MACOMB COUNTY SOLID WASTE MANAGEMENT PLAN

UPDATE 1999

Approved by the Michigan Department of Environmental Quality on March 13, 2000
Plan Prepared by:
RMT, Inc.,
Ann Arbor, Michigan
March 13, 2000

Mr. John C. Hertel, Chairperson
Macomb County Board of Commissioners
40 North Gratiot
Mt. Clemens, Michigan 48043

Dear Mr. Hertel:

The Department of Environmental Quality (DEQ) received the locally approved update to the Macomb County Solid Waste Management Plan (Plan) on July 12, 1999.

The Plan provides for more than ten years of disposal capacity by relying primarily on Pine Tree Acres Landfill in Macomb County (County) to meet its final solid waste disposal needs. In addition, the County has authorized its waste to be exported to Washtenaw, Sanilac, Oakland, Wayne, Jackson, Lenawee, Shiawassee, and Monroe Counties. The County authorizes the importation of waste from Wayne, Oakland, Lapeer, Monroe, Washtenaw, Genesee, Livingston, Tuscola, Sanilac, Huron, Saginaw, and Shiawassee Counties.

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

The Plan may also contain other provisions that are neither required nor expressly authorized for inclusion in a solid waste management plan. The DEQ approval of the Plan does not extend to any such provisions. Under Part 115, the DEQ has no statutory authority to determine whether such provisions have any force or effect.
By this letter, the Plan is hereby approved and the County now assumes responsibility for the enforcement and implementation of this Plan. The DEQ would like to thank the County for its efforts in addressing the solid waste management issues in the County.

If you have any questions, you may contact Mr. Seth Phillips, Chief, Solid Waste Management Unit, Waste Management Division, at 517-373-4750.

Sincerely,

[Signature]
Russell J. Harding
Director
517-373-7917

cc: Senator Arthur J. Miller, Jr.
Senator Kenneth J. DeBeauessaert
Senator Dave Jaye
Representative William J. Callahan
Representative Michael Switalski
Representative Paul Wojno
Representative Jennifer Faunce
Representative Sue Rocca
Representative Paul Gieleghem
Representative Alan Sanborn
Representative Janet L. Kukuk

Mr. Bernard E. Giampetroni, Macomb County Department of Planning
Mr. Arthur R. Nash Jr., Deputy Director, DEQ
Ms. Cathy Wilson, Legislative Liaison, DEQ
Mr. Jim Sygo, DEQ
Ms. Joan Peck, DEQ
Dr. Benedict Okwumabua – Southeast Michigan
Mr. Seth Phillips, DEQ
Mr. Matt Staron, DEQ
June 30, 1999

Mr. Seth Phillips, Chief
Solid Waste Management Unit
Waste Management Division
Department of Environmental Quality
P.O. Box 30241
Lansing, Michigan 48909

Dear Mr. Phillips:

The County of Macomb is pleased to submit the 1999 Macomb County Solid Waste Management Plan Update to be considered by the State for final approval and adoption.

The Solid Waste Planning Committee met and developed a draft plan that was submitted to the public, neighboring counties and affected communities for their review and comments. The SWPC incorporated comments received as appropriate and approved the Plan Update. The Macomb County Board of Commissioners approved the Plan Update and submitted it to the twenty-seven communities that make up the Macomb County Planning Area which resulted in over 67% of the communities approving the plan.

We note that subsequent to the approval of the Plan Update by the Macomb County Board of Commissioners, the Grosse Pointe Clinton Refuse Disposal Authority’s Incinerator in Clinton Township ceased operation and is now in the process of being dismantled. In addition, the City of Richmond indicated that they have a recycling and composting program that should have been included on Table III-1 and Table III-2.

We thank you and your staff for providing technical assistance along the way during this Plan Update process. If you have any further questions regarding the Plan Update or the process the County used to complete the plan, please feel free to contact our Designated Planning Agency, the Macomb County Department of Planning and Economic Development at (810) 469-5285.

Sincerely,

John C. Hertel
Chairman
Macomb County Board of Commissioners

Attachments

cc: James McKiernan, Chair, Solid Waste Planning Committee
Louis J. Burdi, Chair, Planning and Economic Development Committee
Bernard E. Giampetroni, Director,
Planning and Economic Development Department
PLAN FORMAT
FOR PREPARING
COUNTY SOLID WASTE MANAGEMENT PLANS

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

John Engler, Governor
Russell J. Harding, Director

Michigan Department of Environmental Quality
Waste Management Division

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

EQP 5210 (8-97)
MDEQ information is denoted by the font "CG Times - 10" throughout this report as shown here. Information provided by Macomb is denoted by the font "Arial - 12" throughout the report as shown here.

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.

Macomb County
St. Clair County
(includes the portion of the City of Memphis in St. Clair County).

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 D.

<table>
<thead>
<tr>
<th>Municipality</th>
<th>Original Planning County</th>
<th>New Planning County</th>
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<tr>
<td>Memphis</td>
<td>St. Clair</td>
<td>Macomb</td>
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DESIGNATED PLANNING AGENCY PREPARING THIS PLAN UPDATE:
Macomb County Department of Planning and Economic Development

CONTACT PERSON: Mr. Bernard E. Giampetroni, Executive Director

ADDRESS: Macomb County Department of Planning and Economic Development 1 S. Main Mount Clemens, Michigan 48043

PHONE: (810) 469-5285 FAX: (810) 469-6787 (If Applicable)

E-MAIL: (If Applicable)
CENTRAL REPOSITORY LOCATION(S): Macomb County Department of Planning and Economic Development, 1 S. Main, Mount Clemens, Michigan 48043
APPENDIX B - NON SELECTED SYSTEMS
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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)

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<thead>
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<th>% of Economic Base*</th>
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<td>% Land Use</td>
<td>% of Economic Base*</td>
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Total Population
Macomb County Communities

775,875

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

Population projections were obtained from Southeast Michigan Council of Governments (SEMCOG) data.

Economic data for Macomb County was obtained from the report “County/Community Profiles” prepared by the Macomb County Department of Planning and Economic Development.
EXECUTIVE SUMMARY

This Plan has been prepared on behalf of Macomb County and its municipalities under the provisions of Part 115 of Act No. 451 of the Public Acts of 1994, as amended, known as the Natural Resources and Environmental Protection Act. This Plan addresses the solid waste management needs of Macomb County to ensure that all non-hazardous waste generated is collected, recovered, processed, and disposed in a manner consistent with state law and in an environmentally sound manner.

The Study Area for this Plan includes all of the Macomb County communities including the northern portion of the City of Memphis located in St. Clair County.

The Plan was developed to meet four Primary goals:

Goal 1: Fulfill the requirements of Part 115 of Michigan's Natural Resources and Environmental Protection Act (NREPA, 1994 PA 451, as amended) for solid waste management planning.

Goal 2: Reduce the quantity and volume of Macomb County's waste stream that must be disposed in landfills to meet the State Solid Waste Policy for reduction, reuse, composting, recycling, and disposal.

Goal 3: Assure that public health, safety, and the environment are protected from adverse effects of improper solid waste management activities.

Goal 4: Identify the institutional arrangements for the successful implementation of the Solid Waste Management Plan Update.

The current population of the planning area is estimated to be 775,875 people. The population of the study area is expected to increase to 832,596 people by the year 2009. It is estimated that 719,300 tons of residential, commercial, industrial, and other waste is generated in the planning area. This is expected to increase to 771,880 tons by the year 2009. Waste projections were based on waste generation rates developed during previous planning efforts. Residential waste was projected to be 3.08 pounds per capita per day. Commercial waste is generated at a rate of 0.8 pounds with industrial waste generated at a rate of 0.6 pounds per capita per day. Other waste including sludges, demolition, and construction waste is generated at a rate of 0.6 pounds per capita per day.

The center of waste generation was determined to be located in the southern portion of the County. The cities of Warren, Sterling Heights, and St. Clair Shores, and Clinton Township have over 50 percent of the population of Macomb County and generate the greatest quantities of waste in the County. The center of waste generation for industrial waste is likely along the industrial corridors in Warren and Sterling Heights.
Macomb County has one active landfill, the Pine Tree Acres Landfill in Lenox Township. This facility has sufficient capacity to meet the disposal needs of the Macomb County planning area through the next five and ten year planning periods. The Grosse Pointe-Clinton Refuse Disposal Authority operates an incinerator in Clinton Township. This facility is scheduled to cease operation by April 1999.

Macomb County exports approximately 828,300 cubic yards of refuse, and 30,000 cubic yards of incinerator ash. The export of incinerator ash will cease with the closing of the Grosse Pointe-Clinton Refuse Disposal Authority incinerator. Survey data indicates that Macomb County imported 468,400 cubic yards of waste from Oakland, St. Clair, Wayne, and Lapeer Counties. The data indicates that Macomb County is a net exporter of waste.

Solid waste is collected by private haulers operating under contracts with municipalities or through agreements with individual homeowners, except in the City of Warren which provides municipal collection. Four transfer stations operate within Macomb County. They are the South Macomb Disposal Authority Transfer Station serving the communities of Eastpointe, St. Clair Shores, Roseville, and Center Line; Warren Transfer Station; Ray Township Transfer Station; and the Armada Township Transfer Station. The major routes used for refuse hauling vehicles traveling north-south in the County are Van Dyke (M-53), Groesbeck (M-97), Mound, North Avenue, I-94, and Gratiot Avenue (M-3). Harper Avenue is used by vehicles traveling to and from the St. Clair Shores area and to the Grosse Pointe-Clinton Refuse Disposal Authority incinerator. East-west travel is accomplished by using several of the Mile Roads in the southern portion of the County. 29 Mile Road in the northern portion of the County, is used extensively by haulers transporting waste to the Pine Tree Acres Landfill. Other County Roads are also used, generally for short distances in traveling to and from the major routes to disposal areas.

Macomb County has experienced a significant increase in the number of communities that are actively involved in recycling programs since the 1994 Plan Update. Many communities within Macomb County plan, operate, and evaluate their recycling and composting programs with the assistance of private haulers. Sixteen communities within Macomb County indicated that they have a recycling program operating at the current time, while other communities noted that they were interested in information on how they could get materials collected for recycling including plastic containers, newspaper, corrugated containers, glass, metals, used oil, appliances, batteries, and styrofoam. Grass clippings, leaves, and garden debris are collected for composting. The City of St. Clair Shores has a recycling and compost ordinance that requires mandatory separation of recyclables and yard waste from other solid waste for one-family and two-family residential dwellings. Other recycling limitations are provided by each private hauler, and there are no other ordinances or regulations affecting the operation of any of these programs.

Twelve communities in Macomb County indicated that they have a composting program operating at the current time. Grass clippings, leaves, and garden debris are collected primarily by the private waste haulers servicing each community. Most of the private
haulers offer curb-side pickup, while some communities have drop-off sites from where the private haulers take it to a composting facility. Macomb County contributes composted waste to several compost facilities in southeastern Michigan including King of the Winds, Indian Summer Recycling, and Pine Tree Acres Landfill. Many communities provide educational information to increase participation in the recycling programs.

The Macomb County Health Department has established a household hazardous waste program that is available to all Macomb County households. Materials can be dropped off by appointment at a hazardous waste storage building located at the Health Department. The program is funded by the Macomb County Board of Commissioners through the Health Department budget. The program will accept Automotive Products (gasoline, motor oil, battery acid, solvents and degreasers, brake fluid, transmission fluid, and spray paint), Gardening Products (pesticides, weed killers, poisons, sprays and dust, and fertilizers), and Household Products (oven cleaners, muriatic acid, rat and ant poison, drain cleaner, pool chemicals, photo chemicals, household batteries, paint thinner and solvents, paint stripper, nail polish and remover, aerosols, and oil based paint). Other household hazardous waste programs are offered by the US Postal Service, City of St. Clair Shores, City of Eastpointe, and City of Roseville.

The Plan identified the existing solid waste management system as the most efficient, environmentally sound alternative. This system has wide spread acceptance by the public. No other alternatives were evaluated in detail.

CONCLUSIONS

This Plan concludes that the existing solid waste management system is the most cost-effective, environmentally sound alternative for the Macomb County planning area.

SELECTED ALTERNATIVES

The Selected Alternative consists of private collection of residential, commercial, and industrial waste through contracts with municipalities, commercial/industrial users, or directly with homeowners for residential pick-up. Waste is hauled directly to disposal facilities, except for the communities of Ray and Armada Townships, and the cities of Warren, Eastpointe, St. Clair Shores, Roseville, and Center Line where waste is brought to a transfer station and then hauled to the disposal facility.

Private refuse firms provide recycling for contract communities through drop-off centers and curb-side collection. Glass, paper, plastic, metal, batteries, white goods, and used motor oil are recycled. Yard waste and grass clippings are disposed at composting facilities. Household hazardous waste can be periodically disposed at Macomb County Health Department and other agencies facilities.

Waste that is not recycled is disposed in licensed sanitary landfills in Macomb County and adjoining counties or is incinerated at the Grosse Pointe-Clinton Refuse Disposal Authority.
incinerator. Macomb County has sufficient landfill space to meet its needs for the five year and ten year planning periods.

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:** Fulfill the requirements of Part 115 of Michigan’s Natural Resources and Environmental Protection Act (NREPA, 1994 PA 451, as amended) for solid waste management planning.

**Objective 1a:** Inventory the existing solid waste management system in Macomb County with regards to collection, transportation, processing, and disposal issues.

**Objective 1b:** Estimate solid waste generation within Macomb County for five year and 10 year projections.

**Objective 1c:** Assess opportunities in waste reduction, composting, recyclable materials and energy recovery, along with the need for landfill facilities to determine the relative feasibility of different options and how they compare in terms of environmental and monetary cost to the public.

**Objective 1d:** Inform elected officials and all interested citizens of findings and recommendations resulting from the planning study through a public hearing and the preparation and distribution of the Plan Update.
Goal 2: Reduce the quantity and volume of Macomb County's waste stream that must be disposed in landfills to meet the State Solid Waste Policy for reduction, reuse, composting, recycling, and disposal.

Objective 2a: Identify existing community recycling programs, compost facilities, and solid waste management education programs in use in Macomb County.

Objective 2b: Encourage continued participation in existing programs and expansion of these programs in communities that do not provide source reduction, source separation, composting, or recycling.

Goal 3: Assure that public health, safety, and the environment are protected from adverse effects of improper solid waste management activities.

Objective 3a: Identify sufficient disposal capacity to accommodate the solid waste generated in Macomb County for a 10-year planning period.

Objective 3b: Ensure that state-of-the-art technologies for protecting public health and the environment are utilized in developing and operating solid waste facilities.

Goal 4: Identify the institutional arrangements for the successful implementation of the Solid Waste Management Plan Update.

Objective 4a: Identify existing institutional systems and controls for the collection, transportation, reduction, and disposal of solid waste.

Objective 4b: Obtain letters of agreement from public and private operations responsible for implementation of the selected solid waste management system, and documentation from owners or operators to confirm that Macomb County has access to listed disposal capacities.

Objective 4c: Identify the amounts of waste imported into Macomb County and exported from Macomb County and coordinate with other Counties to authorize acceptable quantities of waste imports and exports.

Objective 4d: Provide for the continuous comprehensive plan revision procedure that will allow the Solid Waste Management Plan to be reviewed, assessed, and updated on a five year basis.

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

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)

The following database is derived from the listed sources:

Residential, commercial, industrial, and other types of waste were calculated by RMT., Inc. Michigan, utilizing waste generation factors developed for Macomb County from disposal facility data. Previous studies have shown that approximately 60% of the Macomb County waste stream is residential waste (Figure 1). This equates to a generation rate of 3.08 pounds per capita per day. Commercial solid waste comprises 16% of the waste stream and is generated from commercial businesses such as wholesale and retail trade, banks and other financial institutions, offices, governmental buildings, restaurants, hotels, motels, and schools. Commercial solid waste is generated at a rate of 0.8 pounds per capita per day.

Industrial waste comprises 12% of the Macomb County waste stream. Industrial waste is defined as waste coming from manufacturing, transportation, communication, public utilities, processing, assembly, and distribution facilities. Industrial waste is generated at a rate of 0.6 pounds per capita per day. Other waste comprises waste not fitting into the other three categories. This includes construction/demolition waste, fly ash, municipal wastewater treatment plant sludges, bulky items, tires, foundry sand, sawdust, and agricultural waste. Other waste is generated at a rate of 0.6 pounds per capita per day.

The following table presents the projected waste quantities for the planning area.

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**TOTAL QUANTITY OF SOLID WASTE GENERATED:**

719,300 Tons in 1999

**TOTAL QUANTITY OF SOLID WASTE NEEDING DISPOSAL:**

640,150 Tons in 1999

The Macomb County planning area is projected to generate 719,300 tons of waste in 1999. Not all of the waste generated is disposed in landfills or at the GPCRDA Incinerator. Some waste is removed from the waste stream and is recovered in recycling or compost programs. Macomb County recycles 5.9 percent (42,100 tons) and composts...
5.2 percent of the planning area generated (37,050 tons) waste. Figure 2 shows how much waste is generated in the planning area and the quantities removed prior to final disposal.

The solid waste management system in Macomb County is operating efficiently and without significant problems that would affect the collection, transport, disposal, or recycling of waste. Since the completion of the first Solid Waste Management Plan developed by the Macomb County Board of Commissioners, solid waste practices have been simplified and recycling programs have increased. Recycling efforts have increased from four communities planning programs in 1994 to 16 communities with active programs in 1998. Macomb County has one active licensed landfill that is capable of meeting the disposal needs of the County through a ten year planning period. This is a significant improvement over the 18 landfills that that were used for disposal as prior to 1982. Figure 3 shows the interaction between communities and disposal facilities prior to 1982 and the complex transportation and disposal network. Figure 4 shows that there are only two active disposal sites in the County in 1998 (Pine Tree Acres Landfill and the GPCRDA Incinerator) which has significantly improved waste management practices.

A survey was completed of the communities in the planning area, refuse haulers, and disposal facilitates to determine collection, disposal, recycling, and composting practices. The results of the survey are described in the following sections.
Waste Recycled
42,100 tons

Waste Composted
37,050 tons

Solid Waste Needing Disposal
640,150 tons
Active Disposal Facilities In Macomb County

* DISPOSAL FACILITY

FIGURE 4

MACOMB COUNTY
1998 SOLID WASTE MANAGEMENT PLAN UPDATE

ACTIVE DISPOSAL FACILITIES IN MACOMB COUNTY

DRAWN BY: SJL
APPROVED BY: SJK
PROJECT NUMBER: 4085.01
FILE NUMBER: 40850106.DWG
DATE: MAY 1998

FIGURE PREPARED BY THE MACOMB COUNTY DEPARTMENT OF PLANNING AND ECONOMIC DEVELOPMENT.
DATA BASE

SOLID WASTE DISPOSAL AREAS
Inventory and description of all solid waste disposal areas within the County are to be utilized by the County to meet its disposal needs for the planning period.

A survey was completed to identify the disposal areas utilized by Macomb County to determine the amounts of solid waste imported and exported and the Macomb County disposal capacity.

Macomb County Disposal Sites
Five disposal sites were identified in Macomb County. They are the Pine Tree Acres Landfill, South Macomb Disposal Authority (SMDA) Transfer Station, Ray Township Transfer Station, Armada Township Transfer Station, and the Warren Transfer Station. A sixth disposal facility, the Grosse Pointe-Clinton Refuse Disposal Authority incinerator, is open but is scheduled to close prior to April 1999.

Pine Tree Acres Landfill The Pine Tree Acres Landfill is a privately owned and operated landfill which has been in operation since June 1987. The landfill is located in a sparsely populated area of Lenox Township on 29 Mile Road. The original site encompassed approximately 160 acres of land. In December 1988, Macomb County approved a 300-acre expansion of the disposal facility, increasing the total area to 460 acres. The projected total remaining capacity of the landfill is estimated to be 59,000,000 in-place cubic yards. Solid waste disposed at the facility originates from both Macomb County and neighboring counties.

SMDA Transfer Station The SMDA Transfer Station was constructed in 1979 and primarily serves the member communities of Eastpointe, St. Clair Shores, Roseville, and Center Line. The facility is publicly owned and is currently operated and managed by BFI under provisions of a ten year contract with the SMDA. This contract expires in 2002. Refuse from the transfer station is taken to the BFI Arbor Hills Landfill in Washtenaw County for final disposal. In 1997 approximately 119,000 tons of refuse was disposed at the transfer station, including 118,000 tons from Macomb County and 1,000 tons from Wayne County.

Ray Township Transfer Station The Ray Township Transfer Station is located on Kuntsman Road in Section 17 of Ray Township. The station consists of a concrete pad and a ramp which allows residents to deposit waste into 40-cubic yard roll-off boxes. A separate roll-off box is used to collect metals. Approximately 1,900 cubic yards of refuse was deposited at the transfer station in 1997. Waste is hauled to the Pine Tree Acres Landfill for final disposal. Scrap metal is sold to an area scrap metal dealer.

Armada Township Transfer Station The Armada Township Transfer Station consists of a packer truck brought to the site of the former Township landfill located on Armada Ridge
Road, just north of 33 Mile Road. The transfer station, funded by Armada Township, is open the second and fourth Saturday of each month for use by Armada Township residents. Approximately 600 cubic yards of refuse is collected each year and disposed in the Pine Tree Acres landfill. City Environmental East operates the transfer station and also provides a compartmentalized recycling container truck two Saturdays per month for the recycling of glass, paper, metals, and plastic.

**Warren Transfer Station.** The Warren Transfer Station is owned by the City of Warren and operated by City Management. It is located on Flanders Road, approximately one half mile north of 10 Mile Road in the City of Warren. The station was constructed in 1971 and received approximately 45,000 tons of refuse which was hauled to Pine Tree Acres Landfill for final disposal. Waste brought to the facility is weighed and compacted into 75 cubic yard transfer trailers. The transfer station operates 5 ½ days per week and receives refuse from residential, commercial, and industrial haulers.

