>Management Operation</u>	<u>Responsibilities Evaluation</u>
Chippewa County	Area Wide/Visitors	Public	D	Sp/Su Fa/Wi	ABC DEF	2	2	2

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

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

²Identified by the materials collected by listing of the letter located by that material type. A= plastics; B= Newspaper; C= Corrugated Containers; D= Other Paper; E= Glass; F= Metals; P= Pallets; J= Construction/Demolition; K= Tires, L1, L2, etc. = as identified on page 30.

SELECTED SYSTEM

TABLE III-2

COMPOSTING:

<u>Program Name</u>	<u>Service Area</u> ¹	<u>Public or Private</u>	<u>Collection Point</u> ³	<u>Collection Frequency</u> ⁴	<u>Materials Collected</u> ⁵	<u>Program Management Responsibilities</u> ²		
						<u>Development</u>	<u>Operation</u>	<u>Evaluation</u>
City of SSMarie Composting	City of SSMarie	Public	c/d	Sp thru Fa	GLW	3	3	3
City of Mackinac Island	Mackinac Island	Public	d	w	GLFWA	3	3	3

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

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

² Identified by 1 = Designated Planning Agency; 2 = County Board of Commissioners; 3 = Department of Public Works; 4 = Environmental Group (Identified on page 31); 5 = Private Owner/Operator; 6 = Other (Identified on page 31).

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

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

⁵ Identified by the materials collected by listing of the letter located by that material type. G = Grass Clippings; L = Leaves; F = Food; W = Wood; P = Paper;

S = Municipal Sewage Sludge; A = Animal Waste/Bedding; M = Municipal Solid Waste; L1, L2 etc. = as identified on page 32.

SELECTED SYSTEM

TABLE III-3

SOURCE SEPARATION OF POTENTIALLY HAZARDOUS MATERIALS:

Since improper disposal of non-regulated 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.

<u>Program Name</u>	<u>Service Area</u>	<u>Public or Private</u>	<u>Collection Point²</u>	<u>Collection Frequency³</u>	<u>Materials Collected⁴</u>	<u>Program Management Responsibilities¹</u>		
						<u>Development</u>	<u>Operation</u>	<u>Evaluation</u>
Hazardous Waste	Region-wide	Public	4	d	P/PS/PH U/B1/B2	4	4	4

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

¹ Identified by 1 = Designated Planning Agency; 2 = County Board of Commissioners; 3 = Department of Public Works; 4 = Environmental Group (Identified on

page 31); 5 = Private Owner/Operator; 6 = Other (Identified on page 31).

² Identified by c = curbside; d = drop-off; o = onsite; and if other, explained.

³ Identified by d = daily; w = weekly; b = biweekly; m = monthly; and if seasonal service also indicated by Sp = Spring; Su = Summer; Fa = Fall; Wi = Winter.

⁴ Identified by the materials collected by listing of the letter located by that material type. AR = Aerosol Cans; A = Automotive Products except Used Oil, Oil Filters &

Antifreeze; AN = Antifreeze; B1 = Lead Acid Batteries; B2 = Household Batteries; C = Cleaners and Polishers; H = Hobby and Art Supplies; OF = Used Oil

Filters; P = Paints and Solvents; PS = Pesticides and Herbicides; PH = Personal and Health Care Products; U = Used Oil; OT = Other Materials and identified.

SELECTED SYSTEM

TABLE III-4

PROPOSED RECYCLING:

<u>Program Name</u> (if known)	<u>Service Area</u> ¹	<u>Public or Private</u>	<u>Collection Point</u> ³	<u>Collection Frequency</u> ⁴	<u>Materials Collected</u> ⁵	<u>Program Management Responsibilities</u> ²		
						<u>Development</u>	<u>Operation</u>	<u>Evaluation</u>
NA								

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

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

² Identified by 1 = Designated Planning Agency; 2 = County Board of Commissioners; 3 = Department of Public Works; 4 = Environmental Group (Identified on page 31); 5 = Private Owner/Operator; 6 = Other (Identified on page 31).

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

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

⁵ Identified by the materials collected by listing of the letter located by that material type. A = Plastics; B = Newspaper; C = Corrugated Containers; D = Other Paper; E = Glass; F = Metals; P = Pallets; J = Construction/Demolition; K = Tires; L1, L2 etc. = as identified on page 32.

SELECTED SYSTEM

TABLE III-5

PROPOSED COMPOSTING:

<u>Program Name</u> (if known)	<u>Service Area</u>	<u>Public or Private</u>	<u>Collection Point²</u>	<u>Collection Frequency³</u>	<u>Materials Collected⁴</u>	<u>Program Management Development</u>	<u>Responsibilities¹ Operation Evaluation</u>
NA	_____	_____	_____	_____	_____	_____	_____
	_____	_____	_____	_____	_____	_____	_____
	_____	_____	_____	_____	_____	_____	_____
	_____	_____	_____	_____	_____	_____	_____
	_____	_____	_____	_____	_____	_____	_____
	_____	_____	_____	_____	_____	_____	_____

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

¹ Identified by 1 = Designated Planning Agency; 2 = County Board of Commissioners; 3 = Department of Public Works; 4 = Environmental Group (Identified on

page 31); 5 = Private Owner/Operator; 6 = Other (Identified on page 31).

² Identified by c = curbside; d = drop-off; o = onsite; and if other, explained.

³ Identified by d = daily; w = weekly; b = biweekly; m = monthly; and if seasonal service also indicated by Sp = Spring; Su = Summer; Fa = Fall; Wi = Winter.

⁴ Identified by the materials collected by listing of the letter located by that material type. G = Grass Clippings; L = Leaves; F = Food; W = Wood; P = Paper;

S = Municipal Sewage Sludge; A = Animal Waste/Bedding; M = Municipal Solid Waste; L1, L2 etc. = as identified on page 32.

SELECTED SYSTEM

TABLE III-6

PROPOSED SOURCE SEPARATION OF POTENTIALLY HAZARDOUS MATERIALS:

<u>Program Name</u>	<u>Service Area</u> ¹	Public or	Collection	Collection	Materials	Program Management Responsibilities ²
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¹ Identified by where the program will be offered. If throughout the planning area, then listed by planning area; if only in specific counties, then listed by county; if only in

specific municipalities, then listed by its name and respective county.