**Grosse Pointe-Clinton Refuse Disposal Authority Incinerator.** The Grosse Pointe-Clinton Refuse Disposal Authority incinerator is owned and operated by the Grosse Pointe-Clinton Refuse Disposal Authority since 1972. The incinerator is scheduled to close prior to April 1999. The incinerator serves Clinton Township and Mount Clemens in Macomb County, and Grosse Pointe, Grosse Pointe Farms, Grosse Pointe Park, Grosse Pointe Shores, Grosse Pointe Woods, and Harper Woods in Wayne County. The community members will arrange for refuse disposal once the incinerator shuts down. Current plans are to take waste to the Pine Tree Acres Landfill and/or the Warren Transfer Station.

**Out-of-County Disposal Sites**
A survey was completed of disposal facilities in other counties to identify which disposal facilities were accepting waste from Macomb County and the quantity of waste exported from Macomb County. The Michigan Department of Environmental Quality 1998 *Report of Solid Waste Landfilled in Michigan* was also used to identify landfills that accepted waste from Macomb County.

**Washtenaw County.** The disposal facility survey identified that approximately 355,000 cubic yards of waste from Macomb County is disposed in the Arbor Hills Landfill located in Salem Township. This is a 936-acre site with a permitted area of 217 acres. Based on a remaining capacity of 30,500,000 cubic yards, the landfill has a 17.6 year life expectancy. The 1994 Macomb County Solid Waste Management Plan authorized up to 1,500,000 cubic yards of waste into the Arbor Hills Landfill.

**Sanilac County.** The MDEQ database indicated that Tri-City RDF Landfill accepts approximately 200 cubic yards per year of waste from Macomb County. The 1994 Macomb County Solid Waste Management Plan authorized up to 950 cubic yards per day of waste into the Tri-City Refuse Disposal Facility.

**Oakland County.** Based on the survey form returned by Oakland Heights Development,
approximately 24,000 cubic yards of waste was disposed from Macomb County communities in 1997. This landfill has approximately 3,500,000 cubic yards of permitted air space, and an estimated life of four years. The MDEQ database indicates that the Eagle Valley RDF accepted approximately 353,000 cubic yards of refuse from Macomb County. Based on available information approximately 377,000 cubic yards of Macomb County waste was disposed in Oakland County disposal facilities in 1997. No definitive amount of authorized waste disposal in Oakland County landfill was identified in the 1994 Macomb County Solid Waste Management Plan. However, the plan authorized the exportation of up to 1,301 cubic yards per day of solid waste to facilities in Oakland County for disposal.

**Wayne County.** The Macomb County survey determined that approximately 19,000 cubic yards of refuse from Macomb County was disposed in the Sauk Trail Hills Development. This landfill has approximately 18,000,000 cubic yards of permitted airspace and an estimated life of 12.5 years. The MDEQ database indicates that approximately 5,000 cubic yards of Macomb County refuse is disposed in the Woodland Meadows Landfill, and approximately 72,000 cubic yards in the Carleton Farms Landfill. Ash from the Grosse Pointe-Clinton Refuse Disposal Authority incinerator (approximately 30,000 tons) is also disposed in the Carleton Farms Landfill. Available data indicates that approximately 126,000 cubic yards of Macomb County waste was disposed in Wayne County landfill in 1997. The 1994 Macomb County Solid Waste Management Plan authorized up to 1,000,000 cubic yards of waste to Wayne County disposal facilities.

**Lenawee County.** No Macomb County waste was identified as being disposed in the Lenawee County disposal facility, the Adrian landfill, even though the 1994 Macomb County Solid Waste Management Plan authorized the disposal of up to 4800 tons per week. This amount was based on waste importation quantities identified in the Lenawee County Solid Waste Management Plan.

**Jackson County.** The Liberty Environmentalist Landfill acknowledged that approximately 30 cubic yards of waste was disposed from Macomb County communities in 1997. This site has 400,000 cubic yards of permitted airspace, and an expected life of 20 years. Jackson County was not identified as a source of Macomb County waste during the completion of the 1994 Macomb County Solid Waste Management Plan.

**Shiawassee County.** The Venice Park RDF indicated that it accepted approximately 80 cubic yards of refuse from Macomb County in 1997. This site has 2,200,000 cubic yards of capacity with future expansion plans that will increase the capacity an additional 13,000,000 cubic yards. The site projects an estimated life of 2 years under present conditions, and 25 years with the proposed expansion.

additional 30,000 cubic yards of ash produced at the Grosse Pointe-Clinton Refuse Disposal Authority incinerator were disposed at out-of-County disposal facilities.
FACILITY DESCRIPTIONS

Facility Type: Landfill

Facility Name: Liberty Environmentalist

County: Jackson Location: Liberty Twp. Town: ______ Range: ______ Section(s): 1

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: N/A

☐ Public ☑ Private Owner: Liberty Environmentalist

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

* Explanation of special wastes, including a specific list and/or conditions:
Shredder fluff & foundry sand.

Site Size:
Total area of facility property: 222 acres
Total area sited for use: 65 acres
Total area permitted: 25 acres
Operating: 7.5 acres
Not excavated: 40 acres

Current capacity: 400,000 ☐ tons or ☑ yds³
Estimated lifetime: 20 years
Estimated days open per year: 300 days
Estimated yearly disposal volume: 155,000 ☐ tons or ☑ yds³

(if applicable)
Annual energy production:
Landfill gas recovery projects: N/A megawatts
Waste-to-energy incinerators: N/A megawatts
**FACILITY DESCRIPTIONS**

**Facility Type:** Landfill  
**Facility Name:** Sauk Trail Hills Development  
**County:** Wayne  
**Location:** Canton Twp.  
**Town:**  
**Range:**  
**Section(s):** 35  

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: N/A  

☐ Public  ☒ Private  
Owner: Allied  

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* Explanation of special wastes, including a specific list and/or conditions:  
Non-hazardous material.  

**Site Size:**  
Total area of facility property: 200.7 acres  
Total area sited for use: 160.2 acres  
Total area permitted: 50.7 acres  
Operating: 50.7 acres  
Not excavated: 90.7 acres  
Current capacity: 18,000,000 ☐ tons or ☒ yds³  
Estimated lifetime: 12.5 years  
Estimated days open per year: 309 days  
Estimated yearly disposal volume: 1,440,000 ☐ tons or ☒ yds³  

(if applicable)  
Annual energy production:  
Landfill gas recovery projects: N/A megawatts  
Waste-to-energy incinerators: N/A megawatts  

II-18
FACILITY DESCRIPTIONS

Facility Type: Landfill

Facility Name: Oakland Heights Development

County: Oakland Location: Auburn Town: _____ Range: _____ Section(s): 2

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

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

☐ Public ☑ Private Owner: Allied

Operating Status (check)

☒ open
☐ closed
☒ licensed
☐ unlicensed
☐ construction permit
☐ open, but closure pending

Waste Types Received (check all that apply)

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

* Explanation of special wastes, including a specific list and/or conditions:
Any non-hazardous material

Site Size:

Total area of facility property: 179.74 acres
Total area sited for use: acres
Total area permitted:
  Operating: 63.87 acres
  Not excavated: 22.1 acres
Current capacity: 3,500,000 ☐ tons or ☑ yds³
Estimated lifetime: 4 years
Estimated days open per year: 309 days
Estimated yearly disposal volume: 500,000 ☐ tons or ☑ yds³

(if applicable)
Annual energy production:
Landfill gas recovery projects: N/A megawatts
Waste-to-energy incinerators: N/A megawatts
FACILITY DESCRIPTIONS

Facility Type: Landfill

Facility Name: Tri-City RDF

County: Sanilac  Location: Town: 12N Range: 15E  Section(s): 32

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

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

☐ Public  ☒Private  Owner: Waste Management

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

Paper Pulp, shredded foam, food product waste.

Site Size:

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<td>Estimated yearly disposal volume:</td>
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(if applicable)
Annual energy production:

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<td>Waste-to-energy incinerators:</td>
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FACILITY DESCRIPTIONS

Facility Type: Landfill

Facility Name: Woodland Meadows

County: Wayne   Location: Town:3S   Range: 8E   Section(s): 1

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: N/A

☐ Public   ☑ Private   Owner: Waste Management

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

* Explanation of special wastes, including a specific list and/or conditions:
Sludges - provided they are at least 30% solids

Site Size:
Total area of facility property: 214 acres
Total area sited for use: 214 acres
Total area permitted: 148 acres
Operating: 70 acres
Not excavated: 78 acres

Current capacity: 26,520,800 ☑ tons or ☑ yds³
Estimated lifetime: 19.8 years
Estimated days open per year: 305 days
Estimated yearly disposal volume: 1,340,200 ☑ tons or ☑ yds³

(if applicable)
Annual energy production:
Landfill gas recovery projects: 400.00 MMBTU
Waste-to-energy incinerators: N/A megawatts
FACILITY DESCRIPTIONS

Facility Type: **Landfill**
Facility Name: **Carleton Farms**
County: **Wayne** Location: Town: ____ Range: ____ Section(s): 36
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: **N/A**

□ Public ☒ Private Owner: **REPUBLIC**

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*Explanation of special wastes, including a specific list and/or conditions:
Carleton Farms accepted 30,000 tons of incinerator ash from the Gross Pointe-Clinton Refuse Disposal Authority incinerator, in addition to 72,000 cubic yards of Type II waste from Macomb County.

**Site Size:**
Total area of facility property: ______ acres
Total area sited for use: ______ acres
Total area permitted: ______ acres
Operating: ______ acres
Not excavated: ______ acres
Current capacity: ______ tons or ______ yds³
Estimated lifetime: ______ years
Estimated days open per year: ______ days
Estimated yearly disposal volume: ______ tons or ______ yds³

(if applicable)
Annual energy production:
Landfill gas recovery projects: ______ megawatts
Waste-to-energy incinerators: ______ megawatts

II-22
FACILITY DESCRIPTIONS

Facility Type: **Transfer Station**

Facility Name: **Ray Township Transfer Station**

County: **Macomb** Location: **Ray Twp. Town: 4N** Range: **13E** Section(s): **17**

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

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

☑ Public ☐ Private Owner: **Ray Township**

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<td>☑ special wastes *</td>
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* Explanation of special wastes, including a specific list and/or conditions:
  Used motor oil picked up by Safety-Kleen.

Site Size:

| Total area of facility property: | 9.08 acres |
| Total area sited for use:       | 9.06 acres |
| Total area permitted:           | 9.08 acres |
| Operating:                      | 2 acres    |
| Not excavated:                  | 0 acres    |
| Current capacity:               | ☐ 0 tons or ☐ yds³ |
| Estimated lifetime:             | ☐ years    |
| Estimated days open per year:   | 12 days    |
| Estimated yearly disposal volume: | 1,920 yds³ |

(if applicable)

Annual energy production:

- Landfill gas recovery projects: **N/A** megawatts
- Waste-to-energy incinerators: **N/A** megawatts
FACILITY DESCRIPTIONS

Facility Type: Waste Reduction Plant
Facility Name: Grosse Pointe-Clinton Refuse Disposal Authority

County: Macomb Location: Clinton Twp. Town: ____ Range: ____ Section(s): ____

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: Carleton Farms

☑ Public ☐ Private Owner: Grosse Pointe-Clinton Refuse Disposal Authority

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

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

Site Size:
Total area of facility property: 67 acres
Total area sited for use: 5 acres
Total area permitted: 67 acres
Operating: Not excavated:
Current capacity: 600 TPD ☑ tons or ☐ yds³
Estimated lifetime: years
Estimated days open per year: 275 days
Estimated yearly disposal volume: 125,600 ☑ tons or ☐ yds³

(if applicable)
Annual energy production:
Landfill gas recovery projects: N/A megawatts
Waste-to-energy incinerators: N/A megawatts

II-24
FACILITY DESCRIPTIONS

Facility Type: Landfill

Facility Name: Pine Tree Acres

County: Macomb Location: Lenox Twp, Town: 4N Range: 14E Section(s): 23.24

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: N/A

☐ Public ☒ Private Owner: Waste Management

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

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

Sludge, Auto Fluff

Site Size:

Total area of facility property: 568 acres
Total area sited for use: 568 acres
Total area permitted: 161.2 acres
Operating: 86.1 acres
Not excavated: 75.1 acres

Current capacity: 7,200,000 ☒ tons or ☒ yd³ (Remaining future capacity 59,000,000 yd³)

Estimated lifetime: 8 years (Future expansion 27 years)
Estimated days open per year: 286 days
Estimated yearly disposal volume: 1,800,000 ☐ tons or ☒ yd³

(if applicable)
Annual energy production:
Landfill gas recovery projects: 4 megawatts
Waste-to-energy incinerators: N/A megawatts
FACILITY DESCRIPTIONS

Facility Type:  Landfill
Facility Name:  Eagle Valley RDF

County:  Oakland  Location:  Town: 4N  Range:  10E  Section(s):  26 27

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:  N/A

Public  □ Private  Owner:  Waste Management

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

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

Contaminated soils, chemical containing equipment, coal ash, filter cake, contaminated residuals, incinerator ash, industrial process waste, non-friable asbestos, treated medical wastes, treatment plant sludge, paint filters.

Site Size:
Total area of facility property:  330  acres
Total area sited for use:  330  acres
Total area permitted:
Operating:  76  acres
Not excavated:  13  acres

Current capacity:  4,700,000  □ tons or  ✓ yds³
Estimated lifetime:  5.9  years
Estimated days open per year:  286  days
Estimated yearly disposal volume:  1,650,000  □ tons or  ✓ yds³

(if applicable)
Annual energy production:
Landfill gas recovery projects:  N/A  megawatts
Waste-to-energy incinerators:  N/A  megawatts
FACILITY DESCRIPTIONS

Facility Type: Transfer Station

Facility Name: Warren Transfer Station

County: Macomb Location: Town: _____ Range: _____ Section(s): _____

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: Pine Tree Acres Landfill

☑ Public ☐ Private Owner: City of Warren

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

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

Site Size:
Total area of facility property: _____ acres
Total area sited for use: _____ acres
Total area permitted: _____ acres
Operating: _____ acres
Not excavated: _____ acres

Current capacity: _____ ☐ tons or ☐ yd³
Estimated lifetime: _____ years
Estimated days open per year: _____ days
Estimated yearly disposal volume: 45,500 ☒ tons or ☐ yd³ From Macomb County

(if applicable)
Annual energy production:
Landfill gas recovery projects: N/A megawatts
Waste-to-energy incinerators: N/A megawatts
FACILITY DESCRIPTIONS

Facility Type: Transfer Station
Facility Name: Armada Township Transfer Station
County: Macomb Location: Town: _____ Range: _____ Section(s): ______
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: N/A

Public Private Owner: Armada Township

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

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

Site Size:
Total area of facility property: ______ acres
Total area sited for use: ______ acres
Total area permitted: ______ acres
Operating: ______ acres
Not excavated: ______ acres
Current capacity: ______ □ tons or □ yds³
Estimated lifetime: ______ years
Estimated days open per year: ______ days
Estimated yearly disposal volume: ______ □ tons or □ yds³

(if applicable)
Annual energy production:
Landfill gas recovery projects: N/A megawatts
Waste-to-energy incinerators: N/A megawatts
FACILITY DESCRIPTIONS

Facility Type: Landfill

Facility Name: Adrian Landfill

County: Lenawee Location: Palmyra Twp. Town: _____ Range: _____ Section(s): 6, 7

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

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

☐ Public ☒ Private  Owner: ALLIED

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

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

Asbestos, sludge: per environmental guidelines.

Site Size:

Total area of facility property: 421 acres
Total area sited for use: 287 acres
Total area permitted: 39.94 acres
Operating: 19.49 acres
Not excavated: 20.45 acres

Current capacity: 2,002,000 ☐ tons or ☒ yds³
Estimated lifetime: 6.83 years
Estimated days open per year: 307 days
Estimated yearly disposal volume: 97,731 ☐ tons or ☒ yds³

(if applicable)
Annual energy production:
Landfill gas recovery projects: N/A megawatts
Waste-to-energy incinerators: N/A megawatts
FACILITY DESCRIPTIONS

Facility Type: Landfill (Type III)

Facility Name: Standard Environmental Services - Rockwood Landfill

County: Monroe Location: Berlin Twp. Town: ______ Range: ______ Section(s): 6, 7

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

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

☐ Public ☑ Private Owner: Standard Disposal

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

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

Low hazard industrial wastes and non-hazardous industrial wastes

Site Size:
Total area of facility property: 209.46 acres
Total area sited for use: 147.74 acres
Total area permitted: 209.46 acres
Operating: 10.92 acres
Not excavated: 136.82 acres

Current capacity: 21,765,000 ☑ tons or ☐ yds³
Estimated lifetime: 35 ☑ years
Estimated days open per year: 286 days
Estimated yearly disposal volume: 1,400,000 ☑ tons or ☐ yds³

(if applicable)
Annual energy production:
Landfill gas recovery projects: N/A megawatts
Waste-to-energy incinerators: N/A megawatts

II-30
SOLID WASTE COLLECTION SERVICES AND TRANSPORTATION INFRASTRUCTURE

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

Residential refuse is collected by private haulers in all Macomb County communities, except the City of Warren, which provides municipal collection. Generally, residential and commercial waste is collected by three large waste collection firms and their associates. Information was not available for the Macomb County communities served by Laidlaw. The following table indicates which firms collect in each community. There are other small hauling firms operating in Macomb County that collect industrial waste, building and demolition waste, and roofing materials. The amounts of waste collected by these small haulers is negligible when compared to the waste quantities collected by the three large hauling firms.

<table>
<thead>
<tr>
<th>COMMUNITIES</th>
<th>HAULERS</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>BFI</td>
</tr>
<tr>
<td>Armada, Village</td>
<td>x</td>
</tr>
<tr>
<td>Armada Twp.</td>
<td>x</td>
</tr>
<tr>
<td>Bruce Twp.</td>
<td>x</td>
</tr>
<tr>
<td>Center Line</td>
<td>x</td>
</tr>
<tr>
<td>Chesterfield</td>
<td>x</td>
</tr>
<tr>
<td>Clinton Twp.</td>
<td></td>
</tr>
<tr>
<td>Eastpointe</td>
<td>x</td>
</tr>
<tr>
<td>Fraser</td>
<td></td>
</tr>
<tr>
<td>Harrison Twp.</td>
<td>x</td>
</tr>
<tr>
<td>Lenox Twp.</td>
<td>x</td>
</tr>
<tr>
<td>Macomb Twp.</td>
<td>x</td>
</tr>
<tr>
<td>Memphis</td>
<td></td>
</tr>
<tr>
<td>Mt. Clemens</td>
<td>x</td>
</tr>
<tr>
<td>New Baltimore</td>
<td>x</td>
</tr>
<tr>
<td>Ray Twp.</td>
<td></td>
</tr>
<tr>
<td>Richmond</td>
<td>x</td>
</tr>
<tr>
<td>Richmond Twp.</td>
<td>x</td>
</tr>
<tr>
<td>Romeo</td>
<td></td>
</tr>
<tr>
<td>Roseville</td>
<td>x</td>
</tr>
<tr>
<td>St. Clair Shores</td>
<td>x</td>
</tr>
<tr>
<td>New Haven</td>
<td></td>
</tr>
<tr>
<td>COMMUNITIES</td>
<td>HAULERS</td>
</tr>
<tr>
<td>-----------------</td>
<td>-------------------</td>
</tr>
<tr>
<td>Shelby Twp.</td>
<td>BFI</td>
</tr>
<tr>
<td>Sterling Hgts.</td>
<td>Waste Management</td>
</tr>
<tr>
<td>Utica</td>
<td>X</td>
</tr>
<tr>
<td>Warren*</td>
<td></td>
</tr>
<tr>
<td>Washington Twp.</td>
<td>X</td>
</tr>
</tbody>
</table>

*provides municipal collection

Residential waste is generally collected once each week at the curb-side. Plastic bags and/or cans are most commonly used to store waste for curb-side collection. Private haulers either have agreements with municipalities to collect residential waste, or contract directly with individual homeowners. Commercial and industrial waste are primarily serviced by BFI, Standard Disposal, and Waste Management.

An extensive transportation network has been developed in Macomb County. Interstate 94 traverses the eastern portion of the County and links it to the northeast with Port Huron and Canada, and to the south and west to Detroit and Chicago. The M-53 Freeway runs north from 18 ½ Mile Road in Sterling Heights to 28 Mile Road in Washington Township. Interstate 696 in southern Macomb County follows Eleven Mile Road, connecting Interstate 94 to Interstate 75 and Interstate 96 in Oakland County. In addition, improvements to M-59 will provide a six to eight lane divided highway from I-94 on the eastern side of Macomb County to the Macomb County boundary on the west side. These improvements will be completed by the end of 1998.

The major north-south thoroughfares in Macomb County are Jefferson, Harper, Gratiot, Groesbeck, Van Dyke and Mound Roads (Figure 5). In the east-west direction Sixteen Mile Road is a divided highway known as the Metropolitan Parkway. Eight, Ten, Twelve, and Fourteen Mile Roads, and M-59 are other major routes for east west traffic.

The major routes used for refuse hauling vehicles traveling north-south in the County are Van Dyke (M-53), Groesbeck (M-97), Mound, North Avenue, I-94, and Gratiot Avenue (M-53). Harper Avenue is used by vehicles traveling to and from the St. Clair Shores area and to the Grosse Pointe-Clinton Refuse Disposal Authority incinerator. East-west travel is accomplished by using several of the Mile Roads in the southern portion of the County. 29 Mile Road in the northern portion of the County, is used extensively by haulers transporting waste to the Pine Tree Acres Landfill. Other county roads are also used, generally for short distances in traveling to and from the major routes to disposal areas.
FIGURE 5

MACOMB COUNTY
1998 SOLID WASTE MANAGEMENT PLAN UPDATE

MAJOR THOROUGHFARES

DRAWN BY: S.J.L
APPROVED BY: SJK
PROJECT NUMBER: 4085.01
FILE NUMBER: 40850107.DWG
DATE: MAY 1998
DATA BASE

EVALUATION OF DEFICIENCIES AND PROBLEMS
The following is a description of problems or deficiencies in the existing solid waste system.