² Identified by 1 = Designated Planning Agency; 2 = County Board of Commissioners; 3 = Department of Public Works; 4 = Environmental Group (Identified on

page 31); 5 = Private Owner/Operator; 6 = Other (Identified on page 31).

SELECTED SYSTEM

(if known)

NA

Private	Point ¹	Frequency ²	Collected ³	Development	Operation	Evaluation
---------	--------------------	------------------------	------------------------	-------------	-----------	------------

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

¹ Identified by c = curbside; d = drop-off; o = onsite; and if other, explained.

² Identified by d = daily; w = weekly; b = biweekly; m = monthly; and if seasonal service also indicated by Sp = Spring; Su = Summer; Fa = Fall; Wi = Winter.

³ Identified by the materials collected by listing of the letter located by that material type. AR = Aerosol Cans; A = Automotive Products except Used Oil, Oil Filters & Antifreeze; AN = Antifreeze; B1 = Lead Acid Batteries; B2 = Household Batteries; C = Cleaners and Polishers; H = Hobby and Art Supplies; OF = Used Oil Filters; P = Paints and Solvents; PS = Pesticides and Herbicides; PH = Personal and Health Care Products; U = Used Oil; OT = Other Materials and identified.

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 and in five and ten years.

<u>Collected Material</u>	<u>Projected Annual Tons Diverted</u>			<u>Collected Material</u>	<u>Projected Annual Tons Diverted</u>		
	Current	5th Yr	10th Yr		Current	5th Yr	10th Yr
A. All Plastics	<u>143</u>	<u>145</u>	<u>146</u>	G. Grass & Leaves	230	246	271
B. Newspaper	<u>416</u>	<u>500</u>	<u>550</u>	H. Total Wood Waste	394	422	464
C. Corrugated Containers	<u>961</u>	<u>975</u>	<u>980</u>	I. Construction & Demolition	_____	_____	_____
D. Total Other Paper	<u>188</u>	<u>192</u>	<u>195</u>	J. Food & Food Processing	_____	_____	_____
E. Total Glass	<u>35</u>	<u>38</u>	<u>40</u>	K. Tires	_____	_____	_____
F. Other Materials				L. Total Metals	200	260	275
F1. Magazines/catalogs	<u>278</u>	<u>285</u>	<u>300</u>		_____		
F2 Batteries	<u>1.5</u>	<u>2</u>	<u>3</u>		_____		

SELECTED SYSTEM

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.

<u>Collected Material:</u>	<u>In-State Markets</u>	<u>Out-of-State Markets</u>	<u>Collected Material</u>	<u>In-State Markets</u>	<u>Out-of-State Markets</u>
A. Total Plastics	<u>100%</u>	_____	G. Grass & Leaves	<u>100%</u>	_____
B. Newspaper	<u>100%</u>	_____	H. Total Wood Waste	<u>100%</u>	_____
C. Corrugated Containers	<u>100%</u>	_____	I. Construction & Demolition	_____	_____
D. Total Other Paper	<u>100%</u>	_____	J. Food & Food Processing	_____	_____
E. Total Glass	_____	<u>100%</u>	K. Tires	_____	_____
F. Other Materials			L. Total Metals	<u>100%</u>	_____
F1. Magazines/Catalogs	<u>100%</u>	_____	F3. _____	_____	_____
F2. Batteries	<u>100%</u>	_____	F4. _____	_____	_____

SELECTED SYSTEM

EDUCATIONAL AND INFORMATIONAL PROGRAMS:

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

<u>Program Topic</u> ¹	<u>Delivery Medium</u> ²	<u>Targeted Audience</u> ³	<u>Program Provider</u> ⁴
1	ot □ tours/rtn	p/s-all grades incl. University	O-Chippewa County Recycling Center
2	rtnfe	p/b/s/e	O-City of SSMarie
2	rtnfe	e	O-Mackinac Island
3	rtn	p	HD-Chippewa Co. CU-LSSU
3	rtn	p	HD-Mackinac Co.
5	ot-tours	p/b/i/s-all grades incl. University	OO-Defter Landfill

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

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

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

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

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

SELECTED SYSTEM

TIMETABLE FOR SELECTED SYSTEM IMPLEMENTATION

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

TABLE III-7

Management Components	Timeline
Continue to use three privately-owned landfills for primary disposal of Type II and Type III wastes.	Ongoing
Continue and expand recycling programs.	Ongoing
Continue and expand, where feasible, composting programs.	Ongoing
Continue to contract with private haulers for collection services.	Ongoing
Develop source reduction information and initiate educational programs.	2001 <input type="checkbox"/> Ongoing
Continue and expand household hazardous waste collection programs and develop and provide information to residents and businesses about available services.	Ongoing
Continue current commercial/industrial hazardous waste collection programs and develop and provide additional information to businesses about available services.	Ongoing

SELECTED SYSTEM

SITING REVIEW PROCEDURES

AUTHORIZED DISPOSAL AREA TYPES

All Type II and Type III Solid Waste Disposal Facilities currently certified and permitted by the State of Michigan are deemed consistent with this Plan. Any Solid Waste disposal areas and types not certified or permitted by the State of Michigan shall be deemed inconsistent with this Plan.

SITING CRITERIA AND PROCESS

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

In the year 2000, the eastern Upper Peninsula (Chippewa, Luce and Mackinac counties), demonstrated it has more than ten years of landfill capacity. As such, the Eastern Upper Peninsula Solid Waste Planning Committee recognizes that, as long as it is able to demonstrate that it has at least 66 months of available capacity, it may refuse to utilize its siting mechanism.

The developer of a proposed new or expanded landfill, transfer station, or processing facility shall submit the following information to the Planning Committee:

1. Type of facility (i.e., Type II landfill, Type III landfill, transfer station, or processing facility)
2. A written and signed statement documenting or demonstrating:
 - a. the source of the waste stream (indicate point of origin) that will come to the facility.
 - b. the needs of the service area and how they will be met by the proposed development (include proposed recycling services to be offered).
3. Engineering reports and draft plans specific to the proposed site, including, but not limited to a site map, with the following:
 - a. Scale to fit onto 24 x 36- inch sheet.
 - b. The date, north point and scale.
 - c. The dimensions of all lots and property lines for subject properties and adjacent parcels.
 - d. The location of all existing structures on subject property.
 - e. The location of all existing access roads.
 - f. The location and width of all rights-of-way on roads abutting the property.
 - g. The proposed boundaries of solid waste disposal areas.
 - h. The location of all residential dwellings within a one-mile radius of site.
 - i. The location of all public and private water supplies within a one-mile radius of the site.
 - j. The landfill site distance from airport runways licensed by the MI Aeronautics Commission.