The Grosse Pointe-Clinton Refuse Disposal Authority incinerator is scheduled to cease operations within the next 12 months, prior to April 1999. Member communities of the Authority will have to redirect their waste to sanitary landfills. The Pine Tree Acres landfill has sufficient capacity to accommodate this increased waste load during the next five and 10 year planning periods. There were no other apparent deficiencies identified in the existing solid waste system based on survey information from municipalities, refuse haulers, and disposal facilities.
DATA BASE

DEMOGRAPHICS

The following presents the current and projected population densities 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. If it was extrapolated from yearly data, it was calculated using 365 days per year or another number of days as indicated.

Population projections and waste generation rates have been previously noted in the Plan Section "Database" for all communities in the planning area. These projections show that the center of waste generation and population density are located in the southern part of the County. The following table provides information on the population and waste generation rates for this area.

<table>
<thead>
<tr>
<th>Community</th>
<th>1999 Population</th>
<th>% of Macomb County Population</th>
<th>Total Waste Generation, TPY</th>
</tr>
</thead>
<tbody>
<tr>
<td>Center Line</td>
<td>8,337</td>
<td>1.1</td>
<td>7,729</td>
</tr>
<tr>
<td>Clinton Twp.</td>
<td>96,836</td>
<td>12.5</td>
<td>89,777</td>
</tr>
<tr>
<td>Eastpointe</td>
<td>34,527</td>
<td>4.5</td>
<td>32,010</td>
</tr>
<tr>
<td>Fraser</td>
<td>15,135</td>
<td>2.0</td>
<td>14,032</td>
</tr>
<tr>
<td>Harrison Twp.</td>
<td>26,105</td>
<td>3.4</td>
<td>24,202</td>
</tr>
<tr>
<td>Mt. Clemens</td>
<td>17,685</td>
<td>2.3</td>
<td>16,396</td>
</tr>
<tr>
<td>Roseville</td>
<td>49,757</td>
<td>6.3</td>
<td>46,130</td>
</tr>
<tr>
<td>St. Clair Shores</td>
<td>65,277</td>
<td>8.4</td>
<td>60,518</td>
</tr>
<tr>
<td>Sterling Heights</td>
<td>119,283</td>
<td>15.4</td>
<td>110,587</td>
</tr>
<tr>
<td>Warren</td>
<td>137,328</td>
<td>17.6</td>
<td>127,317</td>
</tr>
<tr>
<td>TOTAL</td>
<td>504,993</td>
<td>73.5</td>
<td>468,180</td>
</tr>
</tbody>
</table>

These communities have approximately 74% of the population and generate the largest quantity of waste. The center for waste generation for industrial waste is likely along the industrial corridors in Warren and Sterling Heights. Figure 6 shows the Center of Waste Generation.
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.

Land use patterns in Macomb County range from commercial, industrial and residential in the highly populated southern portion of the County to mainly open space and agricultural in the rural northern sections as shown in Figure 7. Commercial and industrial land use also exists near the communities of Utica, Romeo, Richmond, New Haven, and New Baltimore in the northern portion of the County.

Over the next five years Shelby, Macomb, Chesterfield, and Washington Townships will continue to develop, with single family dwellings being the dominant use in these four communities. There will continue to be a population shift from the southern portion of the County to a more centralized location in the County. The completion of M-59 will cause further commercial growth in the communities located along this corridor. The northern tier of communities will have limited growth, as these communities are not completely served by sewer and water.
DATA BASE

SOLID WASTE MANAGEMENT ALTERNATIVES (attach additional pages as necessary)

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

The existing solid waste management system provides for the proper collection, transport and disposal of solid waste in the Macomb County planning area. Recycling and composting opportunities have been developed and appear to be expanding. Minor modifications to the system may be needed to further encourage the recycling of materials from the waste stream. A description of the existing solid waste management system follows and is presented in detail in the following Sections of the Plan Update. Management components considered, but not incorporated into the selected alternative, are presented and discussed. The details of the non-selected components are provided in Appendix B.

The existing solid waste management system is the most practical, cost-effective, and environmentally sound alternative. System components were evaluated in previous planning documents and the evaluations and conclusions of those planning efforts remain valid. Therefore, no ranking of alternatives is required to implement the selected alternative.

Existing Solid Waste Management System
The existing solid waste management system consists of private collection of residential, commercial, and industrial waste through contracts with municipalities, commercial / industrial users, or directly with homeowners for residential pick-up. Waste is hauled directly to disposal facilities, except for the communities of Ray and Armada Townships, and the cities of Warren, Eastpointe, St. Clair Shores, Roseville, and Center Line where waste is brought to a transfer station and then hauled to the disposal facility. Refer to the page II 30 for a list of communities and haulers which serve the community.

Private refuse firms provide recycling for contract communities through both drop-off centers or by curb-side collection. Glass, paper, plastic, metal, batteries, white goods, and used motor oil are recycled. Yard waste and grass clipping are disposed at composting facilities.

Waste that is not recycled is disposed in licensed sanitary landfills in Macomb County and adjoining counties, or is incinerated at the Grosse Pointe-Clinton Refuse Disposal Authority incinerator.

Rule 711(d) of Part 115 requires alternative evaluation for the management components of waste reduction, pollution prevention, resource conservation, resource recovery,
volume reduction, sanitary landfill, collection process and transportation, ultimate disposal area uses, institutional arrangements, and recycling and composting programs. This evaluation follows:

Waste Reduction and Pollution Prevention  This management strategy includes changes in manufacturing or other process which generate waste as a function of the process so that a reduced amount of waste is created. Additionally, changes may be made to a waste stream to produce a waste that contains less potential environmental problems. Waste reduction and pollution prevention are voluntary actions by industrial and commercial entities. Due to increased solid waste regulations and public awareness of environmental issues industries have been active in reducing the cost of disposal by reducing the amount of waste generated, and through such programs as the Clean Corporate Citizen program have become conscious of environmental issues. Waste reduction and pollution prevention is considered a part of the existing Macomb County solid waste management system and this plan encourages industries and commercial facilities to evaluate and implement these practices wherever possible.

Resource Conservation  Resource conservation refers to the prevention or reduction of the quantity of waste generated. The primary methods for resource conservation include reducing the amount of materials in manufacturing products; developing and using products with lifetimes; producing products which are more repairable and durable; purchasing food and dry goods in bulk to reduce the amount of packaging waste; selecting products that are packaged in recyclable containers such as glass or aluminum; and purchasing reusable items instead of disposable products. The 1994 Macomb County Solid Waste Management Plan determined that there exists few, if any, state-, county-, or community-wide regulations which could be implemented to promote resource conservation. Resource conservation is considered a part of the existing Macomb County solid waste management system and this plan encourages industries and commercial facilities to evaluate and implement this practice wherever possible.

Resource Recovery  This solid waste management strategy includes the separation of materials at the source and the subsequent recovery of materials, energy savings and/or production re-use potential, and market availability for recovered materials. Resource recovery is a part of the existing Macomb County solid waste management system. A detailed breakdown of resource recovery activities in presented in the following sections of this Plan Update.

Volume Reduction  Waste processing by compactors, balers, shredders, and incinerators are means to reduce the volume of waste disposed. The Grosse Pointe-Clinton Refuse Disposal Authority provides the only volume reduction in the planning area. This facility is scheduled to close prior to April 1999, and there will be no active volume reduction facility in the planning area.

Sanitary Landfill  Disposal of waste in sanitary landfills is a part of the existing Macomb
County solid waste management system. A detailed breakdown of sanitary landfilling activities is presented in the following sections of this Plan Update.

**Collection Processes and Transportation** Collection processes and transportation includes the process of transferring the waste from the point of generation to a transfer station, processing plant, resource recovery facility, or final disposal area. The existing Macomb County solid waste management system includes collection processes and transportation.

**Ultimate Disposal Area Uses** This includes recreational or other potential uses after a facility is properly closed and maintained. The existing Macomb County solid waste management system includes this strategy to the extent that the Pine Tree Acres Landfill has indicated its final use on the application for license renewal. Pine Tree Acres Landfill has indicated that a specific plan for reuse has not been determined and has indicated that one possible use of the closed facility would be a recreational facility.

**Institutional Arrangements** This includes the agreements and organizational arrangements and structures which provide for public and/or private operation of solid waste collection, processing, and disposal systems. The following sections of this Plan Update describe the institutional arrangements for the implementation of the Macomb County Solid Waste Plan Update.

**Recycling and Composting Programs** Recycling and composting programs are a part of the Macomb County solid waste management system, and will be described in detail in the following sections of this Plan Update.

**Alternative Solid Waste Management Systems** Numerous solid waste management system components were evaluated in the 1982 and 1994 Macomb County Solid Waste Management Plans. These included balefilling, shredding, pyrolysis, hydrolysis, and refuse derived fuel, among others. These previous studies have shown that these system components are not feasible at this time for Macomb County. One alternative management system that is considered further is discussed below.

Refuse collection would continue to be provided by private refuse haulers under contract with municipalities or individual homeowners. The private sector provides recycling through drop-off center and curbside collection and composting facilities and this would continue in the alternative.

Waste that is not recycled would be directed to a waste-to-energy (WTE) facility that would be owned and operated by either Macomb County or a County-wide Refuse Disposal Authority established by the Macomb County municipalities. Refuse would be incinerated to reduce its volume and the ash would be disposed in a sanitary landfill. Heat produced during the incineration process would be used in dedicated boilers to generate electricity
that would be sold to Detroit Edison. This alternative would reduce the amount of waste entering landfills extending the operating life of the landfill. Energy would be recovered in this alternative where it would not be available with sanitary landfilling.

Waste to energy was evaluated in detail by Macomb County in the Phase I and Phase II “Waste to Energy Feasibility Study for Macomb County”. It was determined that waste to energy was not viable since energy markets and waste commitments were not available. These conditions still exist in Macomb County and therefore, this alternative is not feasible. Discussion of this non-select alternative is found in Appendix B.
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 B. Following is an overall description of the Selected System:

Selected Solid Waste Management System
The selected solid waste management system consists of private and municipal collection of residential, commercial, and industrial waste through contracts with municipalities, commercial/industrial users, or directly with homeowners for residential pick-up. Waste is hauled directly to disposal facilities, except for the communities of Ray, and Armada Townships, and the cities of Warren, Eastpointe, St. Clair Shores, Roseville, and Center Line where waste is brought to a transfer station and then hauled to the disposal facility.

Private refuse firms provide recycling for contract communities, through both drop-off centers, or by curb-side collection. Glass, paper, plastic, metal, batteries, white goods, and used motor oil are recycled. Yard waste and grass clipping are disposed at composting facilities.

Waste that is not recycled is disposed in licensed sanitary landfills in Macomb County and other counties, or is incinerated at the Grosse Pointe-Clinton Refuse Disposal Authority incinerator. Macomb County has sufficient landfill space to meet its needs for the five year and ten year planning periods.

A detailed description of elements of the solid waste management plan follows.
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>
<thead>
<tr>
<th>IMPORTING COUNTY</th>
<th>EXPORTING COUNTY</th>
<th>FACILITY NAME</th>
<th>AUTHORIZED QUANTITY/DAILY</th>
<th>AUTHORIZED QUANTITY/ANNUAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Macomb County</td>
<td>Wayne County</td>
<td>GrossePointe-Clinton Refuse Disposal Authority Waste Reduction Plant</td>
<td></td>
<td>60,000 Tons</td>
</tr>
<tr>
<td>Macomb County</td>
<td>Wayne County</td>
<td>Pine Tree Acres Landfill</td>
<td></td>
<td>900,000 CY</td>
</tr>
<tr>
<td>Macomb County</td>
<td>Oakland County</td>
<td>Pine Tree Acres Landfill</td>
<td></td>
<td>500,000 CY</td>
</tr>
<tr>
<td>Macomb County</td>
<td>St. Clair County</td>
<td>Pine Tree Acres Landfill</td>
<td></td>
<td>350,000 CY</td>
</tr>
<tr>
<td>Macomb County</td>
<td>Lapeer County</td>
<td>Pine Tree Acres Landfill</td>
<td></td>
<td>100,000 CY</td>
</tr>
<tr>
<td>Macomb County</td>
<td>Monroe County</td>
<td>Pine Tree Acres Landfill</td>
<td></td>
<td>15,000 CY</td>
</tr>
<tr>
<td>Macomb County</td>
<td>Washtenaw County</td>
<td>Pine Tree Acres Landfill</td>
<td></td>
<td>1,500,000 CY</td>
</tr>
</tbody>
</table>

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.

III-2
### Table 1-A Cont’d

<table>
<thead>
<tr>
<th>IMPORTING COUNTY</th>
<th>EXPORTING COUNTY</th>
<th>FACILITY NAME¹</th>
<th>AUTHORIZED QUANTITY/DAILY</th>
<th>AUTHORIZED QUANTITY/ANNUAL</th>
<th>AUTHORIZED CONDITIONS²</th>
</tr>
</thead>
<tbody>
<tr>
<td>Macomb County</td>
<td>Genesee County</td>
<td>Pine Tree Acres Landfill</td>
<td>__________</td>
<td>15,000 CY</td>
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</tr>
<tr>
<td>Macomb County</td>
<td>Livingston County</td>
<td>Pine Tree Acres Landfill</td>
<td>__________</td>
<td>15,000 CY</td>
<td>*</td>
</tr>
<tr>
<td>Macomb County</td>
<td>Tuscola County</td>
<td>Pine Tree Acres Landfill</td>
<td>__________</td>
<td>15,000 CY</td>
<td>*</td>
</tr>
<tr>
<td>Macomb County</td>
<td>Sanilac County</td>
<td>Pine Tree Acres Landfill</td>
<td>__________</td>
<td>80,000 CY</td>
<td>*</td>
</tr>
<tr>
<td>Macomb County</td>
<td>Huron County</td>
<td>Pine Tree Acres Landfill</td>
<td>__________</td>
<td>15,000 CY</td>
<td>*</td>
</tr>
<tr>
<td>Macomb County</td>
<td>Saginaw County</td>
<td>Pine Tree Acres Landfill</td>
<td>__________</td>
<td>9,000 CY</td>
<td>*</td>
</tr>
<tr>
<td>Macomb County</td>
<td>Shiawassee County</td>
<td>Pine Tree Acres Landfill</td>
<td>__________</td>
<td>6,000 CY</td>
<td>*</td>
</tr>
<tr>
<td>Macomb County</td>
<td>Oakland County</td>
<td>SMDA Transfer Station</td>
<td>__________</td>
<td>150,000 CY</td>
<td>*</td>
</tr>
<tr>
<td>Macomb County</td>
<td>St. Clair County</td>
<td>SMDA Transfer Station</td>
<td>__________</td>
<td>50,000 CY</td>
<td>*</td>
</tr>
<tr>
<td>Macomb County</td>
<td>Wayne County</td>
<td>SMDA Transfer Station</td>
<td>__________</td>
<td>150,000 CY</td>
<td>*</td>
</tr>
</tbody>
</table>

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.

³ The counties and the corresponding volumes of waste that are identified in Table I-A, are to be used to satisfy landfill quantity reporting to the State of Michigan for respective planning periods. Throughout the current and upcoming, planning periods, the respective counties are approved to utilize the Pine Tree Acres facilities (PTA), providing PTA has sufficient capacity to service all Macomb County Communities for the next 10 years. The capacity of PTA will be re-evaluated during the next plan update. In addition, the county who intends to export waste to Macomb County, will have adopted a Solid Waste Management Plan which incorporates similar Goals and Objectives as the Macomb County Solid Waste Management Plan.
**SELECTED SYSTEM**

If a new solid waste disposal area is constructed and operating in the future in the County, then disposal of solid waste generated by the EXPORTING COUNTY is if 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**

<table>
<thead>
<tr>
<th>IMPORTING COUNTY</th>
<th>EXPORTING COUNTY</th>
<th>FACILITY NAME&lt;sup&gt;1&lt;/sup&gt;</th>
<th>AUTHORIZED QUANTITY/DAILY</th>
<th>AUTHORIZED QUANTITY/ANNUAL</th>
<th>AUTHORIZED CONDITIONS&lt;sup&gt;2&lt;/sup&gt;</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
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</tr>
</tbody>
</table>

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

---

<sup>1</sup> Facilities are only listed if the exporting county is restricted to using specific facilities within the importing county.

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

III-4
SELECTED SYSTEM

EXPORT AUTHORIZATION

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

Table 2-A

<table>
<thead>
<tr>
<th>EXPORTING COUNTY</th>
<th>IMPORTING COUNTY</th>
<th>FACILITY NAME</th>
<th>AUTHORIZED QUANTITY</th>
<th>AUTHORIZED QUANTITY/ANNUAL</th>
<th>AUTHORIZED CONDITIONS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Macomb</td>
<td>Washtenaw</td>
<td></td>
<td></td>
<td>1,500,000 CY</td>
<td>P</td>
</tr>
<tr>
<td>Macomb</td>
<td>Sanilac</td>
<td></td>
<td>950 CY</td>
<td>247,000 CY</td>
<td>P</td>
</tr>
<tr>
<td>Macomb</td>
<td>Oakland</td>
<td></td>
<td></td>
<td>430,000 CY</td>
<td>P</td>
</tr>
<tr>
<td>Macomb</td>
<td>Wayne</td>
<td></td>
<td></td>
<td>135,000 CY</td>
<td>P</td>
</tr>
<tr>
<td>Macomb</td>
<td>Jackson</td>
<td></td>
<td></td>
<td>10,000 CY</td>
<td>P</td>
</tr>
<tr>
<td>Macomb</td>
<td>Lenawee</td>
<td></td>
<td>1000 T</td>
<td>743,000 CY</td>
<td>P</td>
</tr>
<tr>
<td>Macomb</td>
<td>Shiawassee</td>
<td></td>
<td></td>
<td>10,000 CY</td>
<td>P</td>
</tr>
<tr>
<td>Macomb</td>
<td>Monroe</td>
<td></td>
<td></td>
<td>500,000 CY</td>
<td>P</td>
</tr>
</tbody>
</table>

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

III-5
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

<table>
<thead>
<tr>
<th>EXPORTING COUNTY</th>
<th>IMPORTING COUNTY</th>
<th>FACILITY NAME(^1)</th>
<th>AUTHORIZED QUANTITY/ DAILY</th>
<th>AUTHORIZED QUANTITY/ ANNUAL</th>
<th>AUTHORIZED CONDITIONS(^2)</th>
</tr>
</thead>
<tbody>
<tr>
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</tr>
</tbody>
</table>

\(\square\) 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 indicted by \(P\) = Primary Disposal; \(C\) = Contingency Disposal; * = Other conditions exist and detailed explanation is included in the Attachment Section.

III-6
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-8 through III-23 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.

Macomb County received requests from waste disposal firms to include all of their landfills in the Solid Waste Management Plan. These landfills are located throughout the State of Michigan. The disposal facilities listed below have historically received waste from the Macomb County planning area or are accessible to the communities within a reasonable traveling distance. Only these disposal facilities are included in the Solid Waste Management Plan to minimize the need to include import and export authorization in County Solid Waste Plan when there is no likelihood that waste would be disposed at a distant disposal facility.

**Type II Landfill:**
- Pine Tree Acres Landfill
- Arbor Hills
- Tri-City RDF
- Oakland Heights Development
- Eagle Valley RDF
- Sauk Trail Hills Development
- Woodland Meadows Landfill
- Carleton Farms Landfill
- Adrian Landfill
- Venice Park RDF

**Type III Landfill:**
- Liberty Environmentalist
- Rockwood Landfill

**Type A Transfer Facility:**
- SMDA

**Type B Transfer Facility:**
- Warren
- Ray Township
- Armada Township

**Processing Plant:**
SELECTED SYSTEM

Incinerator: Waste Piles:
Grosse Pointe-Clinton Refuse Disposal Authority

Waste-to-Energy Incinerator: Other:

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

SOLID WASTE FACILITY DESCRIPTIONS

FACILITY DESCRIPTIONS

Facility Type: Transfer Station

Facility Name: South Macomb Disposal Authority (SMDA) Transfer Station

County: Macomb Location: Roseville Town: ___ Range: ___ Section(s): ___

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: BFI Arbor Hills Landfill

☒ Public ☐ Private Owner: South Macomb Disposal Authority

Operating Status (check) Waste Types Received (check all that apply)
☒ open ☒ residential
☐ closed ☒ commercial
☒ licensed ☒ industrial (solid waste only, no special waste)
☐ unlicensed ☒ construction & demolition
☐ construction permit ☐ contaminated soils
☐ open, but closure ☐ special wastes *
☐ pending ☐ other: ______

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

Site Size:

Total area of facility property: 10.729 acres
Total area sited for use: 10.729 acres
Total area permitted: 10.729 acres
Operating: ______ acres
Not excavated: ______ acres

Current capacity: 555 ☒ tons per day or ☐ yds³
Estimated lifetime: N/A years
Estimated days open per year: 256 days
Estimated yearly disposal volume: 120,000 ☒ tons or ☐ yds³

(if applicable)
Annual energy production:
Landfill gas recovery projects: N/A megawatts
Waste-to-energy incinerators: N/A megawatts
SELECTED SYSTEM

FACILITY DESCRIPTIONS

Facility Type: Landfill

Facility Name: Arbor Hills

County: Washtenaw Location: Salem Twp. Town: Range: Section(s): 13

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: N/A

☐ Public ☒ Private Owner: BFI

Operating Status (check) Waste Types Received (check all that apply)
☒ open residential
☐ closed commercial
☒ licensed industrial
☐ unlicensed construction & demolition
☒ construction permit contaminated soils
☒ open, but closure special wastes *
pending other: Arbor Hills is also home to a recycling center and compost facility.