SELECTED SYSTEM

4. Documentation from initial hydro-geological studies of the proposed area which indicate any action needed to meet compliance with statutory requirements; also a statement from a licensed, professional engineer verifying that initial hydro-geological studies comply with statutory requirements.
5. A written and signed statement from a licensed, professional engineer that the proposed development is consistent with proven technologies and with all changes in the statutory requirements of Part 115.
6. Documentation of financial capability and resources to undertake the project. This documentation shall be in the form of a statement from a financial institution or certified public accountant.
7. A written and signed statement agreeing to charge equitable and similar fees within the service area.
8. A written and signed statement agreeing to treat all haulers equitably and impartially.
9. A written and signed statement indicating the landfill facility will provide disposal capacity for solid waste generated in Chippewa, Luce and Mackinac counties (if proposed facility is a landfill).
10. A written and signed document stating that the proposed facility is NOT located in:
 - a) A designated historic district or archaeological area as defined by the State historic preservation officer.
 - b) A groundwater recharge area or wellhead protection area as approved by the Michigan DEQ.
 - c) An area defined in Section 32301 of Part 323, Shorelands Protection and Management of Act 451, or in areas of unique habitat as defined by the Department of Natural Resources, Natural Features Inventory.
11. Written documentation from the host county road commission that the proposed facility property is directly accessible to a public, all-season road (defined as a route that can carry trucks of maximum allowable weights at all times of the year and not subject to seasonal weight restrictions).

If there is not direct access to an all-season road, the developer has the option of reconstructing the road to all-season standards. Such work will be done at the sole expense of the developer, unless other arrangements are agreed upon between the developer and the host county road commission.

Siting Criteria

The following criteria will be used to evaluate the information provided by the developer and to determine if the proposed facility expansion or new Type II landfill, Type III landfill, transfer station or processing facility, is, or is not, consistent with the approved Update of the Eastern Upper Peninsula Solid Waste Management Plan. Some information is applicable to hauling companies.

SELECTED SYSTEM

		YES	NO
1.	TYPE OF FACILITY		
2.	WASTE STREAM/SERVICE NEEDS		
a.	The developer has provided a signed and written statement documenting that waste stream to the facility is authorized by the Plan.		
b.	The developer has a written and signed statement describing the needs of the service area and how the proposed development will address those needs, including proposed recycling services that may be offered.		
3.	MINIMUM ISOLATION DISTANCES		
	The developer assures compliance with DEQ rules R299.4412 through R299.4416 [effective April 12, 1999], and as updated, regarding Type II landfill location restrictions. The developer will submit a signed statement indicating the facility meets the isolation distances identified in Part 115 Rules, as amended.		
4.	COMPLIANCE WITH PART 115 The engineer included, as part of the signed engineering reports and draft plans, a statement that the initial hydro-geological studies indicate probable compliance with statutory requirements (if applicable).		
5.	PROVEN TECHNOLOGY The developer provided a written and signed statement that the proposed development is consistent with proven technologies.		
6.	FINANCIAL CAPABILITY The developer provided written documentation from a financial institution or accountant certifying financial resources are available to undertake the project.		
7.	EQUITABLE AND SIMILAR FEES The developer provided a written and signed statement agreeing to charge equitable and similar fees within the service area.		
8.	EQUITABLE AND IMPARTIAL TREATMENT OF HAULERS The developer provided a written and signed statement agreeing to treat all haulers equitably and impartially, and to provide disposal capacity of solid waste generated in the Eastern Upper Peninsula.		
9.	LANDFILL CAPACITY The developer provided a written and signed statement that they will provide for a ten-year disposal capacity for waste generated in the eastern Upper Peninsula (landfill development). Note: Industrial Type III landfills, developed for the sole use of the industry, are not required to provide ten years of capacity for the Counties.		

MISSING LOCATION

SELECTED SYSTEM

11.	ROAD ACCESS The developer has provided written documentation that the facility will be accessible to a public, all-season road (defined as a route that can carry trucks of maximum allowable weights at all times of the year and not be subject to seasonal weight restrictions).		
-----	---	--	--

If all of the above criteria were answered yes, the proposed facility is consistent with the Eastern U.P. Solid Waste Management Plan.

Review Process

Committee Determination of Consistency

The developer shall provide a written request for consistency with the solid waste plan, along with the required information to the designated planning agency. Within 90 days of receipt of the written request and the required information, the Committee will determine if the proposed development is, or is not, consistent with the Eastern Upper Peninsula Solid Waste Management Plan. The Committee must provide to the developer a written determination of consistency or inconsistency and include the reasons and facts supporting the decision. If the Committee fails to make a determination within the 90 days, the proposal shall be deemed consistent with the Eastern Upper Peninsula Solid Waste Management Plan. Final determination of consistency shall be made by the director of the Department of Environmental Quality upon receipt of a construction permit application.

Appeal Process – To the County Board of Commissioners

If a proposed development is found to be inconsistent with the Eastern Upper Peninsula Solid Waste Management Plan by the Committee, an appeal by the developer may be made to the County Board of Commissioners of the host county. The appeal hearing between the developer and the County Board of Commissioners must be held within 90 days of receipt of the request by the County Board Chairperson.

The appeal process before the Board of Commissioners shall be identical to the Committee review process in terms of information considered and criteria used to determine consistency. The developer, however, may provide additional information to the Board.

Within 30 days of the appeal hearing, the County Board of Commissioners must provide a written determination of consistency or inconsistency to the developer.

SELECTED SYSTEM

This determination must include the reasons and facts supporting the decision. If the County Board of Commissioners upholds the determination of inconsistency rendered by the Committee, the developer may address the deficiencies identified by the Board of Commissioners and the Committee and resubmit the project proposal to the Committee for subsequent review for consistency. It is assumed that the tenants of the appeal process regarding timeframe for a hearing schedule would remain the same as the first appeal.