* Explanation of special wastes, including a specific list and/or conditions:
Non-hazardous (by Fed, State, & local regs.) Industrial process waste (i.e., sludges, filter cakes) and asbestos.

Site Size:
Total area of facility property: 936 acres
Total area sited for use: 356 acres
Total area permitted: 217 acres
Operating: 113 acres
Not excavated: 104 acres

Current capacity: 30,500,000 tons or $\Box$ yd$^3$
Estimated lifetime: 17.6 years
Estimated days open per year: 265 days
Estimated yearly disposal volume: 3,500,000 tons or $\Box$ yd$^3$

(if applicable) Annual energy production:
Landfill gas recovery projects: 18 megawatts
Waste-to-energy incinerators: N/A megawatts

III-10
SELECTED SYSTEM

FACILITY DESCRIPTIONS

Facility Type: Landfill

Facility Name: Venice Park RDF

County: Shiawassee Location: Venice Twp. Town: _____ Range: R4E Section(s): 27

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: N/A

☐ Public ☒ Private Owner: Waste Management

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

* Explanation of special wastes, including a specific list and/or conditions: Asbestos, Medical Waste; Venice Park RDF is also licensed to solidify non-hazardous liquids on site.

Site Size:
Total area of facility property: 80 acres
Total area sited for use: 67 acres
Total area permitted: 67 acres
Operating: 42 acres
Not excavated: 2.5 acres - closed - 22.5 acres

Current capacity: 2,200,000 tons or ☐ yds³
Future capacity: 13,000,000
Estimated lifetime: 2 years - future expansion 25 years
Estimated days open per year: 281 days
Estimated yearly disposal volume: 1,222,109 tons or ☒ yds³

(if applicable)
Annual energy production:
Landfill gas recovery projects: 11,500 megawatts
Waste-to-energy incinerators: N/A megawatts

III-11
SELECTED SYSTEM

FACILITY DESCRIPTIONS

Facility Type: Landfill
Facility Name: Liberty Environmentalist

County: Jackson Location: Liberty Twp. Town: ____ Range: ____ Section(s): 1

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: N/A

☐ Public ☑ Private Owner: Liberty Environmentalist

<table>
<thead>
<tr>
<th>Operating Status (check)</th>
<th>Waste Types Received (check all that apply)</th>
</tr>
</thead>
<tbody>
<tr>
<td>☑ open</td>
<td>☑ residential</td>
</tr>
<tr>
<td>☐ closed</td>
<td>☐ commercial</td>
</tr>
<tr>
<td>☑ licensed</td>
<td>☑ industrial</td>
</tr>
<tr>
<td>☐ unlicensed</td>
<td>☑ construction &amp; demolition</td>
</tr>
<tr>
<td>☐ construction permit</td>
<td>☐ contaminated soils</td>
</tr>
<tr>
<td>☐ open, but closure</td>
<td>☑ special wastes *</td>
</tr>
<tr>
<td>pending</td>
<td>☐ other: ___</td>
</tr>
</tbody>
</table>

* Explanation of special wastes, including a specific list and/or conditions: Shredder fluff & foundry sand.

Site Size:
- Total area of facility property: 222 acres
- Total area sited for use: 65 acres
- Total area permitted: 25 acres
- Operating: 7.5 acres
- Not excavated: 40 acres
- Current capacity: 400,000 ☐ tons or ☑ yds³
- Estimated lifetime: 20 years
- Estimated days open per year: 300 days
- Estimated yearly disposal volume: 155,000 ☐ tons or ☑ yds³

(if applicable)
- Annual energy production:
  - Landfill gas recovery projects: N/A megawatts
  - Waste-to-energy incinerators: N/A megawatts
SELECTED SYSTEM

FACILITY DESCRIPTIONS

Facility Type: Landfill

Facility Name: Sauk Trail Hills Development

County: Wayne Location: Canton Twp, Town: ____ Range: ____ Section(s): 35

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: N/A

☐ Public ☑ Private Owner: Allied

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

* Explanation of special wastes, including a specific list and/or conditions:
Non-hazardous material.

Site Size:
Total area of facility property: 200.7 acres
Total area sited for use: 160.2 acres
Total area permitted: 50.7 acres
Operating: 50.7 acres
Not excavated: 90.7 acres

Current capacity: 18,000,000 ☐ tons or ☑ yds³
Estimated lifetime: 12.5 years
Estimated days open per year: 309 days
Estimated yearly disposal volume: 1,440,000 ☐ tons or ☑ yds³

(if applicable)
Annual energy production:
Landfill gas recovery projects: N/A megawatts
Waste-to-energy incinerators: N/A megawatts

III-13
SELECTED SYSTEM

FACILITY DESCRIPTIONS

Facility Type: Landfill

Facility Name: Oakland Heights Development

County: Oakland  Location: Auburn  Town:  Range:  Section(s): 2

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

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

☐ Public  ☒ Private  Owner: Allied

<table>
<thead>
<tr>
<th>Operating Status (check)</th>
<th>Waste Types Received (check all that apply)</th>
</tr>
</thead>
<tbody>
<tr>
<td>☒ open</td>
<td>☒ residential</td>
</tr>
<tr>
<td>☐ closed</td>
<td>☒ commercial</td>
</tr>
<tr>
<td>☒ licensed</td>
<td>☒ industrial</td>
</tr>
<tr>
<td>☐ unlicensed</td>
<td>☒ construction &amp; demolition</td>
</tr>
<tr>
<td>☐ construction permit</td>
<td>☒ contaminated soils</td>
</tr>
<tr>
<td>☐ open, but closure</td>
<td>☒ special wastes *</td>
</tr>
<tr>
<td>pending</td>
<td>☐ other: ______</td>
</tr>
</tbody>
</table>

* Explanation of special wastes, including a specific list and/or conditions:
Any non-hazardous material

Site Size:

<table>
<thead>
<tr>
<th>Description</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total area of facility property</td>
<td>179.74 acres</td>
</tr>
<tr>
<td>Total area sited for use</td>
<td></td>
</tr>
<tr>
<td>Total area permitted</td>
<td>63.87 acres</td>
</tr>
<tr>
<td>Operating</td>
<td>63.87 acres</td>
</tr>
<tr>
<td>Not excavated</td>
<td>22.1  acres</td>
</tr>
</tbody>
</table>

Current capacity: 3,500,000  ☐ tons or ☒ yd³

Estimated lifetime: 4  years

Estimated days open per year: 309  days

Estimated yearly disposal volume: 500,000  ☐ tons or ☒ yd³

(if applicable)

Annual energy production:

Landfill gas recovery projects: N/A  megawatts

Waste-to-energy incinerators: N/A  megawatts
SELECTED SYSTEM

FACILITY DESCRIPTIONS

Facility Type:  **Landfill**

Facility Name:  **Tri-City RDF**

County:  **Sanilac**  Location:  **Town: 12N**  Range:  **15E**  Section(s):  **32**

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

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

☐ Public  ☑ Private  Owner:  **Waste Management**

<table>
<thead>
<tr>
<th>Operating Status (check)</th>
<th>Waste Types Received (check all that apply)</th>
</tr>
</thead>
<tbody>
<tr>
<td>☑ open</td>
<td>☑ residential</td>
</tr>
<tr>
<td>☐ closed</td>
<td>☑ commercial</td>
</tr>
<tr>
<td>☑ licensed</td>
<td>☑ industrial</td>
</tr>
<tr>
<td>☐ unlicensed</td>
<td>☑ construction &amp; demolition</td>
</tr>
<tr>
<td>☑ construction permit</td>
<td>☑ contaminated soils</td>
</tr>
<tr>
<td>☐ open, but closure</td>
<td>☑ special wastes *</td>
</tr>
<tr>
<td>☐ pending</td>
<td>☐ other: ______</td>
</tr>
</tbody>
</table>

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

Paper Pulp, shredded foam, food product waste.

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**Site Size:**

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
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</thead>
<tbody>
<tr>
<td>Total area of facility property:</td>
<td>195.4 acres</td>
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<tr>
<td>Total area sited for use:</td>
<td>195.4 acres</td>
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<tr>
<td>Total area permitted:</td>
<td>125 acres</td>
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<tr>
<td>Operating:</td>
<td>31.6 acres</td>
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<tr>
<td>Not excavated:</td>
<td>93.4 acres</td>
</tr>
<tr>
<td>Current capacity:</td>
<td>10,780,000</td>
</tr>
<tr>
<td>Estimated lifetime:</td>
<td>22 years</td>
</tr>
<tr>
<td>Estimated days open per year:</td>
<td>272 days</td>
</tr>
<tr>
<td>Estimated yearly disposal volume:</td>
<td>330,000</td>
</tr>
</tbody>
</table>

(if applicable)

Annual energy production:

- Landfill gas recovery projects:  **N/A**  megawatts
- Waste-to-energy incinerators:   **N/A**  megawatts
SELECTED SYSTEM

FACILITY DESCRIPTIONS

Facility Type: **Landfill**
Facility Name: **Woodland Meadows**
County: **Wayne**  Location: Town: **3S**  Range: **8E**  Section(s): **1**

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: **N/A**

☐ Public  **☒ Private  Owner: **Waste Management**

<table>
<thead>
<tr>
<th>Operating Status (check)</th>
<th>Waste Types Received (check all that apply)</th>
</tr>
</thead>
<tbody>
<tr>
<td>☒ open</td>
<td>☒ residential</td>
</tr>
<tr>
<td>☐ closed</td>
<td>☒ commercial</td>
</tr>
<tr>
<td>☒ licensed</td>
<td>☒ industrial</td>
</tr>
<tr>
<td>☐ unlicensed</td>
<td>☒ construction &amp; demolition</td>
</tr>
<tr>
<td>☒ construction permit</td>
<td>☒ contaminated soils</td>
</tr>
<tr>
<td>☐ open, but closure</td>
<td>☒ special wastes *</td>
</tr>
<tr>
<td>pending</td>
<td>☐ other: ____</td>
</tr>
</tbody>
</table>

* Explanation of special wastes, including a specific list and/or conditions:
Sludges - provided they are at least 30% solids

Site Size:
- Total area of facility property: 214 acres
- Total area sited for use: 214 acres
- Total area permitted: 148 acres
- Operating: 70 acres
- Not excavated: 78 acres
- Current capacity: 26,520,800 tons or ☐️ 1,050,000,000 yd³
- Estimated lifetime: 19.8 years
- Estimated days open per year: 305 days
- Estimated yearly disposal volume: 1,340,200 tons or ☐️ 4,840,000 yd³

(if applicable)
- Annual energy production:
  - Landfill gas recovery projects: 400,000 MMBTU
  - Waste-to-energy incinerators: N/A megawatts

III-16
SELECTED SYSTEM

FACILITY DESCRIPTIONS

Facility Type:  **Landfill**

Facility Name:  **Carleton Farms**

County: **Wayne**  Location: Town:____ Range:____ Section(s): 36

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:  **N/A**

□ Public  □ Private  Owner: **REPUBLIC**

<table>
<thead>
<tr>
<th>Operating Status (check)</th>
<th>Waste Types Received (check all that apply)</th>
</tr>
</thead>
<tbody>
<tr>
<td>□ open</td>
<td>□ residential</td>
</tr>
<tr>
<td>□ closed</td>
<td>□ commercial</td>
</tr>
<tr>
<td>□ licensed</td>
<td>□ industrial</td>
</tr>
<tr>
<td>□ unlicensed</td>
<td>□ construction &amp; demolition</td>
</tr>
<tr>
<td>□ construction permit</td>
<td>□ contaminated soils</td>
</tr>
<tr>
<td>□ open, but closure</td>
<td>□ special wastes *</td>
</tr>
<tr>
<td>□ pending</td>
<td>□ other: ____</td>
</tr>
</tbody>
</table>

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

Site Size:

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

| Current capacity:               | □ tons or □ yds³ |
| Estimated lifetime:             | years |
| Estimated days open per year:   | days |
| Estimated yearly disposal volume: | □ tons or □ yds³ |

(if applicable)

| Annual energy production:       | megawatts |
| Landfill gas recovery projects: | megawatts |
| Waste-to-energy incinerators:   | megawatts |
SELECTED SYSTEM

FACILITY DESCRIPTIONS

Facility Type: Transfer Station

Facility Name: Ray Township Transfer Station

County: Macomb  Location: Ray Twp.  Town: 4N  Range: 13E  Section(s): 17

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

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

☑ Public  ☐ Private  Owner: Ray Township

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

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

Used motor oil picked up by Safety-Kleen

Site Size:

Total area of facility property: 9.08 acres
Total area site for use: 9.08 acres
Total area permitted: 9.08 acres
Operating: 2 acres
Not excavated: 0 acres
Current capacity: ☐ tons or ☑ yds³
Estimated lifetime: _______ years
Estimated days open per year: 12 days
Estimated yearly disposal volume: 1,920 ☐ tons or ☑ yds³

(if applicable)
Annual energy production:
Landfill gas recovery projects: N/A megawatts
Waste-to-energy incinerators: N/A megawatts
SELECTED SYSTEM

FACILITY DESCRIPTIONS

Facility Type:  Waste Reduction Plant

Facility Name:  Grosse Pointe-Clinton Refuse Disposal Authority

County:  Macomb  Location:  Clinton Twp.  Town:  Range:  Section(s): 

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:  Carleton Farms

☑ Public  ☐ Private  Owner:  Grosse Pointe-Clinton Refuse Disposal Authority

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

☒ open  ☐ closed  ☑ licensed  ☐ unlicensed  ☐ construction permit  ☐ open, but 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: 67 acres
Total area zoned for use: 5 acres
Total area permitted: 67 acres
Operating: 
Not excavated: 
Current capacity: 600 TPD
Estimated lifetime: 
Estimated days open per year: 275 days
Estimated yearly disposal volume: 125,600 tons or yds³

(If applicable)
Annual energy production:
Landfill gas recovery projects: N/A megawatts
Waste-to-energy incinerators: N/A megawatts
SELECTED SYSTEM

FACILITY DESCRIPTIONS

Facility Type: Landfill

Facility Name: Pine Tree Acres

County: ______ Location: Lenox Twp. Town: 4N Range: 14E Section(s): 23, 24

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: N/A

☐ Public ☑ Private Owner: Waste Management

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

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

Sludge, Auto Fluff

Site Size:
Total area of facility property: 568 acres
Total area sited for use: 568 acres
Total area permitted: 161.2 acres
Operating: 86.1 acres
Not excavated: 75.1 acres
Current capacity: 7,200,000 ☐ tons or ☑ yds³ (Remaining Future Capacity 59,000,000 yd³)
Estimated lifetime: 8 years (Future expansion 27 years)
Estimated days open per year: 286 days
Estimated yearly disposal volume: 1,800,000 ☐ tons or ☑ yds³

(if applicable)
Annual energy production:
Landfill gas recovery projects: 4 megawatts
Waste-to-energy incinerators: N/A megawatts

III-20
SELECTED SYSTEM

FACILITY DESCRIPTIONS

Facility Type: Landfill
Facility Name: Eagle Valley RDF
County: Oakland  Location: Town: 4N  Range: 10E  Section(s): 26, 27
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: N/A

Public  □  Private  Owner: Waste Management

<table>
<thead>
<tr>
<th>Operating Status (check)</th>
<th>Waste Types Received (check all that apply)</th>
</tr>
</thead>
<tbody>
<tr>
<td>□ open</td>
<td>□ residential</td>
</tr>
<tr>
<td>□ closed</td>
<td>□ commercial</td>
</tr>
<tr>
<td>□ licensed</td>
<td>□ industrial</td>
</tr>
<tr>
<td>□ unlicensed</td>
<td>□ construction &amp; demolition</td>
</tr>
<tr>
<td>□ construction permit</td>
<td>□ contaminated soils</td>
</tr>
<tr>
<td>□ open, but closure</td>
<td>□ special wastes *</td>
</tr>
<tr>
<td>□ pending</td>
<td>□ other: _______</td>
</tr>
</tbody>
</table>

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

Contaminated soils, chemical containing equipment, coal ash, filter cake, contaminated residuals, incinerator ash, industrial process waste, non-friable asbestos, treated medical wastes, treatment plant sludge, paint filters.

Site Size:

| Total area of facility property: | 330 acres |
| Total area sited for use:       | 330 acres |
| Total area permitted:           | 89 acres  |
| Operating:                      | 76 acres  |
| Not excavated:                  | 13 acres  |
| Current capacity:               | 4,700,000 tons or □ 20 yds³ |
| Estimated lifetime:             | 5.9 years |
| Estimated days open per year:   | 286 days  |
| Estimated yearly disposal volume: | 1,650,000 tons or □ 20 yds³ |

(if applicable)
Annual energy production:

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

III-21
SELECTED SYSTEM

FACILITY DESCRIPTIONS

Facility Type: Transfer Station  
Facility Name: Warren Transfer Station  
County: Macomb  
Location: Town:  
Range:  
Section(s):  

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: Pine Tree Acres Landfill

Public  Private  Owner: City of Warren

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

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

Site Size:
Total area of facility property:  acres
Total area sited for use:  acres
Total area permitted:  acres
Operating:  acres
Not excavated:  acres

Current capacity:  tons or yds³
Estimated lifetime:  years
Estimated days open per year:  days
Estimated yearly disposal volume: 45,500  tons or yds³ From Macomb County

(if applicable)
Annual energy production:
Landfill gas recovery projects:  N/A  megawatts
Waste-to-energy incinerators:  N/A  megawatts

III-22
SELECTED SYSTEM

FACILITY DESCRIPTIONS

Facility Type: **Transfer Station**

Facility Name: **Armada Township Transfer Station**

County: **Macomb** Location: Town: _____ Range: _____ Section(s): _____

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: **N/A**

☒ Public ☐ Private  Owner: **Armada Township**

<table>
<thead>
<tr>
<th>Operating Status (check)</th>
<th>Waste Types Received (check all that apply)</th>
</tr>
</thead>
<tbody>
<tr>
<td>☒ open</td>
<td>residential</td>
</tr>
<tr>
<td>☐ closed</td>
<td>commercial</td>
</tr>
<tr>
<td>☐ licensed</td>
<td>industrial</td>
</tr>
<tr>
<td>☐ unlicensed</td>
<td>construction &amp; demolition</td>
</tr>
<tr>
<td>☐ construction permit</td>
<td>contaminated soils</td>
</tr>
<tr>
<td>☐ open, but closure</td>
<td>special wastes *</td>
</tr>
<tr>
<td>☐ pending</td>
<td>other: ______</td>
</tr>
</tbody>
</table>

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

<table>
<thead>
<tr>
<th>Site Size:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total area of facility property: ____ acres</td>
</tr>
<tr>
<td>Total area sited for use: ____ acres</td>
</tr>
<tr>
<td>Total area permitted: ____ acres</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Operating:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not excavated: ____ acres</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Current capacity:</th>
</tr>
</thead>
<tbody>
<tr>
<td>____ tons or ____ yds³</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Estimated lifetime:</th>
</tr>
</thead>
<tbody>
<tr>
<td>____ years</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Estimated days open per year:</th>
</tr>
</thead>
<tbody>
<tr>
<td>____ days</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Estimated yearly disposal volume:</th>
</tr>
</thead>
<tbody>
<tr>
<td>____ tons or ____ yds³</td>
</tr>
</tbody>
</table>

(if applicable)

<table>
<thead>
<tr>
<th>Annual energy production:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Landfill gas recovery projects: <strong>N/A</strong> megawatts</td>
</tr>
<tr>
<td>Waste-to-energy incinerators: <strong>N/A</strong> megawatts</td>
</tr>
</tbody>
</table>

III-23
SELECTED SYSTEM

FACILITY DESCRIPTIONS

Facility Type: Landfill

Facility Name: Adrian Landfill

County: Lenawee Location: Palmyra Town: ______ Range: ______ Section(s): 6, 7

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

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

☐ Public ☒ Private  Owner: ALLIED

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

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

Asbestos, sludge: per environmental guidelines.

Site Size:
Total area of facility property: 421 acres
Total area sited for use: 287 acres
Total area permitted: 39.94 acres
Operating: 19.49 acres
Not excavated: 20.45 acres

Current capacity: 2,002,000 ☐ tons or ☒ yds³
Estimated lifetime: 6.83 years
Estimated days open per year: 307 days
Estimated yearly disposal volume: 97,731 ☐ tons or ☒ yds³

(if applicable)
Annual energy production:
Landfill gas recovery projects: N/A megawatts
Waste-to-energy incinerators: N/A megawatts
SELECTED SYSTEM

FACILITY DESCRIPTIONS

Facility Type:  Landfill (Type III)
Facility Name:  Standard Environmental Services - Rockwood Landfill
County:  Monroe  Location:  Berlin Twp.  Town:  Range:  Section(s):  6, 7
Map identifying location included in Attachment Section:  ☑ Yes  ☐ No

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

☑ Public  ☑ Private  Owner:  Standard Disposal

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

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

Low hazard industrial wastes and non-hazardous industrial wastes

Site Size:
Total area of facility property:  209.46 acres
Total area sited for use:  147.74 acres
Total area permitted:
Operating:  209.46 acres
Not excavated:  10.92 acres
Not excavated:  136.82 acres
Current capacity:  21,765,000  ☑ tons or ☐ yds³
Estimated lifetime:  35  years
Estimated days open per year:  286  days
Estimated yearly disposal volume:  1,400,000  ☑ tons or ☐ yds³

(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.

Solid waste is collected by the private sector in Macomb County. Residential waste is collected by private haulers, either through contracts with municipalities or directly with private homeowners. There has been a consolidation of refuse collection firms and most residential waste is collected by one of several large waste hauling firms. BFI, Waste Management, and City Environmental account for the majority of the residential waste. Table 1 on page II-35 lists the haulers servicing each community in Macomb County. The same waste hauling companies also service industrial and commercial generated waste within Macomb County. Smaller commercial haulers service commercial and industrial users, or haul their own waste from roofing, demolition, and construction projects, or contract with builders or other contractors for the removal of these wastes.

Four transfer stations are in operation in the County: the Ray Township Transfer Station, Armada Township Transfer Station, SMDA Transfer Station, and City of Warren Transfer Station. These facilities will continue to collect solid waste for transfer to final disposal areas.

The transportation infrastructure in Macomb County is sufficient to accommodate the hauling and transfer vehicles used for the collection of solid waste. The major routes used for refuse hauling vehicles traveling north-south in the County are Van Dyke (M-53), Groesbeck (M-97), Mound, North Avenue, I-94, and Gratiot Avenue (M-3). Harper Avenue is used by vehicles traveling to and from the St. Clair Shores area and to the Grosse Pointe-Clinton Refuse Disposal Authority incinerator. East-west travel is accomplished by using several of the Mile Roads in the southern portion of the County. 29 Mile Road in the northern portion of the County, is used extensively by haulers transporting waste to the Pine Tree Acres Landfill. Other County Roads are also used, generally for short distances in traveling to and from the major routes to disposal areas.
SELECTED SYSTEM
RESOURCE CONSERVATION EFFORTS:

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

The 1994 Macomb County Solid Waste Management Plan determined that few if any State-wide, County-wide, or community-wide regulations could be implemented to promote resource conservation. The 1994 Plan states that educating the public as to the methods of resource conservation can be used to effectively increase the number of persons and businesses participating in this form of waste management.

This Plan concurs that Macomb County cannot provide regulations that effectively promote resource conservation. Resource conservation is a waste management component best promoted on the State level. Therefore, this Plan encourages private industry and commercial entities to explore means to increase resource conservation and reduce the amount of waste generated. This Plan also encourages, but does not mandate, that the State of Michigan provide educational materials or seminars on resource conservation methods to interested parties. Educational materials could include news releases on purchasing reusable items rather than disposable, selecting products that are packaged in recyclable containers, such as glass or aluminum or purchasing food and dry goods in bulk to reduce the amount of packaging waste. Since conservation efforts are provided voluntarily and change with technologies and public awareness this plan cannot assign a value to the amount of waste diverted from landfills.

Macomb County encourages the reuse of materials through the purchase of products containing recycled materials. While the County does not have a written policy the County procedure is to consider products with recycled materials and purchase them if cost competitive.

<table>
<thead>
<tr>
<th>Effort Description</th>
<th>Est. Diversion Tons/Yr</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Current</td>
</tr>
<tr>
<td></td>
<td></td>
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</tr>
</tbody>
</table>

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

III-27
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 this Plan update’s intention to limit the techniques to only what is listed. Persons within the County are encouraged to utilize the technique that provides the most efficient and practical volume reduction for their needs. Documentation explaining achievements of implemented programs or expected results of proposed programs is attached.

The Grosse Pointe-Clinton Refuse Disposal Authority incinerator currently achieves approximately 93% volume reduction in the waste processed by the plant. The incinerator is scheduled to close within the next 12 months by April 1999, and consequently, no Macomb County waste will be subject to volume reduction after the incinerator is closed.

<table>
<thead>
<tr>
<th>Technique Description</th>
<th>Est. Air Space Conserved Yds³/Yr</th>
</tr>
</thead>
<tbody>
<tr>
<td>Incineration</td>
<td>Current 5th yr. 10th yr.</td>
</tr>
<tr>
<td></td>
<td>90,000 0 0</td>
</tr>
</tbody>
</table>

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

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.

A Solid Waste Stream Analysis was completed for Macomb County and identified the percentage of recyclables in the waste stream. The potential amounts of recyclables for the Macomb County planning area was determined using these data and the projected waste generation projections for residential and commercial waste. The projected annual amounts of recyclable materials are presented in the following table.

<table>
<thead>
<tr>
<th>Category</th>
<th>% of Waste</th>
<th>Residential/Commercial Waste, tons</th>
<th>Amount, tons</th>
</tr>
</thead>
<tbody>
<tr>
<td>Newsprint</td>
<td>10.4</td>
<td>594,332</td>
<td>62,000</td>
</tr>
<tr>
<td>Corrugated</td>
<td>11.4</td>
<td>594,332</td>
<td>68,000</td>
</tr>
<tr>
<td>Office Paper</td>
<td>1.0</td>
<td>594,332</td>
<td>6,000</td>
</tr>
<tr>
<td>Yard Waste</td>
<td>30.6</td>
<td>594,332</td>
<td>182,000</td>
</tr>
<tr>
<td>Glass</td>
<td>3.0</td>
<td>594,332</td>
<td>18,000</td>
</tr>
<tr>
<td>Ferrous Metal</td>
<td>4.4</td>
<td>594,332</td>
<td>26,000</td>
</tr>
<tr>
<td>Non-Ferrous</td>
<td>0.4</td>
<td>594,332</td>
<td>2,000</td>
</tr>
</tbody>
</table>

The amount of material recycled and composted in Macomb County is growing. The cooperation between private waste haulers and the individual communities minimizes impediments to the recycling and compost programs. Public awareness of the benefits of recycling waste to reduce the waste stream will create more competition among private waste haulers to provide better recycling facilities for the public. In addition, this competition will cause the private waste haulers and the communities to provide better education to the public about recycling, which will increase the county participation rate.

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

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

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

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

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

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

III-29
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-18, 19, & 20 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-21, 22, & 23 list the recycling, composting, and source separation of hazardous materials programs that are proposed in the future for the County. It is not this Plan update's intent to prohibit additional programs or expansions of current programs to be implemented beyond those listed.

Macomb County has experienced a significant increase in the number of communities that are actively involved in recycling programs since the 1994 Plan Update. Many communities within Macomb County plan, operate, and evaluate their recycling and composting programs with the assistance of private haulers. Sixteen communities within Macomb County indicated that they have a recycling program operating at the current time, while other communities noted that they were interested in information on how they could get materials collected for recycling include plastic containers, newspaper, corrugated containers, glass, metals, used oil, appliances, batteries, and Styrofoam. Grass clippings, leaves, and garden debris are collected for composting. Other than limitations provided by each private hauler, there are no ordinances or regulations affecting the operation of any of these programs.

Most communities have either drop-off sites where the residents sort their recyclables into large roll-off containers, or curb side pick-up. Some communities provide residents with a yard waste bin, or sticker to place on yard waste containers, and a smaller bin for recyclables, such as plastics and tin, to place on the curb for either weekly, bi-weekly, or daily pick up. The collection point and collection frequency for each participating community is presented in Table III-1.

The communities work with the private haulers to provide recycling for the residents of Macomb County. There is high public awareness that recycling will help the environment and reduce the waste stream being disposed in landfills. Because of this public awareness, waste haulers see the need to recycle to remain competitive with other haulers. These cooperative agreements between the communities within Macomb County and the waste haulers ensure that waste will be recycled.

The successful recycling programs have a significant amount of community participation. Information regarding the recycling programs was provided by the private waste haulers and the communities. Flyers and newsletters are distributed detailing information on how to prepare the recyclables for pick up, what is accepted for recycling, and how recycling helps minimize the waste stream. Some communities offer short seminars that the public can attend to learn more about the basics of recycling. For example, St. Clair Shores has a traveling education booth that goes to community events and works with the local media. Their educational outreach program has resulted in an 80 percent recycling participation rate in the community. Other community participation rates average between 25 and 50 percent.

The current community participation that Macomb County has with its community recycling and composting programs indicates that Macomb County is moving towards the eight to 12
percent composting and the 20 to 30 percent recycling goal set by the State of Michigan by the year 2005. Current estimates show that Macomb County is composting 8.5 percent of its residential waste, (5.2% of its total waste) and recycling 5.9 percent of its total waste.
<table>
<thead>
<tr>
<th>Program Name</th>
<th>Service Area</th>
<th>Public or Private</th>
<th>Collection Point</th>
<th>Collection Frequency</th>
<th>Materials Collected</th>
<th>Program Development</th>
<th>Management Operation</th>
<th>Responsibilities² Evaluation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Recycling</td>
<td>Armada Twp.</td>
<td></td>
<td></td>
<td></td>
<td>a.b.c.e.f</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Recycling</td>
<td>City of Sterling Heights</td>
<td></td>
<td></td>
<td></td>
<td>a.b.c.e.f</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Recycling</td>
<td>City of Fraser</td>
<td></td>
<td></td>
<td></td>
<td>a.b.e.f</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Recycling</td>
<td>City of Mt. Clemens</td>
<td></td>
<td></td>
<td></td>
<td>a.b.c.d.e.f</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Recycling</td>
<td>Romeo</td>
<td></td>
<td></td>
<td></td>
<td>a.b.e.f</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Recycling</td>
<td>Richmond Twp.</td>
<td></td>
<td></td>
<td></td>
<td>a.b.c.e.f</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Recycling</td>
<td>Clinton Twp.</td>
<td></td>
<td></td>
<td></td>
<td>a.b.e.f</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Recycling</td>
<td>St. Clair Shores</td>
<td></td>
<td></td>
<td></td>
<td>a.b.c.d.e.f</td>
<td></td>
<td></td>
<td>5</td>
</tr>
</tbody>
</table>

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; 5 = Private Owner/Operator; 6 = Other.

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

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⁵ Identified by the material 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.

III-32
<table>
<thead>
<tr>
<th>Program Name</th>
<th>Service Area</th>
<th>Public or Private</th>
<th>Collection Point</th>
<th>Collection Frequency</th>
<th>Materials Collected</th>
<th>Program Development</th>
<th>Management Operation</th>
<th>Responsibilities¹²³</th>
</tr>
</thead>
<tbody>
<tr>
<td>Recycling</td>
<td>Eastpointe</td>
<td></td>
<td></td>
<td></td>
<td>a,b,c,d,e,f</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Recycling</td>
<td>Center Line</td>
<td></td>
<td></td>
<td></td>
<td>a,b,c,d,e,f</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Recycling</td>
<td>City of Richmond</td>
<td></td>
<td></td>
<td></td>
<td>N/A</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Recycling</td>
<td>Ray Twp.</td>
<td></td>
<td></td>
<td></td>
<td>N/A</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Recycling</td>
<td>Warren</td>
<td></td>
<td></td>
<td></td>
<td>N/A</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Recycling</td>
<td>New Baltimore</td>
<td></td>
<td></td>
<td></td>
<td>N/A</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Recycling</td>
<td>Roseville</td>
<td></td>
<td></td>
<td></td>
<td>N/A</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Recycling</td>
<td>Shelby</td>
<td></td>
<td></td>
<td></td>
<td>a,b,c,f</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

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.
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<table>
<thead>
<tr>
<th>Program Name</th>
<th>Service Area</th>
<th>Public or Private</th>
<th>Collection Point</th>
<th>Collection Frequency</th>
<th>Materials Collected</th>
<th>Program Development</th>
<th>Management Operation</th>
<th>Responsibilities</th>
</tr>
</thead>
<tbody>
<tr>
<td>Indian Summer Recycling</td>
<td>City of Fraser</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Indian Summer Recycling</td>
<td>Clinton Twp.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>King of the Winds</td>
<td>Mt. Clemens</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pine Tree Acres</td>
<td>Sterling Heights</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>BFI (Northville)</td>
<td>Center Line</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>BFI (Northville)</td>
<td>St. Clair Shores</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Waste Management</td>
<td>Romeo</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>City East</td>
<td>New Haven</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Arbor Hills RRF</td>
<td>Eastpointe</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

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.

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5 Identified by the material 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.
<table>
<thead>
<tr>
<th>Program Name</th>
<th>Service Area</th>
<th>Public or Private Collection Point</th>
<th>Collection Frequency</th>
<th>Materials Collected</th>
<th>Program Development</th>
<th>Management Operation</th>
<th>Responsibilities</th>
</tr>
</thead>
<tbody>
<tr>
<td>Roseville</td>
<td>5 C W G.L. 5</td>
<td>5</td>
<td>5</td>
<td>3</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Warren</td>
<td>5 C W G.L. 5</td>
<td>5</td>
<td>5</td>
<td>3</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

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### SOURCE SEPARATION OF POTENTIALLY HAZARDOUS MATERIALS:

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

<table>
<thead>
<tr>
<th>Program Name</th>
<th>Service Area</th>
<th>Public or Private</th>
<th>Collection Point</th>
<th>Collection Frequency</th>
<th>Materials Collected</th>
<th>Program Development</th>
<th>Management Operation</th>
<th>Responsibilities</th>
</tr>
</thead>
<tbody>
<tr>
<td>Macomb County Health Department</td>
<td>Macomb County</td>
<td>Public</td>
<td>d</td>
<td>varies</td>
<td>AR, B2, C,</td>
<td>6</td>
<td>6</td>
<td>6</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>PS, PH, U</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>O, T, P</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Waste Oil Recycling Sites</td>
<td>Mt. Clemens, Clinton Twp., Harrison Twp., Fraser, Sterling Heights, St. Clair Shores, Roseville, Eastpointe, Utica, Shelby Twp., Warren, Center Line</td>
<td>Public</td>
<td>d</td>
<td>varies</td>
<td>U</td>
<td>6</td>
<td>6</td>
<td>6</td>
</tr>
<tr>
<td>Household Battery/US Postal Service</td>
<td>Macomb County</td>
<td>Public</td>
<td>d</td>
<td>d</td>
<td>B2</td>
<td>6</td>
<td>6</td>
<td>6</td>
</tr>
</tbody>
</table>

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

---

3 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.

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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 = Pains and Solvents; PS = Pesticides and Herbicides; PH = Personal and Health Care Products; U = Used Oil; OT = Other Materials and identified.
<table>
<thead>
<tr>
<th>Program Name</th>
<th>Service Area</th>
<th>Public or Private</th>
<th>Collection Point</th>
<th>Collection Frequency</th>
<th>Materials Collected</th>
<th>Program Development</th>
<th>Management Operation</th>
<th>Responsibilities Evaluation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Household Hazardous Waste</td>
<td>Roseville</td>
<td>Public</td>
<td>d</td>
<td>varies</td>
<td>P, B2, C, U</td>
<td>3</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>Household Hazardous Waste</td>
<td>Shelby Twp.</td>
<td>Private</td>
<td>d</td>
<td>Sp</td>
<td>AR, C, P</td>
<td>5</td>
<td>5</td>
<td>3</td>
</tr>
<tr>
<td>Household Hazardous Waste</td>
<td>Eastpointe</td>
<td>Public</td>
<td>d</td>
<td>Su</td>
<td>B2, U</td>
<td>3</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>Household Hazardous Waste</td>
<td>St. Clair Shores</td>
<td>Private</td>
<td>d</td>
<td>Su</td>
<td>____</td>
<td>3</td>
<td>3</td>
<td>3</td>
</tr>
</tbody>
</table>

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The Macomb County Health Department has established a household hazardous waste program that is available to all Macomb County households. Materials can be dropped off by appointment at a hazardous waste storage building located at the Health Department. The program is funded by the Macomb County Board of Commissioners through the Health Department budget. The program will accept Automotive Products (gasoline, motor oil, battery acid, solvents and degreasers, brake fluid, transmission fluid, and spray paint), Gardening Products (pesticides, weed killers, poisons, sprays and dust, and fertilizers), and Household Products (oven cleaners, muriatic acid, rat and ant poison, drain cleaner, pool chemicals, photo chemicals, household batteries, paint thinner and solvents, paint stripper, nail polish and remover, aerosols, and oil based paint).

The US Postal Service has partnered with the Macomb County Health Department to accept household batteries at local Post Offices throughout Macomb County.

The City of Roseville Department of Public Works receives oil based paint, batteries, oil and antifreeze, and cleaning supplies at the DPW facility. A household hazardous waste collection is provided to residents once each year.

The City of Eastpointe Department of Public Works has a drop off center for car and household batteries, antifreeze, and used oil. An annual collection day is staged in August by the DPW for household hazardous waste.

The City of St. Clair Shores stages an annual collection day for household hazardous waste through its DPW. The Second Annual event was held in June, 1998. The City provides a packet of information regarding solid waste procedures to all new residents.

A example of the information provided to citizens for the Macomb County Health Department, US Postal Service, and City of Roseville's household hazardous waste programs is attached in the Appendix.
# Proposed Recycling

<table>
<thead>
<tr>
<th>Program Name (if known)</th>
<th>Service Area</th>
<th>Public or Private Collection Point</th>
<th>Collection Frequency</th>
<th>Materials Collected</th>
<th>Program Development</th>
<th>Management Operation</th>
<th>Responsibilities Evaluation</th>
</tr>
</thead>
<tbody>
<tr>
<td>N/A</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

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

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### TABLE III-5

#### PROPOSED COMPOSTING:

<table>
<thead>
<tr>
<th>Program Name, (if known)</th>
<th>Service Area¹</th>
<th>Public or Private</th>
<th>Collection Point³</th>
<th>Collection Frequency⁴</th>
<th>Materials Collected⁵</th>
<th>Program Development</th>
<th>Management Operation</th>
<th>Responsibilities² Evaluation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Compost Collection</td>
<td>Village of Armada is currently considering a program</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

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---

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## TABLE III-6

**PROPOSED SOURCE SEPARATION OF POTENTIALLY HAZARDOUS MATERIALS:**

<table>
<thead>
<tr>
<th>Program Name, (if known)</th>
<th>Service Area¹</th>
<th>Public or Private Collection Point³</th>
<th>Collection Frequency⁴</th>
<th>Collection Materials Collected⁵</th>
<th>Program Development</th>
<th>Management Operation</th>
<th>Responsibilities² Evaluation</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
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<td></td>
<td></td>
</tr>
</tbody>
</table>

☐ 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; 5 = Private Owner/Operator; 6 = Other.

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

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

⁵ Identified by the materials collected by listing of the letter located by that material type. AR = Aerosol Cans; A = Automotive Products except Used Oil, Oil Filters & Antifreeze; AN = Antifreeze; BI = 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

IDENTIFICATION OF RESOURCE RECOVERY MANAGEMENT ENTITIES:
The following identifies those public and private parties, and the resource recovery or recycling programs for which they have management responsibilities.

Environmental Groups:

Other:
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.

Current quantities of collected materials are calculated based on the data provided in the survey form for each community provided. Currently, 59% of communities provide recycling for residents and 44% of communities provide composting for residents. The average public participation rate in recycling and composting programs was 45%. For projected recycling quantities, the 59% communities and 45% participation was increased to 80% communities and 50% participation for 5th year projected quantities and was increased to 100% communities and 60% participation for the 10th year projection. These percentages, population, and residential waste projections were used to calculate the projected annual tons diverted. The material recovery rates for non-composted material for industrial and commercial sources were assumed to be the same as residential quantities.

<table>
<thead>
<tr>
<th>Collected Material</th>
<th>Projected Annual Tons Diverted:</th>
<th>Collected Material</th>
<th>Projected Annual Tons Diverted:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Current  5th Yr  10th Yr</td>
<td></td>
<td>Current  5th Yr  10th Yr</td>
</tr>
<tr>
<td>A. TOTAL PLASTICS:</td>
<td>2570 3680 6170</td>
<td>G. GRASS AND LEAVES:</td>
<td>37050 45600 77100</td>
</tr>
<tr>
<td>B. NEWSPAPER:</td>
<td>See(D)</td>
<td>H. TOTAL WOOD WASTE:</td>
<td>N/A</td>
</tr>
<tr>
<td>C. CORRUGATED</td>
<td>17.7 25 35</td>
<td>I. CONSTRUCTION AND</td>
<td>N/A</td>
</tr>
<tr>
<td>CONTAINERS:</td>
<td></td>
<td>DEMOLITION:</td>
<td></td>
</tr>
<tr>
<td>D. TOTAL OTHER</td>
<td>15300 21800 36550</td>
<td>J. FOOD AND FOOD</td>
<td>N/A</td>
</tr>
<tr>
<td>PAPER:</td>
<td></td>
<td>PROCESSING:</td>
<td></td>
</tr>
<tr>
<td>E. TOTAL GLASS:</td>
<td>6110 8740 14660</td>
<td>K. TIRES:</td>
<td>N/A</td>
</tr>
<tr>
<td>OTHER MATERIALS:</td>
<td></td>
<td>L. TOTAL METALS:</td>
<td>10490 15010 21160</td>
</tr>
<tr>
<td>F.1</td>
<td>2 2.5 3</td>
<td>F.3</td>
<td>7270 8949 13913</td>
</tr>
<tr>
<td>F.2</td>
<td>391 548 787</td>
<td>F.4</td>
<td></td>
</tr>
</tbody>
</table>

N/A: No information available
**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.

<table>
<thead>
<tr>
<th>Collected Material</th>
<th>In-State Markets</th>
<th>Out-of-State Markets</th>
<th>Collected Material</th>
<th>In-State Markets</th>
<th>Out-of-State Markets</th>
</tr>
</thead>
<tbody>
<tr>
<td>A. TOTAL PLASTICS:</td>
<td>50</td>
<td></td>
<td>G. GRASS AND LEAVES:</td>
<td>100</td>
<td></td>
</tr>
<tr>
<td>B. NEWSPAPER:</td>
<td>100</td>
<td></td>
<td>H. TOTAL WOOD WASTE:</td>
<td>100</td>
<td></td>
</tr>
<tr>
<td>C. CORRUGATED CONTAINERS:</td>
<td>100</td>
<td></td>
<td>I. CONSTRUCTION AND DEMOLITION:</td>
<td>N/A</td>
<td></td>
</tr>
<tr>
<td>D. TOTAL OTHER PAPER:</td>
<td>100</td>
<td></td>
<td>J. FOOD AND FOOD PROCESSING</td>
<td>N/A</td>
<td></td>
</tr>
<tr>
<td>E. TOTAL GLASS:</td>
<td>50</td>
<td></td>
<td>K. TIRES:</td>
<td>N/A</td>
<td></td>
</tr>
<tr>
<td>F. OTHER MATERIALS:</td>
<td></td>
<td></td>
<td>L. TOTAL METALS:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>F1.</td>
<td></td>
<td></td>
<td>F3.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

 Majority of material can be sold to in-state markets, but many out-of-state markets are available.
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.