If the County Board of Commissioners fails to make a determination within 30 days of the appeal hearing, the proposal shall be deemed consistent with the Eastern Upper Peninsula Solid Waste Management Plan.

If the County Board of Commissioners fails to act upon the request within 90 days of receiving the request, the proposal shall be considered to be consistent with the Eastern Upper Peninsula Solid Waste Management Plan.

Final determination of consistency shall be made by the Director of the Department of Environmental Quality upon receipt of a construction permit application.

SELECTED SYSTEM

SOLID WASTE MANAGEMENT COMPONENTS¹

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

The Solid Waste Management Plan Update for the Eastern Upper Peninsula region (Chippewa, Luce & Mackinac counties). Planning staff of the Eastern Upper Peninsula Regional Planning and Development Commission are responsible for the information included in the Plan Update. Information included in the Plan Update is gathered from the representation on the Solid Waste Planning Committee. Individuals selected to serve on the Committee comprise a range of stakeholders whose vocations or elected positions make them qualified to help determine the needs of the region and who can help implement and enforce the Plan as presented. The Committee is as follows:

Four delegates - the waste management industry

- Tim Harrow □ Dafer Sanitary Landfill
- Bill Glime □ Newberry DPW
- Bruce Zimmerman □ City of Mackinac Island DPW
- Cal Lofdahl □ Chippewa County Recycling Center

One delegate □ industrial waste generator

- Mike Soder □ Curtis business owner

Two delegates □ environmental interest groups within the region

- Mike Ripley, St. Mary's River BPAC
- Diane Meyer, Three Lakes Group of the Sierra Club

Three delegates □ general public

- Rodney Richards
- Frank Harness
- Aaron Hopper

One delegate □ county government

- Bernard Labie

One delegate □ township government

- Jim Durm, Moran Twp.

One delegate □ city government

- Jim Hendricks, Sault EDC

One delegate □ Planning Agency

- Jeff Hagan, Director

¹ Components or subcomponents may be added to this table.

SELECTED SYSTEM

IDENTIFICATION OF RESPONSIBLE PARTIES

Document entities within the region which may have an interest in the following areas of the Plan.

Resource Conservation:

- St. Mary's River Bi-national Public Advisory Council
- Munoscong River Watershed Council
- Sault Naturalists (Audubon Society)
- Three Lakes Group of the Sierra Club
- Nature Conservancy
-

Resource Recovery Programs/Volume Reduction Techniques:

- Chippewa County Recycling Center
- City of Sault Ste. Marie Public Works (composting)
- City of Mackinac Island Public Works (composting)
- Dafter Landfill (metals collection)
- Sault Ste. Marie Transfer Station (metals collection)

Collection Processes:

- Waste Management of the Eastern U.P, Inc. (Chippewa, Luce & Mackinac counties)
- Great American Environmental Services, Inc. (parts of Luce and Mackinac counties)
- Smith Sanitation (parts of Chippewa County)
- Beaudoin Sanitation (parts of Chippewa and Mackinac counties)
- Republic Waste Systems (Chippewa, Mackinac, Luce Counties)

Transportation:

Same as above.

Disposal Areas:

- Processing Plants Mackinac Island Department of Public Works
- Transfer Stations Waste Management of the Eastern U.P., Townships which have collection containers
- Sanitary Landfills Dafter Landfill, Wood Island Landfill, Waters Landfill, Elk Run Sanitary Landfill (Type II, Type III) , Hiawatha Shores Landfill

Ultimate Disposal Area Uses:

Primary disposal of solid waste.

Local Responsibility for Plan Update Monitoring & Enforcement:

Eastern Upper Peninsula Solid Waste Planning Committee
Chippewa County, Luce County and Mackinac County Boards of Commissioners

SELECTED SYSTEM

Educational and Informational Programs:

MSU Extension Services
Eastern U.P. Intermediate School District & area public schools
Chippewa County Recycling Center
county health departments
Area environmental groups

LOCAL ORDINANCES AND REGULATIONS AFFECTING SOLID WASTE DISPOSAL

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

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

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

A. Geographic area/Unit of government:

Type of disposal area affected:

Ordinance or other legal basis:

Requirement/restriction:

B. Geographic area/Unit of government:

Type of disposal area affected:

Ordinance or other legal basis:

Requirement/restriction:

C. Geographic area/Unit of government:

Type of disposal area affected:

Ordinance or other legal basis:

Requirement/restriction:

D. Geographic area/Unit of government:

Type of disposal area affected:

Ordinance or other legal basis:

Requirement/restriction:

E. Geographic area/Unit of government:

Type of disposal area affected:

Ordinance or other legal basis:

Requirement/restriction:

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

Additional listings are on attached pages.

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 available to the County. This certification is required to be prepared and approved by the County Board of Commissioners.

- Chippewa, Luce and Mackinac counties have more than ten years capacity identified in this Plan and an annual certification process is not included in this Plan.
- Ten years of disposal capacity has not been identified in this Plan. The County will annually submit capacity certifications to the DEQ by June 30 of each year on the form provided by DEQ. The County's process for determination of annual capacity and submission of the County's capacity certification is as follows:

Dafter Sanitary Landfill, Inc. (a Waste Management Inc. company)

Current capacity - 351,900 cyds
(est.) Yearly disposal volume - 67,133 cyds
5.2 years of operation remaining at current rate of disposal (5/2001)

Great American Environmental Services, Inc./Wood Island Waste Management Landfill

Current capacity - 1,500,000 cyds
(est.) Yearly disposal volume - 78,000 cyds
19+ years of operation remaining at current rate of disposal

City Environmental Services Waters Landfill (a Waste Management Inc. company)

Current capacity - 8,200,000 cyds
(est.) Yearly disposal volume - 200,000 cyds
40+ years of operation remaining at current rate of disposal

Republic Waste Systems/Elk Run Sanitary Landfill

Current capacity - 2,700,000 cyds
(est.) Yearly disposal volume - 288,000 cyds
23 years of operation remaining at current rate of disposal

Hiawatha Shores Sanitary Landfill

Current Capacity - 5.0 acres
(est.) Yearly disposal volume - 50,000 ton
20 years of operation remaining at current rate of disposal

APPENDIX

SELECTED

SYSTEMS

EVALUATION OF RECYCLING

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

DETAILED FEATURES OF RECYCLING AND COMPOSTING PROGRAMS:

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

Recycling

Chippewa County Recycling Center

- Cardboard (961 tons)
- Magazines/catalogs (278 tons)
- Glass (35 tons)
- Steel (99 tons)
- Newspaper (416 tons)
- Office Paper (188 tons)
- Plastics (143 tons)
- Batteries (2 tons)
- Aluminum (16 tons)

Composting

Mackinac Island Composting Center

- Wood, leaves, grass clippings, restaurant kitchen slop, horse manure (est. 1000 cyds finished product, annually)

City of Sault Ste. Marie Composting Center

- Wood, leaves, grass clippings (819 cyds of processed material, year 1999)

Dafter Sanitary Landfill, Inc.