<table>
<thead>
<tr>
<th>Program Topic</th>
<th>Delivery Medium</th>
<th>Targeted Audience</th>
<th>Program Provider</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.5</td>
<td>o.t.f</td>
<td>P</td>
<td>Sterling Heights</td>
</tr>
<tr>
<td>1</td>
<td>f</td>
<td>P</td>
<td>OO, Armada Twp.</td>
</tr>
<tr>
<td>1.2</td>
<td>f.t.website.o</td>
<td>P</td>
<td>Clinton Twp.</td>
</tr>
<tr>
<td>1</td>
<td>o.t</td>
<td>P</td>
<td>City of Fraser</td>
</tr>
<tr>
<td>1.2</td>
<td>f.t</td>
<td>P</td>
<td>EX, Mt. Clemens</td>
</tr>
<tr>
<td>1</td>
<td>o.f</td>
<td>P</td>
<td>City of Center Line</td>
</tr>
<tr>
<td>1</td>
<td>f</td>
<td>P</td>
<td>OO, Romeo</td>
</tr>
<tr>
<td>1</td>
<td>o, welcome signs</td>
<td>P</td>
<td>OO, City of Richmond</td>
</tr>
</tbody>
</table>

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 D.

III-45
<table>
<thead>
<tr>
<th>Program Topic</th>
<th>Delivery Medium</th>
<th>Targeted Audience</th>
<th>Program Provider</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.2</td>
<td>o.e. traveling booth</td>
<td>P</td>
<td>St. Clair Shores</td>
</tr>
<tr>
<td>1</td>
<td>o</td>
<td>P</td>
<td>Eastpointe</td>
</tr>
</tbody>
</table>

The Macomb Cooperative Extension Agency, part of the Michigan State University Cooperative Extension, has an education group that meets periodically (usually twice a year) to discuss recycling and composting issues and determine public information needs. The agency meeting includes representatives from environmental groups, the health department, department of public works, and the waste industry. The agency also conducts a master composting class each fall for municipal officials and residents.
SELECTED SYSTEM

TABLE III-7

TIMETABLE FOR SELECTED SYSTEM IMPLEMENTATION

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

<table>
<thead>
<tr>
<th>Management Components</th>
<th>Timeline</th>
</tr>
</thead>
<tbody>
<tr>
<td>Collection</td>
<td>On-Going</td>
</tr>
<tr>
<td>Transport and Transfer Stations</td>
<td>On-Going</td>
</tr>
<tr>
<td>Volume Reduction</td>
<td>On-Going</td>
</tr>
<tr>
<td>Sanitary Landfill</td>
<td>On-Going</td>
</tr>
<tr>
<td>Recycling</td>
<td>On-Going</td>
</tr>
<tr>
<td>Composting</td>
<td>On-Going</td>
</tr>
<tr>
<td>Household Hazardous Waste</td>
<td>On-Going</td>
</tr>
</tbody>
</table>
SELECTED SYSTEM

SITING REVIEW PROCEDURES

AUTHORIZED DISPOSAL AREA TYPES

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

Sanitary Landfill
Waste to Energy Facility
Transfer Station
Materials Recovery Facility

SITING CRITERIA AND PROCESS

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

Macomb County has sufficient landfill capacity, utilizing the Pine Tree Acres landfill, for the five and ten year planning periods. Therefore, a siting criteria and process are not required.
SELECTED SYSTEM

SOLID WASTE MANAGEMENT COMPONENTS

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

The Macomb Board of Commissioners is the legislative, administrative and policy-making body of Macomb County government. Macomb County has a population currently estimated at 775,875, an annual budget over $209,000,000 with approximately 2300 employees. As such, the Macomb County Board of Commissioners is listed as the party for management responsibilities over the areas of the plan as described on the following pages.

All of the County departments, entities, persons and functions which relate to the various areas of the plan come under the aegis of the Macomb County Board of Commissioners in terms of purpose, mission, budgetary control and operational oversight.

This general position of the Macomb County Board of Commissioners is the basis for its identification as the primary responsible party for the plan.

1 Components or subcomponents may be added to this table.

III-49
SELECTED SYSTEM

IDENTIFICATION OF RESPONSIBLE PARTIES

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

Resource Conservation:
Source or Waste Reduction - Board of Commissioners

Product Reuse - Board of Commissioners

Reduced Material Volume - Board of Commissioners

Increased Product Lifetime - Board of Commissioners

Decreased Consumption - Board of Commissioners

Resource Recovery Programs:
Composting - Board of Commissioners

Recycling - Board of Commissioners

Energy Production - Board of Commissioners

Volume Reduction Techniques: Board of Commissioners

Collection Processes: Board of Commissioners
SELECTED SYSTEM

Transportation: Board of Commissioners

Disposal Areas:

Processing Plants - Board of Commissioners

Incineration - Board of Commissioners

Transfer Stations - Board of Commissioners

Sanitary Landfills - Board of Commissioners

Ultimate Disposal Area Uses: Board of Commissioners

Local Responsibility for Plan Update Monitoring & Enforcement: Board of Commissioners

Educational and Informational Programs: Board of Commissioners

Documentation of acceptance of responsibilities is contained in Appendix D.
LOCAL ORDINANCES AND REGULATIONS AFFECTING SOLID WASTE DISPOSAL

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

1. Section 11538.8 and rule 710 (3) of Part 115 prohibits enforcement of all County and local ordinances and regulations pertaining to solid waste disposal areas unless explicitly included in an approved Solid Waste Management Plan. Local regulations and ordinances intended to be part of this Plan must be specified below and the manner in which they will be applied described.

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

A. Geographic area/Unit of government: __________________________
   Type of disposal area affected: __________________________
   Ordinance or other legal basis: __________________________
   Requirement/restriction: __________________________

B. Geographic area/Unit of government: __________________________
   Type of disposal area affected: __________________________
   Ordinance or other legal basis: __________________________
   Requirement/restriction: __________________________

C. Geographic area/Unit of government: __________________________
   Type of disposal area affected: __________________________
   Ordinance or other legal basis: __________________________
   Requirement/restriction: __________________________

D. Geographic area/Unit of government: __________________________
   Type of disposal area affected: __________________________
   Ordinance or other legal basis: __________________________

III-52
Requirement/restriction: __________________________________________

Geographic area/Unit of government: ____________________________________

Type of disposal area affected: ________________________________________

Ordinance or other legal basis: ________________________________________

Requirement/restriction: ____________________________________________

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

The City of St. Clair Shores ordinance Section 32.250 Refuse; Storage and Collection Regulations regulates recycling and compost activities within the City.

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

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

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

Pine Tree Acres Landfill has a projected remaining capacity of 59,000,000 in-place cubic yards. This is equivalent to 118,000,000 in-gate cubic yards. This projection includes existing and future capacity.

The original Pine Tree Acres site comprised approximately 160 acres of land. In 1988, an additional 300 acres of property was approved by Macomb County increasing the total acreage to approximately 460 acres. The landfill was evaluated by Macomb County based on geologic and hydrogeologic conditions, availability of cover material, accessibility, capacity, isolation, and zoning/land use issues and was deemed to be in conformance with the Macomb County Solid Waste Management Plan.

Pine Tree Acres, Inc. requested the inclusion of an additional 108 acres of contiguous property located on the eastern side of the landfill in this Plan update. The additional acreage would compensate for land previously approved by Macomb County that was not developable due to MDEQ mandated setbacks and area set aside for wetlands mitigation.

The additional 108 acres of land are deemed to be in conformance with the Macomb County Solid Waste Plan and have been included in the calculations for site capacity. This plan recognizes 568 acres of property in Sections 23 and 24 of Lenox Twp. being available for landfilling activities by the Pine Tree Acres landfill.

A calculation was completed to determine the expected life of the site and assumed that all waste generated in Macomb County would be disposed in the Pine Tree Acres landfill. The Macomb County projection included all waste currently disposed at the Grosse Pointe-Clinton Refuse Disposal Authority Incinerator which is expected to close prior to April 1999. The calculation also assumed that all of the waste imports identified in Table 1-A would continue through the life of the landfill. Based on these waste projections, and the available capacity, the expected life of the Pine Tree Acres landfill
is 27 years. This exceeds the required capacity for Macomb County for the next five and 10 year planning periods.

Pine Tree Acres has notified Macomb County that its listed capacity is available for all communities in the Macomb County planning area. This documentation letter, including a map of the landfill property, is included in Appendix D, Listed Capacity.
APPENDIX A

ADDITIONAL INFORMATION

REGARDING THE

SELECTED

SYSTEM
EVALUATION OF RECYCLING

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

DETAILED FEATURES OF RECYCLING AND COMPOSTING PROGRAMS:

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

A Solid Waste Stream Analysis was completed for Macomb County and identified the percentage of recyclables in the waste stream. The potential amounts of recyclables for the Macomb County planning area was determined using these data and the projected waste generation projections for residential and commercial waste. The projected amounts of annual recyclable materials are presented in the following table.

<table>
<thead>
<tr>
<th>Category</th>
<th>% of Waste</th>
<th>Residential/Commercial Waste, tons</th>
<th>Amount, tons</th>
</tr>
</thead>
<tbody>
<tr>
<td>Newsprint</td>
<td>10.4</td>
<td>594,332</td>
<td>62,000</td>
</tr>
<tr>
<td>Corrugated</td>
<td>11.4</td>
<td>594,332</td>
<td>68,000</td>
</tr>
<tr>
<td>Office Paper</td>
<td>1.0</td>
<td>594,332</td>
<td>6,000</td>
</tr>
<tr>
<td>Yard Waste</td>
<td>30.6</td>
<td>594,332</td>
<td>182,000</td>
</tr>
<tr>
<td>Glass</td>
<td>3.0</td>
<td>594,332</td>
<td>18,000</td>
</tr>
<tr>
<td>Ferrous Metal</td>
<td>4.4</td>
<td>594,332</td>
<td>26,000</td>
</tr>
<tr>
<td>Non-Ferrous</td>
<td>0.4</td>
<td>594,332</td>
<td>2,000</td>
</tr>
</tbody>
</table>

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: The communities in Macomb County use private waste haulers to provide recycling and composting services to its residents. The private waste haulers have their own recycling and composting facility or contribute to existing private recycling and composting facilities. The process used to select the equipment for the facilities was determined by the private owners of these facilities.
Proposed Programs: Macomb County plans to continue using private waste haulers for its recycling and composting program so no proposed programs exist.

Site Availability & Selection

Existing Programs:

Proposed Programs: Macomb County plans to continue using private waste haulers for its recycling and composting program so no proposed programs exist.

Appendix A-2
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:

<table>
<thead>
<tr>
<th>Program Name: Unit</th>
<th>pH Range</th>
<th>Heat Range</th>
<th>Other Parameter</th>
<th>Measurement</th>
</tr>
</thead>
<tbody>
<tr>
<td>BFI (Northville)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Indian Summer Recycling</td>
<td></td>
<td>N/A</td>
<td></td>
<td></td>
</tr>
<tr>
<td>King of the Winds</td>
<td></td>
<td>N/A</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pine Tree Acres</td>
<td></td>
<td>N/A</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Waste Management</td>
<td></td>
<td>N/A</td>
<td></td>
<td></td>
</tr>
<tr>
<td>City East</td>
<td></td>
<td>N/A</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Arbor Hills RDF</td>
<td></td>
<td>N/A</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Heat range and pH range are monitored by each private compost operation because different ranges affect the rate of the composting cycle. Typical composting cycle temperatures range from 40 degrees (after 10 days, beginning of mesopylic bacteria reproduction) and up to 150 degrees (after 20 days, thermophyllic bacteria which destroy pathogens). Range of pH is monitored at compost sites because either extreme acidity or alkalinity can decrease the degradation process. A low pH can signify anaerobic degradation, which can be adjusted by mixing the compost materials differently.

Proposed Programs:

<table>
<thead>
<tr>
<th>Program Name Unit</th>
<th>pH Range</th>
<th>Heat Range</th>
<th>Other Parameter</th>
<th>Measurement</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Appendix A-3
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 plan is technically and economically feasible. All of the major components including collection, transportation, disposal, recycling, and composting are proven technologies and have been accepted by the public.

The selected plan has the following anticipated positive and negative impacts on the public health, economics, environmental conditions, siting considerations, existing disposal areas, and energy consumption and production.

Public Health
The selected plan relies primarily on sanitary landfills for final disposal of waste. Properly sited, constructed, and operated landfills will have minimal effect on groundwater and the environment. Past history has shown that a landfill can have a negative effect on public health due to leakage, blowing papers, and vermin. These conditions have been addressed in the design and operation of modern landfill which utilize composite liner systems, leachate detection systems, and improved operational methods to reduce blowing papers and vermin.

Recycling and compost facilities reduce public health impacts by taking materials out of the waste stream that would normally go to a landfill.

Proper collection of refuse reduces the potential for rodent infestation and disease transmission by vermin and insects.

Economics
Landfilling is the most economical method of refuse disposal but could be costly if the landfill is improperly designed or operated, resulting in air or water pollution. The selected plan relies on a Part 115 designed and operated landfill for final disposal of most of the waste generated in the planning area. A Part 115 landfill would minimize the risk of groundwater and air pollution.

Recycling creates opportunities for revenues from the waste stream but is not
necessarily the most cost-effective waste management component. Composting can also create opportunities for revenues, and may be used as a substitute for other materials.

Refuse collection through open markets provides competitive pricing and economies of scale. Transfer stations can provide a cost savings over direct route hauling with numerous collection vehicles.

Environmental Conditions
A properly sited, designed, constructed, and operated landfill will have minimal environmental effects. Groundwater problems at landfills can have a significant effect on the environment, requiring extensive cleanups, or requiring the development of a public water supply system. However, newer landfills have been designed with leachate collection and leachate detection systems which minimize the potential for groundwater pollution.

Recycling and compost facilities reduce the environmental effects of landfills. They can also cause nuisance conditions if not properly designed and maintained, though their negative effects would be less than the negative effects of an improperly maintained landfill. Compost facilities can have odor problems if not properly operated.

Siting Considerations
Landfills are extremely difficult to site due to public opposition and the need to locate an environmentally sound site. Macomb County has sufficient landfill capacity to meet its needs over the next five and 10 year planning period and does not need to site a new landfill. A properly sited landfill can minimize the potential for environmental contamination.

The selected plan identifies existing recycling and composting facilities. New facilities may have local opposition if the proposed areas are too small to accommodate proper screening and isolation distances. Less opposition would be expected for larger sites.

Existing Disposal Areas
The selected plan relies on the Pine Tree Acres Landfill to provide disposal capacity for the five and 10 year planning periods. Therefore, no new landfills would be required.

Energy Consumption and Production
The selected plan identifies four transfer stations that can reduce the amount of fossil fuel used to transport waste to the final disposal site. Transportation of recycled materials and yard waste uses energy. However, these management components can also save energy through the reuse of materials, or substitution for other products.

Appendix A-7
Sanitary landfills represent a potential loss of energy recovery of combustible materials. However, the Pine Tree Acres landfill has a methane gas recovery system which generates approximately four megawatts of energy annually.
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. The existing system is functioning efficiently and has been accepted by the public.

2. Recycling awareness is increasing and commercial haulers are offering curb-side and drop-off recycling as part of refuse hauling contracts.

3. Municipalities and the private sector are providing educational materials to the public to increase awareness of materials recovery.

4. The number of sanitary landfills is limited, which reduces the potential groundwater contamination from numerous sites.

5. Yard waste is being composted which saves landfill space.

6. Institutional arrangement for the implementation of the Plan are currently in place.

7. Household hazardous waste drop-off facilities are available to every Macomb County household through the Macomb County Health Department, US Postal Service, and several local community programs.

DISADVANTAGES:

1. Relies on landfilling for the predominant disposal method.

2. Depends on the Pine Tree Acres Landfill for the majority of disposal in the County.

3.

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APPENDIX B

NON-SELECTED SYSTEMS
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.

Macomb County evaluated the potential for a waste-to-energy facility to reduce the reliance on sanitary landfills and to recover energy from the waste stream.

Waste-to-Energy Feasibility Studies were previously completed for Macomb County. These studies identified markets that may be available for energy production, or refuse derived fuel. Detroit Edison, Chrysler production facilities, Ford Motor Company production plants among other have energy requirements that could be met by a waste-to-energy (WTE) plant. Other potential users were identified that may have the potential to use refuse derived fuel, or thermal energy produced by a WTE plant. However, this management components was not deemed viable for the following reasons:

Due to flow control laws being struck down by the Supreme Court, Macomb County would not have control over the waste stream which would affect the County's ability to finance a project and ensure the waste necessary to economically operate the facility. Air pollution requirements have substantially increased in recent years for WTE facilities requiring expensive air pollution control equipment to be included with the construction and operation of the facility. This adds significant cost to the operation and maintenance of a WTE project. Some WTE facilities have had its ash classified as hazardous waste. Transportation and disposal of hazardous ash would be expensive.

Current trends in municipal WTE facilities indicate there is a general slow-down in the development of these facilities until additional information is provided on the environmental and economic considerations. Due to uncertainties regarding flow control and the abundance of less costly landfill capacity, the construction of a WTE was not considered feasible at this time. WTE remains a potential waste management component for future Solid Waste Plan Updates, but is not considered feasible during this planning period.
SYSTEM COMPONENTS:

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

The 1982 Macomb County Solid Waste Management Plan and the 1994 Macomb County Solid Waste Management Plan Update provided a detailed description of various Solid Waste Management components. These included waste reduction strategies, volume reduction technologies, resource recovery technologies, direct material recovery technologies, indirect material recovery technologies, and land disposal technologies. A preliminary screening was completed and various components were evaluated in detail. The advantages and disadvantages of components were discussed. Both of these reports were forwarded to the Michigan Department of Environmental Quality and are available for viewing by the public at the offices of the Macomb County Department of Planning and Economic Development, 115 S. Groesbeck Highway, Mount Clemens, Michigan.

Since the information required in this section was previously described in the above referenced reports, no additional information will be repeated in this update.

RESOURCE CONSERVATION EFFORTS:

VOLUME REDUCTION TECHNIQUES:

RESOURCE RECOVERY PROGRAMS:

COLLECTION PROCESSES:
TRANSPORTATION:

DISPOSAL AREAS:

INSTITUTIONAL ARRANGEMENTS:

EDUCATIONAL AND INFORMATIONAL PROGRAMS:

CAPITAL, OPERATIONAL, AND MAINTENANCE COSTS:

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.

ADVANTAGES AND DISADVANTAGES OF THE NON-SELECTED SYSTEM:

Appendix B-3
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.
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**DISADVANTAGES:**

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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.
PLANNING COMMITTEE APPOINTMENT PROCEDURE:

On June 14, 1997 the Macomb County Board of Commission was notified of the State's intent to begin the Solid Waste Plan Update Process. On August 14, 1997, the Macomb County Board of Commissioners authorized:

1) The approval to submit a notice of intent to prepare the plan to the Michigan Department of Environmental Quality
2) The appointment of the Planning and Economic Development Department as the Designated Planning Agency
3) The consultant selection process
4) The creation of the 14 member Solid Waste Planning Committee

Based on the approval by the Board of Commissioners, the Chairman considered prospective candidates for the Solid Waste Planning Committee. The Chair recommended a fourteen person Solid Waste Planning Committee which was reviewed and approved at the December 18, 1997 full Macomb County Board of Commissioners meeting.
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. Mr. Douglas W. Bruce, Refuse Equipment Service
2. Mr. Edwin T. Hoover, Senior Vice President, City Management, Inc. and Members of the SWPC 1980-92
3. Mr. Sanford Rosen, Great Lakes International Recycling
4. Mr. Ted Wahby, Chairman, South Macomb Disposal Authority

One representative from an industrial waste generator:
1. Mr. John Gardner, General Motors Corporation

Two representatives from environmental interest groups from organizations that are active within the County:
1. Mr. Russ LaBarge, Chairman, Blue Ribbon Commission on Lake St. Clair
2. Mr. Ralph Liberato, Michigan United Conservation Clubs

One representative from County government. All government representatives shall be elected officials or a designee of an elected official.
1. Ms. Ann Klein, County Commissioner

One representative from township government:
1. Mr. James Sinnamon, Supervisor, Clinton Township

One representative from city government:
1. Mayor Richard Notte, Mayor, Sterling Heights

One representative from the regional solid waste planning agency:
1. Mr. Charles Hersey, Recommendation from SEMCOG

Three representatives from the general public who reside within the County:
1. Ms. Marietta Crabtree, Citizen
2. Mr. James Furstenau, Citizen
3. Mr. Jim McKiernan, Citizen
PUBLIC HEARING MATERIAL
STATE OF MICHIGAN, 

COUNTY OF MACOMB 

Robin Demuyck 

being first duly sworn, says that he/she is the principal clerk of 

Independent Newspapers, Inc. 

newspapers published in the English language for the dissemination of local or transmitted news and intelligence of a general character, which are duly qualified newspapers, and that annexed hereto is a copy of a certain order taken from these newspapers in which the order was published on the 

6/10/98 

Robin Demuyck 

Subscribed and sworn to before me on this 15th day of JUNE, A.D., 1998 

SUSAN G. CHARLTON 

Notary Public in and for said County 

Commission expires: May 20, 1999 

NOTARY PUBLIC IN AND FOR SAID COUNTY 

ACTING IN MACOMB COUNTY 

PRINTERS BILL 

Inches 7.00 

Times 1 

Amount 240.00 

Received Payment, Amt.: $
SOLID WASTE MANAGEMENT PLAN UPDATE
PUBLIC HEARING
SEPTEMBER 8, 1998
4:00 P.M.

Mr. McKiernan

Good afternoon and welcome to the Macomb County Solid Waste Management Plan Update Public Hearing. My name is James McKiernan and I am the Chair of the Macomb County Solid Waste Planning Committee.