- Recovery of metals (agreement with private scrap dealer for container and collection (83 gross tons in year 2000)

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

Equipment Selection

Existing Programs:

Equipment utilized in existing recycling operations is owned and operated by the entities which provide the services. Chippewa County Recycling Center, Mackinac Island Department of Public Works (composting), City of Sault Ste. Marie Public Works Department (composting).

Proposed Programs:

Site Availability & Selection

Existing Programs:

The Chippewa County Recycling Center is located in the City of Sault Ste. Marie with motor vehicle access to the drop off center. The center is open seven days per week (exceptions for some holidays). This program also provides mobile recycling collection trailers which are on site seven days per week, in each township.

Sault Ste. Marie Composting is located in the City of Sault Ste. Marie. The grounds are open to the residents of the city from May through November and city crews provide curbside pick-up twice each year - in the spring and again in the fall.

Mackinac Island Composting is located on Mackinac Island. The complex is open year-round for disposal of materials.

Proposed Programs:

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:

<u>Program Name:</u>	<u>pH Range</u>	<u>Heat Range</u>	<u>Other Parameter</u>	<u>Measurement Unit</u>
SSM Composting	neutral	low	NA	NA
Misland Composting	neutral	low	NA	NA
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____

Proposed Programs:

<u>Program Name</u>	<u>pH Range</u>	<u>Heat Range</u>	<u>Other Parameter</u>	<u>Measurement Unit</u>
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____

COORDINATION EFFORTS:

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

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

Ultimate responsibility for implementing the Solid Waste Plan rests with the Chippewa, Luce and Mackinac counties boards of commissioners as part of their general governance.

The boards of commissioners have charged the Eastern U.P. Regional Planning and Development Commission to be cognizant of any pertinent ordinances or approved land use plans or wellhead protection plans within the counties, and any pertinent restrictions or ongoing commitments contained in plans for air quality, water quality or waste management which may be required to meet state and federal standards.

The boards of commissioners have requested the EUP Solid Waste Management Planning Committee to be cognizant of any pertinent ordinances and any pertinent restrictions and on-going commitments contained in waste management planning.

Any decisions affecting current or anticipated programs for solid waste management, air quality, water quality or land use planning may be made after consultation and recommendations from the Regional Planning Commission and/or the EUP Solid Waste Management Planning Committee.

COORDINATION EFFORTS CONTINUED:

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 Component¹	Estimated Costs	Potential Funding Sources
<u>Resource Conservation Efforts</u>		
<u>Resource Recovery Programs</u>	\$408,000 / yr.	County Millage and sale of recyclable materials.
<u>Volume Reduction Techniques</u>		
<u>Collection Processes</u>	\$984, 200 / yr.	Fees
<u>Transportation</u>		
<u>Disposal Areas</u>	\$1,539,000 / yr.	Fees
<u>Future Disposal Area Uses</u>		
<u>Management Arrangements</u>		
<u>Educational & Informational Programs</u>	\$10,000	MSU Extension Public Schools Civic Groups

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

EVALUATION SUMMARY OF THE SELECTED SYSTEM:

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

The selected system should utilize five primary landfill sites for disposal as adequate space is available to support operations for more than 66 months. The selected system should continue to support private firm contracts for the collection of solid waste, and equitable reimbursement for services.

The selected system encourages the continuation of existing recycling and composting programs and encourages the expansion of these programs, and implementation of new programs throughout the tri-county eastern U.P.

The selected system encourages the implementation of new and expansion of existing household hazardous waste collection programs throughout the region.

The selected system encourages the development of educational materials and programs. Currently a number of Eastern U.P. schools have initiated solid waste and hazardous waste educational programs. These programs, and others aimed at the adult population, should be encouraged and implemented by the local environmental organizations, with assistance from the solid waste industry representatives and the Committee.

ADVANTAGES AND DISADVANTAGES OF THE SELECTED SYSTEM:

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

ADVANTAGES:

1. Five primary disposal sites that provide adequate space for eastern U.P. solid waste for more than 20 years.
2. Existing recycling and composting programs are convenient to residents in the areas they serve, and provide for significant waste reduction.
3. Existing programs are convenient for the majority of community residents, including access to recycling centers and composting areas, curbside collection in communities and transfer boxes in outlying areas.

4.

5.

6.

7.

DISADVANTAGES:

1. Does not address issues of clean-up and closure of two former landfill sites located in the region.

2.

3.

4.

5.

6.

7.

NON-SELECTED

SYSTEMS

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

SYSTEM COMPONENTS:

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

RESOURCE CONSERVATION EFFORTS:

Several resource conservation efforts are currently handled through private groups and organizations.

VOLUME REDUCTION TECHNIQUES:

Development and implementation of an incinerator waste disposal option is not feasible because it would not gather public support because of environmental concerns.

A household hazardous waste program is currently being designed through the efforts of Lake Superior State University, environmental groups, business and government. The project includes the construction of a building which will be used to store materials until they are collected a private company.

RESOURCE RECOVERY PROGRAMS:

COLLECTION PROCESSES:

The new hazardous waste facility would serve as a voluntary drop-off center to area residents.

TRANSPORTATION:

DISPOSAL AREAS:

INSTITUTIONAL ARRANGEMENTS:

EDUCATIONAL AND INFORMATIONAL PROGRAMS:

CAPITAL, OPERATIONAL, AND MAINTENANCE COSTS:

Costs associated with the construction and operation of an incineration plant, at this time, would be too prohibitive.