Before we begin the public comment portion of our meeting, I would like to introduce Mr. Ben Giampetroni who is the Executive Director of our Planning and Economic Development Department for some comments.

Mr. Giampetroni,

Thank you Mr. Chairman. Under the directive of the Macomb County Board of Commissioners, the Solid Waste Planning Committee has worked throughout the last nine months to develop a Draft Plan Update. Prior to any meetings of the Solid Waste Planning Committee, the Macomb County Planning and Economic Development Department, working as the Designated Planning Agency, initiated a consultant selection process to retain a firm to assist in the preparation of the Plan Update. The selection process was completed in late December 1997, and resulted in the retaining of RMT, Inc. from Ann Arbor.

In January of 1998, RMT began researching and compiling data to be included in the Draft Plan Update. From January to May, RMT met with the Solid Waste Planning Committee
to discuss the Plan Update's format and submitted a Draft Plan Update to the Solid Waste Planning Committee in June. The Committee reviewed the draft and after careful consideration, recommended that the draft be released for the State of Michigan mandated ninety-day public comment period.

Today's meeting marks the end of that ninety-day public comment period. This hearing is held to provide the public an opportunity to voice any concerns that they may have on the proposed Draft Plan Update. Anyone from the public that is wishing to voice their concerns will have an opportunity to speak. Each speaker will be allocated seven minutes to speak.

Before we get into the hearing portion of this meeting, Bill Kotowski, from RMT, will provide us with a brief overview of the planning process and describe the results of their research that is the basis for the Draft Plan Update. I will now turn the floor over to Mr. Kotowski.

Mr. Kotowski, thank you Mr. Giampetroni. I am Bill Kotowski, the consultant from RMT who assisted Macomb County Department of Planning and Economic Development in the writing of the draft Macomb County Solid Waste Management Plan. The plan follows the format that was identified by the Michigan Department of Environmental Quality and has the necessary requirements of that planning process. In general, the solid waste system in Macomb County is functioning very well. Waste is collected properly and disposed of in licensed facilities, recycling and composting operations are on the increase and there is sufficient disposal capacity in Macomb County to meet the County's needs for the next 27 years.
Data was collected for the Solid Waste Plan from a number of sources. Solid waste questionnaires were sent to municipalities to find out about their collection processes. Waste disposal facilities were contacted to find out their existing capacity, their future capacity, how much waste they receive from Macomb County and how much waste they receive from out-of-county municipalities. Information was also received from contacting refuse haulers who operate in Macomb County. The Macomb County Department of Planning and Economic Development provided information on land use and population and other valuable information. SEMCOG, the Regional Planning Agency, was also contacted for demographic data to be used in the writing of the Plan.

The solid waste planning area of Macomb County includes all of Macomb County plus those communities in Wayne County that are member communities of the Grosse Pointe Clinton Refuse Disposal Authority. It is estimated that the current population in the plan study area is about 839,000 people of which 776,000 people reside in Macomb County. The plan study area generates approximately 778,000 tons of waste per year. Of this 698,000 tons needs to be landfilled while the remaining 80,000 tons are recycled or composted.

In the solid waste planning area there are six solid waste facilities that are recognized by the Michigan Department of Environmental Quality. Pine Tree Acres Landfill in Lenox Township and the Grosse Pointe Clinton Refuse Disposal Waste Reduction Facility are the only two disposal facilities in the County. There are additionally four transfer stations: Armada Township, Ray Township, South Macomb Disposal Authority and Warren transfer stations that operate in the County. Based on the survey results from the haulers, landfills and the MDEQ database, it is estimated that Macomb County exports about 820,000 cubic yards of refuse each year and they import about 468,000 cubic yards of refuse making Macomb County a net exporter of waste. The Grosse Pointe Clinton Refuse Disposal Authority who brings waste in from Wayne County is expected to close sometime prior to
April of 1999. It is anticipated that all those communities in Wayne County and the two Macomb County communities will be able to take their waste to the Pine Tree Acres Landfill who has sufficient capacity to meet their needs.

Recycling and composting in Macomb County is increasing significantly over the previous Solid Waste Plan. In 1994 there were only four communities that were planning on having recycling facilities. Now, there are seventeen communities through cooperation with private refuse haulers and disposal facilities that have a recycling program. In addition, several of the communities have indicated that they are participating in some type of a compost program. Household hazardous wastes are collected in Macomb County on a frequent basis. Macomb County Department of Public Health has a drop-off by appointment program. Batteries can be collected at U.S. post offices and some other communities, thirteen communities have recycling programs and several other communities like Eastpointe and Roseville for example have annual collection of household hazardous waste through their DPW office.

The Solid Waste Plan looked at a number of alternatives for solid waste disposal by reviewing the previous management plan and based on the information received, the selected system for the next five year period seems to be the current solid waste management system where refuse is collected by private haulers for residential refuse and taken to a landfill for waste disposal. Recycling and composting is completed through contractual arrangements with private haulers or through public education programs by municipalities and haulers. The County selected plan recommends that there be inter-county transfer of waste with adjoining counties. The plan permits the import of up to 1.9 million cubic yards of waste from other counties and also has the authority to export about 2.1 million cubic yards per year of waste to other counties. The specific import and export counties, and the quantities are listed in the Solid Waste Plan. The Macomb County plan shows that the Pine Tree Acres
Landfill has 27 years of capacity to meet the County’s disposal needs, therefore, there is no need for an annual certification program to assure that there is enough disposal capacity to meet the County’s needs. The Pine Tree Acres Landfill has 568 acres of land identified in this solid waste management plan and includes an additional 108 acres of land not previously identified in the 1994 Solid Waste Plan.

Since the Solid Waste Plan was issued for public review there has been four pieces of correspondence that has been received by the Designated Planning Agency which is the Department of Planning and Economic Development. And I would just like to briefly mention those right now if there is anyone else in the audience that might like to speak, that opportunity will be provided. One of the letters came from the Washtenaw County Public Works Division where they concur that Washtenaw County is willing to accept 1.5 million cubic yards of refuse from Macomb County. They would also like to have put in the Macomb County plan, that Macomb County would be willing to accept 1.5 million cubic yards of waste from Washtenaw County. To date and in past surveys, Macomb County has been an exporter of refuse to Washtenaw County to the Arbor Hills Landfill.

Another correspondence was received from BFI a waste hauling firm and disposal facility. They pointed out several minor inconsistencies in the Plan and requested that South Macomb Disposal Authority Transfer Station which they operate be sited. The plan says that they can accept waste from Oakland County, St. Clair County, and Wayne County. That waste would come into the South Macomb Disposal Authority Transfer Station and then be transferred out of the County to the Arbor Hills Landfill.

Another piece of correspondence was received from the City of Sterling Heights which recommended that the Solid Waste Planning Committee include a siting procedure in the Solid Waste Management Plan.
And the final correspondence that was received was from Standard Disposal Services which requested that their landfill in Monroe County, the Rockwood Landfill, be identified as a landfill that waste could be exported at an annual rate of 500,000 yards per year. Those correspondence are incorporated into the public record here and will be taken into consideration by the Solid Waste Planning Committee. That ends my presentation. If you have any questions, I'll be available.

Chairman McKiernan

Thank you, Bill. Now we will begin the public comment portion. Was there any questions of Bill? As stated before, each person will be allowed seven minutes to speak. The Chair will identify who will speak. Once you are identified, please step forward; state your name, state whether you are a citizen or the organization that you represent, and your address. Your seven minutes begins at the completion of stating this information. Is there anyone from the public that would like to speak at this time?

Good afternoon. My name is Terry Paul and I am the Administrative Supervisor from Sterling Heights Public Works Department and I was asked by the Public Works Director, Guy Kebbe, to come down and read a letter that into the minutes. This letter was approved by the Sterling Heights City Council at their September 1, 1998 meeting. I have additional copies if anyone wants.
September 2, 1998

Macomb County Solid Waste
Planning Committee Members
115 S. Groesbeck
P.O. Box 806
Mt. Clemens, MI 48046-0806


Dear Solid Waste Planning Committee Members:

The City of Sterling Heights reviewed the first draft of the Macomb County Solid Waste Management Plan Update, as prepared by RMT, Inc., Michigan that was released by the Macomb County Solid Waste Planning Committee at your meeting of June 9, 1998, and offer the following comments.

The City of Sterling Heights agrees with many of the goals and objectives identified in the Solid Waste Management Plan. While the City agrees with the general concepts of the Plan Update draft, we do not agree with the plan not including an approvable siting process and criteria for additional solid waste disposal facilities. This is unacceptable to the City of Sterling Heights in that it would maintain the monopoly situation currently enjoyed by the Pine Tree Acres Landfill as the only operating landfill in the county.

The consolidation, which is currently occurring in the solid waste industry with the purchase of City Management Corporation by USA Waste Services and USA Waste Services merger with Waste Management, has significantly reduced competition in the marketplace both in the number of companies now providing solid waste collection services as well as disposal facilities. The lack of siting provisions in the Plan Update will guarantee that no new disposal facilities could be sited in Macomb County. This could lead to escalating solid waste disposal costs not only in Macomb County, but also throughout southeast Michigan.

It is the City of Sterling Heights contention that writing a plan which does not include an approvable siting process is inappropriate and lends itself to the perception that Macomb County is supporting or enabling a monopoly
situation to continue to exist in the solid waste disposal industry in Macomb County. The City of Sterling Heights supports including language similar to the landfill siting criteria and site review process as contained in the 1982 Macomb County Solid Waste Management Plan. The City of Sterling Heights believes that a competitive solid waste disposal industry is in the best interest of its citizens, as well as the vast majority of Macomb County residents.

Accordingly, a Plan Update which would be acceptable to the City of Sterling Heights must include an approvable siting process. Your consideration of our comments and concerns for inclusion in the final draft of the Macomb County Solid Waste Management Plan Update is appreciated.

The City of Sterling Heights is hopeful amendments can be made to the draft Plan Update, which would allow the City of Sterling Heights to be able to vote in favor of the final draft of the Plan.

Sincerely,

Steve M. Duchane
City Manager

Mr. McKieman

Thank you sir. Are there anymore comments or anyone wish to speak? Anyone desire to speak at this time? Alright, this concludes the public comment portion of the meeting. I would like to thank all of you for coming today and participating in this process. The public comment that was provided today will be brought back to the Solid Waste Planning Committee for consideration. Thank you again for your participation.

Hearing no more public in-put, this public hearing for the Draft of the 1998 Solid Waste Management Plan Update is now closed. We stand adjourned at 4:30 p.m.
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<thead>
<tr>
<th>Name</th>
<th>Agency</th>
<th>Address</th>
</tr>
</thead>
<tbody>
<tr>
<td>Jerry Paul</td>
<td>City of</td>
<td>7800 18 Mile</td>
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<td>Sterling Hts</td>
<td>Sterling Hts, MI 48311</td>
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<td>Juv Cattelion</td>
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<td>22001 Hoover, MI 48025</td>
</tr>
<tr>
<td>Griz Caratsen</td>
<td>City Manager</td>
<td>360025 Mike Rd</td>
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September 3, 1998

Mr. Bernard E. Giampetroni, Executive Director
Macomb County Dept. of Planning & Economic Dev.
115 S. Groesbeck Highway
Mount Clemens, MI 48043

RE: DRAFT Macomb County Solid Waste Management Plan dated June 1998

Dear Mr. Giampetroni:

BFI is a privately owned waste disposal firm providing significant collection, transportation, recycling, composting and disposal related services to Macomb County. As such, and as a Market Development Representative for my company, I have been assigned the task of reporting on Macomb County through this solid waste planning process. I have obtained a copy of the draft and submit these comments on behalf of BFI for the Solid Waste Planning Committee's and your review.

On page II-31, Solid Waste Collection Services and Transportation Infrastructure, the table listing the communities and their respective haulers, BFI has been incorrectly listed as providing collection services to Grosse Pointe Park. It is, in fact, WMX/USA Waste.

On page III-2, Current Import Volume Authorization of Solid Waste, the plan does not authorize any importation of out of county waste to the SMDA transfer station facility. BFI would request the following import authorizations be added to this section of Macomb's plan:

<table>
<thead>
<tr>
<th>County</th>
<th>Cubic Yards</th>
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<tbody>
<tr>
<td>Oakland</td>
<td>150,000</td>
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<tr>
<td>St. Clair</td>
<td>50,000</td>
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<tr>
<td>Wayne</td>
<td>150,000</td>
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</table>

On page III-9, Solid Waste Disposal Areas, there is an error on the Facility Description for the BFI Arbor Hills Landfill under estimated yearly disposal volume. The information submitted to RMT listed the estimated yearly disposal volume to be 3,500,000 cubic yards. Your plan shows that disposal volume to be 8,500,000 cubic yards.
On page III-30, Recycling and Composting, BFI provides collection and transportation services to the following communities under a municipal solid waste contract. As such, BFI can report that the recycling materials collected in these municipalities are as follows:

Eastpointe   items a,b,c,d,e,f
Centerline   items a,b,c,e,

Plastics are #1 & #2 HDPE
Metals are predominantly household food containment cans

On page III-34, Source Separation of Potentially Hazardous Materials, BFI again, assists in the administration of Household Hazardous Waste programs in the communities of St. Clair Shores and Eastpointe with whom we have municipal solid waste contracts. Their programs for household hazardous waste collection are as follows:

St. Clair Shores   An annual collection day event is staged at the DPW. In June of 1998 the 2nd annual event was held. St. Clair Shores publishes the event in the community newsletter and local newspaper, as well as on cable T.V.

Eastpointe   An annual collection day event is staged at the DPW. August 1, 1998 was the fourth or fifth time the event has been staged. It typically takes place in August and again, is advertised in the community newsletter and local newspaper. (I am uncertain as to whether or not it is announced on local cable T.V.)

Also under this section and on this same page, the notated items 1 through 5 below the line are incorrect and reflect recycling items collected versus household, hazardous waste items collected.

On page III-35, Additional Information Source Separation of Potentially Hazardous Materials, you may, again, want to include information about Eastpointe’s and St. Clair Shores’ household hazardous waste programs.

On page D-3, Listed Capacity, Macomb County should have received a letter providing this capacity guarantee from Washtenaw County. If you have not received this letter, you may contact Susan Todd, the Washtenaw County Solid Waste Coordinator at (734)994-2398.
On page D-6, Special Conditions, BFI would request that this section be modified to include special conditions that should be clarified relative to BFI's request to include importation authorization to the SMDA transfer station on Page III-2 of the plan as outlined above. Suggested language for the special condition is as follows:

Authorized importation into the SMDA transfer station will not impact the County's disposal capacity and therefore should be excluded from the requirement that the County have minimum disposal capacity as a condition to importation.

BFI appreciates your time and attention to these comments. We hope that this information proves instrumental in assisting Macomb's Solid Waste Planning Committee in preparing a thorough and complete plan. Should you have any questions with regard to this information, please feel free to contact me at (248) 349-7230, ext. 3233.

Sincerely,

[Signature]

Kathleen A. Klein
Market Development Manager
BFI Arbor Hills Center for Resource Management
August 25, 1998

Mr. James McKiernan, Chairman
Solid Waste Planning Committee
c/o Mr. Bernard E. Giampertoni, Executive Director
Macomb County Department of Planning and Economic Development
115 South Groesbeck Highway
Mount Clemens, Michigan 48043

Dear Mr. McKiernan:

We are advised that the Public Hearing process to convey opinions about the 1998 Draft Macomb County Solid Waste Management Plan is underway. Accordingly, I would like to provide the following input.

Standard Disposal has recently acquired Standard Environmental Services, Inc. - Rockwood Landfill in Monroe County. In 1997, in an effort to service businesses and residents of Macomb County, the Rockwood Landfill received approximately 58,000 cubic yards of type III waste from Macomb County. In July 1998, the Michigan Department of Environmental Quality (M-DEQ) forwarded a notice of potential violation to Standard Disposal. The M-DEQ letter outlined a potential violation to the existing 1994 Plan because Monroe County and the Rockwood Landfill are not specifically listed as authorized locations for the disposal of Macomb County waste. The letter concluded that under the existing conditions of the 1994 Plan, that Standard Disposal could be in violation and subject to M-DEQ enforcement if Macomb County waste was to continue to be hauled to Monroe and the Rockwood Landfill.

Standard Disposal is writing today to request that the Rockwood Landfill in Monroe be included in the 1998 Plan and to authorize 500,000 cubic yards be exported to Monroe County. By including Monroe County and site, Standard Disposal has the opportunity to continue to service the businesses and residents of Macomb County. Thank you for your assistance in this matter.

Sincerely,

Dominic Campo
Executive Vice President
Macomb County Solid Waste Planning Committee
115 S. Groesbeck
P.O. Box 806
Mount Clemens, MI 48046-0806
Attn: Mr. Ben Giampetroni

October 16, 1998


Dear Committee Members:

Having reviewed the June 1998 Draft with members of the Richmond Township Board of Trustees, as well as reviewing comments from the City of Sterling Heights in a letter dated September 2, 1998, we felt obligated to express our support of your draft plan in its current form. We agree with the Committee's exclusion of the siting process and criteria for additional solid waste disposal facilities in Macomb County.

Sterling Heights upholds the need for the landfill siting process and criteria to increase competition and reduce dumping cost. Unfortunately, this makes for an unfair apples-to-oranges comparison and is inaccurate.

More is not better nor cheaper when it comes to landfill siting. To open Macomb County to unneeded landfill space would encourage an influx of out of county garbage as well as Canadian and out of state dumping. More landfill sites would provide county residents with more problems such as lake pollution, crumbling roads, drinking water contamination, lower property values, etc. Thus, the comparison of reduced dumping cost through competition badly skews any direct benefit (savings) comparison for county residents.

We would like to commend the Macomb County Solid Waste Management Planning Committee Members on your 1998 Draft Plan and encourage you to maintain the current language that excludes the siting process and criteria. Inclusion of such language would only encourage additional solid waste disposal facilities in our county at the expense of the environment and citizens of Macomb County.

Sincerely,

Keith L. Rengert,
Richmond Township Supervisor

cc: Macomb County Board of Commissioners
    Macomb County Planning Commission
September 2, 1998

Macomb County Solid Waste
Planning Committee Members
115 S. Groesbeck
P. O. Box 806
Mt. Clemens, MI 48046-0806


Dear Solid Waste Planning Committee Members:

The City of Sterling Heights reviewed the first draft of the Macomb County Solid Waste Management Plan Update, as prepared by RMT, Inc., Michigan that was released by the Macomb County Solid Waste Planning Committee at your meeting of June 9, 1998, and offer the following comments.

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The consolidation, which is currently occurring in the solid waste industry with the purchase of City Management Corporation by USA Waste Services and USA Waste Services merger with Waste Management, has significantly reduced competition in the marketplace both in the number of companies now providing solid waste collection services as well as disposal facilities. The lack of siting provisions in the Plan Update will guarantee that no new disposal facilities could be sited in Macomb County. This could lead to escalating solid waste disposal costs not only in Macomb County, but also throughout southeast Michigan.

It is the City of Sterling Heights' contention that writing a plan which does not include an approvable siting process is inappropriate and lends itself to the perception that Macomb County is supporting or enabling a monopoly situation to continue to exist in the solid waste disposal industry in Macomb County. The City of Sterling Heights supports including language similar...
to the landfill siting criteria and site review process as contained in the 1982 Macomb County Solid Waste Management Plan. The City of Sterling Heights believes that a competitive solid waste disposal industry is in the best interest of its citizens, as well as the vast majority of Macomb County residents.

Accordingly, a Plan Update which would be acceptable to the City of Sterling Heights must include an approvable siting process. Your consideration of our comments and concerns for inclusion in the final draft of the Macomb County Solid Waste Management Plan Update is appreciated.

The City of Sterling Heights is hopeful amendments can be made to the draft Plan Update, which would allow the City of Sterling Heights to be able to vote in favor of the final draft of the Plan.

Sincerely,

[Signature]
Steve M. Duchane
City Manager

SMD/GK/jlh

cc: Macomb County Board of Commissioners
    Chief elected officials of all Macomb County cities, townships, and villages
    Macomb County Planning and Economic Development Department
November 9, 1998

Mr. Bernard E. Giampetroni, Executive Director
Macomb County Dept. of Planning & Economic Development
115 S. Groesbeck Highway
Mount Clemens, MI 48046

RE: Review and Comment of the State mandated 1998 Macomb Solid Waste Management Plan Update

Dear Mr. Giampetroni:

Thank you for giving the City of St. Clair Shores the opportunity to comment on your proposed 1998 Solid Waste Plan. My overall opinion is that RMT, Inc. of Michigan lacks a certain degree of accuracy and insight in order to prepare a document of this magnitude. It appears to me that the burden of planning and execution has been subordinated to Cities, Villages, Townships, privately owned landfills and a soon to be deactivated incinerator. I see no overall plan for implementation of PA 451 of 1994 as amended, source reduction, siting of new landfills for emergencies, education of homeowners, encouragement of local ordinances to enforce state law and having an emergency contingency plan just in case the disposal of waste has to be contained within the county boundary.

My specific comments are as follows:

1. Under the Executive Summary for St. Clair Shores, the consecutive figures are 68107, 5%, 95%, 0, NA, 1%, 10%, 89%.

2. St. Clair Shores' residential waste is 3.37 pounds per person per day. Reducing it to 3.08 is a fine goal.

3. On page I-4, there is a statement that there are no ordinances or regulations affecting the operations of any recycle programs. I am enclosing a copy of our ordinance for your use and inclusion into your Plan as noted on page III-49.

MUNICIPAL OFFICES
27600 JEFFERSON CIRCLE DRIVE, ST. CLAIR SHORES, MI 48081-2093
Phone: (810) 445-5200 FAX: (810) 445-0469
www.ci.saint-clair-shores.mi.us
4. On page I-5 please add St. Clair Shores as having a hazardous waste program.