EVALUATION SUMMARY OF NON-SELECTED SYSTEM:

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

The construction and operation of an incineration plant would not gather public support because of environmental concerns.

Formation of a regional solid waste management authority is not feasible at this time.

Household hazardous waste collection programs for the region are currently being expanded through the efforts of local health departments and environmental groups. Once this expanded program is in place it would offer area residents the opportunity to drop-off items at a central location (building designed to standards established for materials) more frequently. This option is not mentioned in the Selected System because it is currently being developed.

This program would provide for more frequent voluntary disposal of household hazardous waste, encourage the participation of more people by providing for a convenient drop-off point and operating hours. The building would be a structure designed to accommodate the items, and would be operated by persons trained to handle special materials. Ultimately this center would produce volume reduction at landfills serving the region.

ADVANTAGES AND DISADVANTAGES OF THE NON-SELECTED SYSTEM:

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

ADVANTAGES:

1. At this time there would be no public support for development of an incinerator.
2. At this time there would be no public support for the development of a regional solid waste management authority.
- 3.
- 4.
- 5.
- 6.
- 7.
- 8.

DISADVANTAGES:

1. The household hazardous waste program currently being considered is still in the planning and development stages.
- 2.
- 3.
- 4.
- 5.
- 6.
- 7.
- 8.

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: 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.

1. Solid Waste Planning Committee approves submittal of Draft Plan to all municipalities and to a central repository where it can be inspected by the public and also approves the initiation of the 90-day review and comment period. A copy is also sent to the Director of the Michigan Department of Environmental Quality (MDEQ).
2. A notice is published at the time the Plan is submitted for review as to the availability of the Plan for review or copying.
3. A Public Hearing on the proposed Plan is held during the public comment period. A notice of the Hearing is published in local newspapers not less than 30 days prior to the Hearing. A transcript and recording of the Hearing is produced and made available to the public.
4. If necessary, the Solid Waste Planning Committee makes revisions to the Plan in response to the Public Hearing comments and all other written comments received during the 90-day review period.
5. The Solid Waste Planning Committee then submits the Draft Plan to the three county boards for review and approval or requests for revisions.
6. Upon each county's approval for distribution to its political subdivisions, the Plan is sent to all municipalities in each county for approval.
7. Once 67 percent or more of the municipalities in each county formally approve the Plan it sent to the Director of MDEQ.
8. Once the Plan is approved by the Director of the MDEQ, it is formally adopted as the area's Solid Waste Management Plan.

PLANNING COMMITTEE APPOINTMENT PROCEDURE:

The Eastern Upper Peninsula Regional Planning and Development Commission was given the authority to appoint the members of the Eastern U.P. Solid Waste Management Planning Committee.

Members of the existing Committee who wished to continue to serve during the Plan update were re-appointed recently. Recommendations for new members to fill the vacancies in designated sectors were solicited and new members were selected from the list of names received. These newly appointed representatives from the public and private sectors have a working knowledge of solid waste issues.

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. Tim Harrow (Dafter Sanitary Landfill)
2. Cal Lofdahl (Chippewa County Recycling Center)
3. Bill Glime (Newberry DPW)
4. Bruce Zimmerman (City of Mackinac Island DPW)

One representative from an industrial waste generator:

1. Mike Soder (Curtis business owner)

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

1. Diane Meyer (Three Lakes Group of the Sierra Club)
2. Mike Ripley (St. Mary's River BPAC)

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

1. Bernard LaJoie (Chippewa County Board of Commissioners)

One representative from township government:

1. Jim Durm (Moran Township)

One representative from city government:

1. Jim Hendricks (Sault Ste. Marie Economic Development Corporation)

One representative from the regional solid waste planning agency:

1. Jeff Hagan (Eastern U.P. Regional Planning & Development Commission)

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

1. Frank Harness (Mackinac County)
2. Rodney Richards (Luce County area)
3. Aaron Hopper (Chippewa County)

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 Selected System is a continuation of the present system. Proposed new programs and expansion programs will be topics of subsequent meetings of the planning committee following Plan adoption.

Resolutions

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

Listed Capacity

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

Capacity lists from landfills:

- Dafter Sanitary Landfill, Inc. (a Waste Management Inc. company)
- City Environmental Services Waters Landfill (a Waste Management Inc. company)
- Great American Environmental Services, Inc. Wood Island Waste Management Landfill
- Elk Run Sanitary Landfill
- Hiawatha Shores Landfill

DAFTER SANITARY LANDFILL INC.
A WASTE MANAGEMENT COMPANY

3962 West 12 Mile Road
Dafter, MI 49724
(906) 632 6186
(906) 632 2257

June 5, 2001

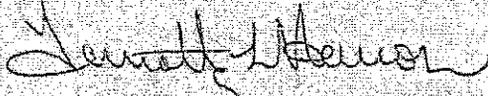
Eastern UP Regional Planning & Development Commission
524 Ashmun Street
PO Box 520
Sault Ste. Marie, MI 49783

Re: Dafter Landfill

Dear Mr. Campbell

This letter serves to certify that the Dafter Sanitary Landfill has sufficient disposal capacity based on current volumes to accept all the waste generated in Chippewa, Luce and Mackinac Counties for a minimum 5 year period.

Sincerely,



Timothy L. Harrow
District Manager

HIAWATHA SHORES LANDFILL, INC.

Landfill Office
2725W U.S. HWY 2
Gulliver, MI 49840
906-283-3133

April 17, 2007

Mr. John Campbell, Director
Eastern U.P. Regional Planning
P.O. Box 520
Sault Ste. Marie, MI 49783

Dear Mr. Campbell:

Hiawatha Shores Landfill is able to provide access to Chippewa, Luce and Mackinac Counties for the disposal of up to 50,000 tons per year for the next twenty years. Should you have any questions, please feel free to call me. Thank you.

Sincerely,



Stanley E. Zellar
President



36850 Van Born Rd.
P.O. Box 68
Wayne, MI 48184
734-641-3655
734-729-8890 Fax

April 9, 2007

Mr. John Campbell
Eastern U.P. Regional Planning & Development Comm.
524 Ashmun Street - P.O. Box 520
Sault Ste. Marie, Michigan 49783

RE: Solid Waste Plan Update

Dear Mr. Campbell,

The Elk Run Landfill has sufficient capacity to service the disposal needs of the Eastern U.P. Regional Planning & Development Commission, which includes the Counties of Chippewa, Luce and Mackinac. Elk Run's current capacity has approximately 2,700,000 bank cubic yards permitted. At 2006 disposal rates (220,000 gate yards received) along with approximately 60,000 gate yards that we could potentially see from the EUP Planning Area, this equates to more than 23 years of site life.

Thank you for this opportunity to provide clarification. Please feel free to contact me if you have any questions or require any additional information at 734-727-2128 or 734-231-9203.

Respectfully,

A handwritten signature in black ink, appearing to read "Stephanie Glysson", written over a horizontal line.

Stephanie Glysson
Director of Governmental Affairs



WASTE MANAGEMENT

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

April 24, 2000

ATTN: John Campbell
Eastern U.P. Regional Planning & Development Committee
5243 Ashmun St. - P.O. Box 520
Sault Ste. Marie, MI 49783

Dear Mr. Campbell:

Waste Management, Inc. Sanitary Landfill of Waters is able to provide access to Chippewa, Luce, and Mackinac Counties for the disposal of up to 100% of solid waste annually for the next ten years.

Sincerely,

A handwritten signature in cursive script that reads 'Chad A. Crawford'.

Chad A. Crawford
Landfill Manager

WOOD ISLAND Sanitary Landfill

Corporate Office
P.O. Box 2002
Kingsford, MI 49802
906-774-9006



Landfill Office
M-28 East, P.O. Box 165
Wetmore, MI 49894
906-387-2646

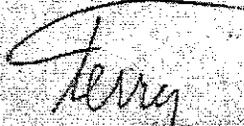
May 10, 2000

Mr. John Campbell, Director
Eastern U.P. Regional Planning
P.O. Box 520
Sault Ste. Marie, MI 49783

Dear John:

Wood Island Landfill is able to provide access to Chippewa, Luce and Mackinac Counties for the disposal of up to 47,000 tons per year for the next 10 years. Should you have any questions, please feel free to give me a call. Thank You.

Sincerely,


Terrance J. Barnes
Vice President

"Committed To Our Upper Peninsula Environment"

Maps

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

Landfills

- Dafter Sanitary Landfill, Inc. (Chippewa County)
- City Environmental Services/Waters Landfill (Crawford County)
- Wood Island Waste Management Landfill (Alger County)
- Elk Run Sanitary Landfill (Presque Isle County)
- Hiawatha Shores Landfill (Schoolcraft County)

Transfer Stations

- Sault Ste. Marie Transfer Station (Chippewa County)
- Village of Newberry Transfer Station (Luce County)
- Clark Township Transfer Station (Mackinac County)
- St. Ignace Transfer Station (Mackinac County)

Other

- Sault Ste. Marie Composting Center (Chippewa County)
- Mackinac Island Composting Center (Mackinac County)

DISPOSAL OPTIONS



Inter-County Agreements

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

Special Conditions

Special conditions affecting import or export of solid waste.

- The solid waste planning committee (at its meeting on June 6, 2001) supported to change import and export status for Delta County from a primary basis to a contingency basis. (Letter attached.)

CUPPAD

REGIONAL COMMISSION

2415 14th Avenue South Escanaba, Michigan 49829-1197
(906) 786-9234 FAX (906) 786-4442

June 1, 1998

Mr. John Campbell
Eastern U.P. Regional
Planning Commission
524 Ashmun Street
Sault Ste. Marie, MI 49783

Dear Mr. Campbell:

The County of Delta, as are most counties in the state, is in the process of updating its County Solid Waste Plan. As part of the process, consideration is being given to waste import and export provisions. As you know, for the inter-county flow of waste to take place, both the importing and exporting counties must include each other in their respective plans.

At this time, the Delta County Solid Waste Plan will authorize the exportation of up to 100% of waste from Delta County to the following counties: Alger, Baraga, Chippewa, Dickinson, Gogebic, Houghton, Iron, Keweenaw, Luce, Mackinac, Marquette, Menominee, Ontonagon and Schoolcraft Counties for primary disposal. The exportation of wastes to an out-of-county solid waste facility is authorized provided it meets the following conditions:

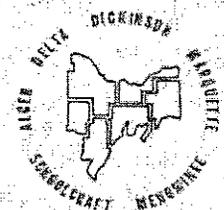
- Wastes exported to other counties for disposal shall be permitted when there is a discontinuance of landfill operations, or the solid waste first is processed or handled at a transfer station owned and operated by the Delta Landfill Authority, or the Delta Solid Waste Management Authority is unable to take the waste for disposal at the Delta Landfill.
- Wastes generated by Mead Paper Publishing Division to an out-of-county solid waste facility would not need the approval of the Delta Solid Waste Management Authority.
- The exportation of wastes to other counties is subject to provisions as contained in the importing county's solid waste plan.
- The County Plan does not require formal reciprocal or other agreements between landfills or local units of government for the exportation of waste.

The Delta County Solid Waste Plan will authorize the importation of up to 100% of waste from Alger, Baraga, Chippewa, Dickinson, Gogebic, Houghton, Iron, Keweenaw, Luce, Mackinac, Marquette, Menominee, Ontonagon and Schoolcraft Counties for primary disposal. Out-of-county wastes for disposal

CENTRAL UPPER PENINSULA PLANNING AND DEVELOPMENT REGIONAL COMMISSION

EXECUTIVE COMMITTEE & COUNTY REPRESENTED

Chairperson	L. Benson, Menominee
Vice-Chairperson	G. Anderson, Marquette
Secretary	G. Corkin, Marquette
Treasurer	T. Aho, Alger
Director	Ernest Hoholik, Schoolcraft
Director	R. Good, Delta
Director	M. Minnerick, Dickinson
Director	P. Grisleau, Menominee
Past-Chairperson	D. Olson, Dickinson
Executive Director	David C. Gillis



"Some men see things as they are and say WHY,
we dream things that never were and say WHY NOT."
- George Bernard Shaw

Page Two

at the Delta Solid Waste Management Authority landfill is authorized provided it meets the following conditions:

- The Delta Solid Waste Management Authority, as owner of the landfill facility, must agree to accept the out-of-county wastes and is responsible for establishing the waste disposal fees.
- A maximum of 24,000 tons a year of out-of-county waste shall be imported into Delta County for disposal at the Delta Landfill.
- The importation of wastes from other counties is subject to provisions as contained in the exporting county's solid waste plan.
- The County Plan does not require formal reciprocal or other agreements between landfills or local units of government for the importation of waste.
- The Delta Solid Waste Management Authority retains the option of contracting with outside agencies for acceptance of waste when it is in the best financial interest of the Authority, and offers no risk to the health, safety and welfare of the citizens of the Delta County, and further that the best financial interests of the Delta Solid Waste Management Authority be defined as that airspace is sold at a rate higher than the rates for Delta County residents and such sale does not preclude routine or emergency waste disposal by any County resident or agency.

On behalf of the Delta Solid Waste Planning Committee, we request the inclusion of Delta County as an "exporting county" for primary disposal in your plan update. As you may be aware, Delta County has a publicly owned and managed landfill with a life capacity of about 28 years. There are no plans to cease landfill operations, but the county wishes to maintain viable landfill options. Even if your county does not have a landfill at present, perhaps some day a landfill, transfer station or waste processing facility may be constructed that could be utilized by Delta County.

As you proceed through the update process, you may wish to include Delta County as a possible disposal site, subject to the provisions contained above.

Should you have any questions or comments, feel free to contact me.

Sincerely,



Peter Van Steen
Senior Planner

pvs:bbs

cc: Melinda Keillor
Tom Vitito

Minutes of a regular meeting of the Chippewa County Board of Commissioners, held at the Chippewa County Courthouse, 319 Court St., Sault Ste. Marie, Michigan on the tenth day of September, 2007 at 7:00 p.m.

PRESENT: Earl Kay, Richard Timmer, Scott Shackleton, Don Cooper, Ted Postula and Bernie LaJoie

ABSENT: Jim Moore

The following preamble and resolution was offered by Commissioner LaJoie and seconded by Commissioner Postula.

RESOLUTION NO. 07-18

**RESOLUTION IN SUPPORT OF
EASTERN U.P. REGIONAL SOLID WASTE
MANAGEMENT PLAN**

WHEREAS, Chippewa County Board of Commissioners has had an opportunity to review the Eastern U.P. Regional Solid Waste Management Plan; and

WHEREAS, Chippewa County Board of Commissioners supports the findings of the Solid Waste Planning Committee.

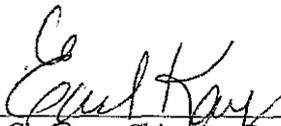
NOW, THEREFORE, BE IT RESOLVED, that Chippewa County Board of Commissioners hereby approves the E.U.P. Regional Solid Waste Plan Amendment (revised draft dated May, 2007).

A VOTE WAS TAKEN AS FOLLOWS

AYES: Kay, Timmer, Shackleton, Cooper, Postula, LaJoie

NAYS: None

RESOLUTION DECLARED ADOPTED.



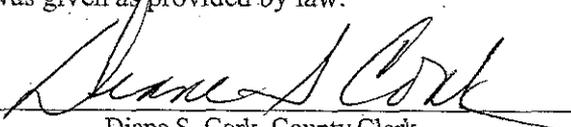
Earl Kay, Chairman, Chippewa County Board of Commissioners



Diane S. Cork, County Clerk

STATE OF MICHIGAN)
) ss.
COUNTY OF CHIPPEWA)

I hereby certify that the foregoing is a true and complete copy of the resolution adopted by the County Board of Commissioners of Chippewa County at a regular meeting held on the date first stated above, and I further certify that public notice of such meeting was given as provided by law.



Diane S. Cork, County Clerk

**Luce County
Board of Commissioners**

County Government Building
407 W. Harrie Street
Newberry, MI 49868

(Phone) 906 293-5521 (Fax) 906 293-0050

District #1 Nancy Morrison
District #3 Rita Lemanek

District #4 Jill Maki

District #2 Terry Stark
District #5 Phyllis French

LUCE COUNTY RESOLUTION

EASTERN U.P. REGIONAL SOLID WASTE MANAGEMENT PLAN

WHEREAS, the Luce County Board of Commissioners has had an opportunity to review the Eastern U.P. Regional Solid Waste Management Plan; and

WHEREAS, the Luce County Board of Commissioners supports the findings of the Solid Waste Planning Committee; therefore,

Resolved, that the Luce County Board of Commissioners hereby approves the Eastern U.P. Regional Solid Waste Plan Amendment (revised dated May, 2007).

It is hereby certified that this resolution was passed by the Luce County Board of Commissioners at a regular meeting held on September 13, 2007 held in the Circuit Courtroom of the board of commissioners, at Newberry, Michigan.



Terry Stark, Chair
County Board of Commissioners

Date: 9/13/07



S. Mahar
County Clerk

Date: 9/13/2007

Mackinac County Board of Commissioners

100 S. Marley Street Room 10

St. Ignace, Michigan 49781

Phone (906) 643-7300 Fax (906) 643-7302

Mike J. Patrick

Calvin McPhee

Lawrence Leveille

Nelson
erson

razier
airperson

SOLID WASTE MANAGEMENT PLAN AMENDMENT RESOLUTION

REAS, Mackinac County has had an opportunity to review the Eastern U.P. Regional Solid Management Plan; and

REAS, Mackinac County Board of Commissioners supports the findings of the Solid Waste mg Committee; therefore,

RESOLVED, that Mackinac County Board of Commissioners hereby approves the Eastern egiional Solid Waste Plan Amendment (revised draft dated May, 2007).

CALL VOTE

ed by: Frazier

ted by: McPhee

Leveille

Frazier, McPhee, Patrick, Nelson

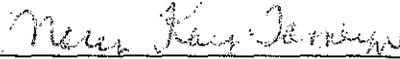
None

September 13, 2007



Dawn L. Nelson, Chair

Kay Tamlyn, Clerk of the Mackinac County Board of Commissioners, do hereby certify ny seal to the above resolution as adopted by the Mackinac County Board of ssioners at their regular meeting held on the 13th day of September, 2007.



Mary Kay Tamlyn, Clerk