5. I question the validity of the statement that Macomb County has sufficient landfill space to meet its needs for the five-year and ten-year planning periods.

6. On page II-1, I am not certain how you obtained the figures, but I note that on page II-3, you list St. Clair Shores at an excess of 36,000 tons of residential waste per year. Our figures from SMDA track our residential waste at approximately 29,900 tons per year.

7. In St. Clair Shores, approximately 29% of a homeowners solid waste was recycled. This equates to approximately 10% recyclables and 19% yard waste (compost). Your rates of 5.6% and 4.6% appear to be low.

8. Looking at your Overview of Resource Recovery Programs, I am not certain how you compute your percentages. It appears that other parts of the waste stream such as by-products of commercial establishments and industrial sites are somehow factored into the equation of percent. In St. Clair Shores there are a substantial amount of dumpsters being utilized and in most cases are privately administered. The City does not track those tonnages or whether it is recycled or landfilled. The figures that I have furnished are those that are picked up and disposed of in accordance with State law.

9. On page III-34, please add St. Clair Shores to your Table III-3 as a private operation at a single collection point.

10. On page III-35, I am enclosing some of the literature that we use in our City. We have had an aggressive recycling program and have kept our citizens informed through newsletters. A new resident is furnished with a packet regarding our solid waste procedures.

11. I am concerned that your plan infers that our City ordinance, which has been in effect since 1987 with the last amendments in
1996 cannot be enforced. I also cannot understand how your survey of municipalities would conclude that there are not any regulations in place.

Sincerely,

ST. CLAIR SHORES CITY OFFICES

[Signature]

Mark Wollenweber
City Manager

Encs

cc: Mayor and Council
    L. M. Lozon, D.P.W. Superintendent
    M. J. Brunell, Communications Director
    R. Marlin Sumner, P.E.
THE CITY OF ST. CLAIR SHORES ORDAINS THAT SECTION 35.250, REFUSE:
STORAGE AND COLLECTION REGULATIONS SHALL BE REPEALED AND THE
FOLLOWING ORDINANCE IS ADOPTED IN ITS PLACE:

35.251 Definitions.

Sec. 1.

a. Municipal solid waste: All waste generated by residential and commercial
   occupants of land within the City including mixed waste, recyclables and
   yard waste.

b. Mixed waste: A mixture of garbage, rubbish and bulk items.

c. Bulk items: Large pieces of furniture, bed springs, mattresses, appliances
   (including stoves), refrigerators, washing machines, dryers, etc. and
   sometimes referred to as "white goods" and other discarded materials
   incidental to the usual major routine of housekeeping.

d. Garbage: All rejected food wastes including waste accumulation of
   animal, fruit or vegetable matter used or intended for food or those items
   for the preparation, use, cooking, dealing in or storing of meat, fish, fowl,
   fruit or vegetable.

e. Rubbish: Solid waste materials resulting from house maintenance and
   cleaning means, nonputrescible solid waste, including cold ashes
   consisting of both combustible and noncombustible waste, (including
   paper, cardboard, non-recyclable metal containers, bedding, crockery,
   floor sweepings, empty paint cans with lids removed), rags and other
   items, all of which are included in the term "mixed waste".

f. Recyclable materials: Materials such as newspapers, junk mail, paper,
   glass, metal cans, plastics, aluminum, household batteries, grayboard and
   other materials designated by the City.

g. Yard waste: Miscellaneous waste material resulting from maintaining the
   landscaping of a home which includes (but not limited to) grass, weeds,
   shrub clippings, leaves and tree trimmings.

h. Compost: A dark, crumbly and earthy-swelling form of decomposing
   organic matter, also called humus. Compost, a useful soil amendment
   is the result of the composting process.

i. Compost bin: A receptacle for a compost pile designed and constructed to
   facilitate composting.

j. Compost pile: An accumulation of yard waste and other compostable
   materials.

k. Recycling container: Other than yard waste, the curbside recycling bin
   and lid provided by the City and assigned to that address. Should a
   resident vacate the premises, the bin and lid shall remain with the
   property.
1. **Grayboard**: Cardboard that is not corrugated.

m. **Household hazardous waste**: An accumulation of liquid automobile products, gardening pesticides, weed killers and poisons, personal and health care products especially aerosol containers, paint cans with paint, household products including oven cleaners, acid, chemicals, poisons and aerosol cans.

(Ord. eff. June 18, 1996)

**35.252 Containers, single-family and two-family dwellings.**

Sec. 2. A proper and sufficient number of portable containers for the storage of mixed waste between collections shall be provided by each resident occupying a single-family or two-family dwelling. It shall be the duty of the occupants to maintain such container in good repair and in a clean and satisfactory condition to store mixed waste properly therein. The City is not responsible for lost or damaged containers.

(Ord. eff. June 18, 1996)

**35.253 Containers, multiple dwellings.**

Sec. 3. In the case of a building housing more than two families, the owner, lessee or agent, of the premises shall provide for each family a proper and sufficient number of containers as herein defined for the storage of mixed waste between collections. All containers shall be of a type approved by the City. The owner, lessee, agent or caretaker of such receptacles shall maintain them in good repair and in a clean and satisfactory condition. Each unit is entitled to have the number of containers equivalent of the service level of a single-family residence.

(Ord. eff. June 18, 1996)

**35.254 Containers, commercial establishments, etc.**

Sec. 4. The proprietor, manager, agent or person in charge of a commercial establishment, professional office, church, school or other non-residential occupancy where solid waste materials accumulate, shall provide proper and sufficient containers as herein defined for the storage of mixed waste between collections. All containers shall be of a type approved by the City and kept clean and in good repair. Each commercial establishment is entitled to have the number of containers equivalent to the service level of a single-family residence, but in no case shall more than 10 containers be placed at curbside at any one time.

(Ord. eff. June 18, 1996)

**35.255 Containers used for mixed waste.**

Sec. 5.

a. Mixed waste shall be placed in water tight containers or other portable receptacles, either galvanized metal or heavy duty plastic with handles and shall have a capacity of not less than 10 gallons nor more than 32 gallons, nor shall each container weigh more than 60 pounds. Cardboard boxes are not acceptable.
b. Plastic bags for mixed waste shall be of good quality, tied shut and be able to withstand lifting by the top without breaking. In no case shall a bag exceed 40 pounds.

c. Containers with ragged or sharp edges or other defects shall be left, tagged indicating a defect for the resident to correct. If not corrected, the container including contents will be collected on next pickup.

(Ord. eff. June 18, 1996)

35.256 Containers used for yard waste.

Sec. 6. Yard waste shall be placed in water tight containers or kraft paper bags. The containers may be galvanized metal or heavy duty plastic with handles and shall have a capacity of not less than 10 gallons nor more than 32 gallons, nor shall each container weigh more than 60 pounds. Containers shall be appropriately marked "yard waste". Cardboard boxes are not acceptable.

(Ord. eff. June 18, 1996)

35.257 Collection of certain items.

Sec. 7.

a. Mandatory separation of recyclable materials and yard waste. It shall be mandatory for residents living in one-family or two-family residential dwellings in the City to separate all recyclables and yard wastes from other solid waste.

b. Materials to be recycled. Recyclables shall be separated from other solid waste, prepared and set out for collection in accordance with the City's published instructions.

c. Collection of recyclable materials. Materials for recycling shall be placed in recycling containers provided or specified by the city.

d. Yard waste. Yard waste including tree trimmings 2" or less in diameter shall be separated from other solid waste and placed in containers as specified by the City.

e. Yard waste brush. Branches, vines, tree limbs, tree trunks, stumps and other tree and brush trimmings are not put into a container shall be separated from other solid waste and prepared for brush collection as follows:

1. Materials for brush collection shall be cut in lengths of four feet or less.
2. The individual weight of materials shall not exceed 60 pounds.
3. If woody branches are smaller than 4 inches in diameter, they shall be tied in a bundle and shall not exceed 60 pounds.

f. Bulk items. Large household furnishings or bulk items will be collected on the regular collection day if they are put at curbside. Refrigerators must have doors removed. Appliances containing coolants or refrigerants must have coolant removed by a certified technician and properly tagged.
Residents shall have contractor's disposal form attached.

**g. Items not collected.** Waste oil, contractor's debris, household hazardous waste, pesticides and other chemicals, concrete bricks. Dirt and hot ashes will not be collected.

(Ord. eff. June 18, 1996)

35.258 Collection time: Placing at curbside.

Sec. 8.

a. *Placement of receptacles for mixed waste, recyclable materials and yard waste.* Containers for all solid wastes shall be placed at the curbside or other designated spot on the resident's premises by 7:00 a.m. on the day of collection. Containers shall be separated. However, no such solid waste shall be placed at curbside before 6:00 p.m. on the evening before the collection day. Any number of proper containers or items may be so placed for collection except that in the case of commercial waste, a maximum of 10 containers per week shall be removed. In such case, any commercial waste in excess of 10 containers shall be removed by the owner or occupant. The City reserves the right to establish service to a business or commercial establishment if the number of containers exceeds this limit on a regular basis.

b. *Removal of containers for recyclables and yard waste.* After collection, empty containers shall be removed promptly by the owner, lessee or occupant of the premises.

(Ord. eff. June 18, 1996)

35.259 Accessibility required.

Sec. 9. Proper ingress and egress must be provided for the passage of the collection vehicles. If such ingress and egress is not provided, the solid waste must be brought to a location where it will be accessible.

(Ord. eff. June 18, 1996)

35.260 Permitted composting on residential property.

Sec. 10. Compost piles shall be permitted on residential property only in accordance with the following:

a. Compost piles shall be located a minimum of two feet from any lot line and thirty feet from any dwelling located on adjacent property.

b. Compost piles or compost bins shall not exceed four feet by eight feet or eight feet in diameter and shall not exceed four feet in height. A maximum of three compost piles or compost bins shall be allowed on any single property.

c. Compost piles and compost bins may include a combination of yard waste, garden and lawn trimmings and debris including (but not limited to) grass clippings, leaves, weeds, twigs, wood chips, small branches, bark peelings, spent flowers, coffee grounds, tea leaves, vegetable and fruit peelings, cabbage and lettuce leaves.
d. Compost piles and compost bins shall not include garbage, pet manures, plastics, synthetics or other biodegradable materials or other materials which create offensive odors.

e. Compost piles and compost bins shall be maintained to prevent the attraction and harborage of rodents and pets and to prevent the escape of offensive odors to adjacent property.

f. Compost piles and compost bins which do not conform to this section shall constitute a nuisance per se and shall be abated in addition to any other applicable penalties.

(Ord. eff. June 18, 1996)

35.261 Yard waste reduction.

Sec. 11. To the maximum extent possible, yard waste shall be reduced through mulching or composting on the premises when generated.

(Ord. eff. June 18, 1996)

35.262 Yard waste—Removal by a landscaping company.

Sec. 12. Section 20.297, Article D of the Public Parks and Forestry Ordinance shall apply with regard to all yard waste generated by a landscaping business. The person, entity or business removing the yard waste shall be obligated to dispose of it by composting or delivery to an approved site.

(Ord. eff. June 18, 1996)

35.263 Scavenging or unauthorized collections.

Sec. 13. Recyclable materials placed at the curbside for collection or in any recycling containers are the property of the City. It is a violation of this ordinance for any person not authorized by the City to collect, pick up or cause to have collected or picked up any recyclable materials placed in a container.

(Ord. eff. June 18, 1996)

35.264 Improper use of a container.

Sec. 14. It shall be unlawful for any person, firm, corporation, organization or business entity to use or place waste materials into a container not designated for their use or owned by them.

(Amend. eff. September 22, 1987; Ord. eff. June 18, 1996)

35.265 Penalty for violation.

Sec. 15. Whenever in this ordinance any act is prohibited or is made or declared to be unlawful or an offense or whenever in this ordinance the doing of any act is required or the failure to do any act is declared to be unlawful, the violation of any such provision shall be punished as specified in the Municipal Civil Infraction Ordinance, Section 11.150 et seq.

(Amend. eff. September 22, 1987; Amend. eff. August 11, 1992; Ord. eff. June 18, 1996)
35.266 Severability.

Sec. 16. If any section, subsection, clause, phrase or portion of this ordinance is for any reason, held invalid or unconstitutional by any court of competent jurisdiction, such portion shall be deemed a separate, distinct and independent portion of this ordinance and such holding shall not affect the validity of the remaining portions of this ordinance.

(amend. eff. September 22, 1987; ord. eff. June 18, 1996)
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)

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Chris: O-t-4 Agree: I-1
August 7, 1998

Mr. Bernard E. Giampetroni
Macomb County Planning & Economic Development Department
115 South Groesbeck
Mount Clemens, MI 48043

Dear Mr. Giampetroni,

In preparing its 1998 Part 115 Solid Waste Management Plan Update, Washtenaw County is considering recognizing all 83 counties in Michigan for import/export authorization. Exhibit A (attached) describes Washtenaw County's intended import/export authorizations, including quantities, for each county in the State.

Washtenaw County currently has one licensed and operational Type II landfill located within its borders, the Arbor Hills Landfill operated by Browning Ferris Industries. Per statutory requirements, it is necessary for both the generating and receiving county plans to explicitly authorize waste transfers and amounts. Washtenaw County is hereby requesting Macomb County to authorize the receipt of 1,500,000 gate cubic yards of Washtenaw County solid waste per year into Macomb County through explicit authorization in your solid waste plan. We propose to authorize the importation of 1,500,000 gate cubic yards per year of Macomb County solid waste into Washtenaw County.

Washtenaw County intends to release the draft of its Plan Update in October of this year. In order to ensure that your County's disposal needs are included in our Plan, and that our needs are likewise included in your Plan, we would appreciate receiving written notice of your import/export intentions by September 1, 1998.

Thank you for your attention to this matter. If you have any questions or concerns, please contact me at (734) 994-2398 or via e-mail at todds@co.washtenaw.mi.us.

Sincerely,

Susan Todd
Solid Waste Coordinator
Enc.
Authorized Importation of Solid Waste

From all sources, the Arbor Hills Landfill shall not receive more than 4.5 million gate cubic yards in any one year and no more than 17,500,000 gate cubic yards in the most recent consecutive five year period that concludes at the end of the current year of activity.

Subject to this overall limit, import of solid waste to the Arbor Hills Landfill from the following counties in the quantities specified is explicitly recognized in this Plan Update:

**Jackson County** – No more than 250,000 gate cubic yards of solid waste per year may be imported from Jackson County to the Arbor Hills Landfill.

**Kalamazoo County** - No more than 200,000 gate cubic yards of solid waste per year may be imported from Kalamazoo County to the Arbor Hills Landfill.

**Lenawee County** – No more than 750,000 gate cubic yards of solid waste per year may be imported from Lenawee County to the Arbor Hills Landfill.

**Livingston County** – No more than 750,000 gate cubic yards of solid waste per year may be imported from Livingston County to the Arbor Hills Landfill.

**Macomb County** – No more than 1,500,000 gate cubic yards of solid waste per year may be imported from Macomb County to the Arbor Hills Landfill.

**Monroe County** - No more than 1,500,000 gate cubic yards of solid waste per year may be imported from Monroe County to the Arbor Hills Landfill.

**Oakland County** – No more than 1,500,000 gate cubic yards of solid waste per year may be imported from Oakland County to the Arbor Hills Landfill.

**Wayne County** – No more than 2,000,000 gate cubic yards of solid waste per year may be imported from Wayne County to the Arbor Hills Landfill.

In addition, a total of no more than 500,000 gate cubic yards of solid waste may be imported from one or any combination of the counties listed below, subject to the overall limit identified above:

- Alcona
- Alger
- Allegan
- Alpena
- Antrim
- Arenac
- Baraga
- Barry
- Bay
- Benzie
- Berrien
- Dickinson
- Eaton
- Emmet
- Genesee
- Gladwin
- Gogebic
- Grand Traverse
- Gratiot
- Hillsdale
- Houghton
- Huron
- Lake
- Lapeer
- Leelanau
- Lenawee
- Livingston
- Luce
- Macinac
- Macomb
- Manistee
- Marquette
- Mason
- Oceana
- Ogemaw
- Ontonagon
- Oscoda
- Osceola
- Otsego
- Ottawa
- Presque Isle
- Roscommon
- Saginaw
- Saint Clair
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This authorization is contingent upon the receiving County explicitly authorizing the receipt of Washtenaw County waste in their approved Part 115 Solid Waste Plan.
Date: September 23, 1998
To: Bernard E. Giampetroni, Executive Director
     Macomb County Department of Economic Development
From: Christina Pecoraro, Associate Planner
Re: Import Authorizations

This memo is in response to the draft plan that our office received from you dated August 10, 1998. In it, you had listed Saginaw County as a county that would export waste to Macomb. I am writing to inform you that Saginaw County does not plan on including Macomb County in our Plan. Saginaw County has recently reached a decision on import/exports of waste. Waste will only be allowed to flow between the borders of the seven contiguous counties. Macomb County is not included in these seven contiguous. However, there is a process that non-contiguous counties can go through to be included in our Plan. I am enclosing a copy of our approved flow control proposal. If you are interested in being included in our Plan, you must follow the steps listed in the following document.

If you have any questions, please give me a call at (517) 797-6800.
Saginaw County Solid Waste Management Plan - 1998 Update
Flow Control Proposal - Revisions Adopted 9-22-98

Upon the approval of the 1993 Saginaw County Solid Waste Management Plan by the Michigan Department of Environmental Quality, all wastes being brought to Saginaw County from another Michigan county for disposal, were subject to the signing of a reciprocal agreement for solid waste disposal. The Chairman of the Saginaw County Board of Commissioners was authorized to sign agreements with the seven contiguous counties in the amounts specified without further approval from the Board of Commissioners.

1. Bay County 343 TPD
2. Clinton County 84 TPD
3. Genesee County 1000 TPD
4. Gratiot County 50 TPD
5. Midland County 622 TPD
6. Shiawassee County 130 TPD
7. Tuscola County 160 TPD

These contracts were only valid through the adoption of a new Saginaw County Solid Waste Management Plan.

This plan continues to authorize the seven contiguous counties for import and export of wastes across county borders. Reciprocal agreements are not required for the seven contiguous counties, but are preferred. If the authorized contiguous county meets all authorized conditions (see below and refer to pages III-2 - III-5) waste may be transferred between counties without a reciprocal agreement. The three conditions are 1) the waste volumes flowing between borders must not be higher than the identified maximum daily volumes (listed above), 2) the contiguous counties must provide the Supporting Information for Import/Export Authorizations (found on following page) to the DPA, and 3) both Counties (the sending and the receiving) must explicitly authorize the import/export of waste in each other’s plan. If one or more of these authorized conditions in the Plan are not met, a contiguous county is not authorized to import/export waste to and from Saginaw County until such time that all of the authorized conditions are met.

Upon receipt of the Supporting Information for Import/Export Authorizations by the Designated Planning Agency (Saginaw County Metropolitan Planning Commission), waste may begin flowing between the borders of the seven contiguous counties as long as all of the authorized conditions are met (pages III-2 - III-5 of the Plan). A reciprocal agreement, for any amount up to the identified volume, as listed above, may be signed by the Chairman of the Saginaw County Board of Commissioners without further approval from the Board of Commissioners. These agreements would expire no later than December 31, 2004.
composting, and resource recovery occurring in the proposed county to their maximum ability?

2. Are local companies in poor financial health? Would including additional counties help them become financially stable again?

3. Are there multiple options for disposal of the materials that would be brought into Saginaw or is the other county relying exclusively on Saginaw County for disposal of its waste?

4. How does the proposal impact projections of available landfill capacity for Saginaw County waste?

5. Are all weather roads available for transport of waste between Saginaw County and the subject county?

Once the Solid Waste Committee has met to discuss the proposal initially, a public hearing will be held. The Solid Waste Committee, after the hearing and their own discussion, will make a recommendation to the Saginaw County Board of Commissioners on whether this Solid Waste Management Plan should be amended to include the subject county as an authorized importer/exporter. If the County Board approves the amendment, the local municipalities must then vote on it and have at least 67% approval of the amendment. If there is enough local support, the DEQ must then approve it to officially become a part of the plan. Upon adoption of such a plan amendment, waste may be transferred between borders under the authorized conditions of the plan amendment: (in the import/export section) or the Chairman of the Saginaw County Board of Commissioners would be authorized to sign a reciprocal agreement for up to the specified amount.

If the Solid Waste Planning Committee or the Board of Commissioners wants additional information before making their decision, they may assign the acting Designated Planning Agency to compile it.

Upon approval of this Saginaw County Management Plan Update by the MDEQ, all wastes being brought into Saginaw County for disposal from counties other than the above explicitly authorized sources, or those that the Board approves through a special request, will be considered in direct violation of the Plan and P.A. 451.

Part 115 of P.A. 451 requires the explicit authorization in both County plans of the sending and receiving county for solid waste disposal. Thus, for Saginaw County to import and/or export waste to and from any county, both counties must explicitly authorize the transfer in their approved county solid waste management plans.

Revisions Adopted 9-22-98
November 9, 1998

Benard E. Giampetroni, Executive Director
Macomb County Planning and Economic Development Department
115 South Groesbeck Highway
Mount Clemens, Michigan 48043

Dear Mr. Giampetroni:

Thank you for sending a copy of the 1998 Macomb County Draft Solid Waste Management Plan Update for Oakland County's review and comments. Oakland County supports the basic management strategies contained in the documents. Following are comments as they relate to inter-county flow authorization levels.

The Oakland County Designated Planning Agency is recommending the establishment of a basic free market approach to the inter-county flows of Act 451 solid wastes as part of the new Oakland County Solid Waste Management Plan Update. Flows of Act 451 wastes to and from Oakland County will essentially not be restricted by provisions within the planning document. We request that your County's Plan Update contain similar inter-county flow authorizations involving flows to and from Oakland County.

We understand that the Macomb County Plan Update is currently drafted to allow for the inter-county flows of wastes between Macomb County and Oakland County. Specifically, the Macomb County documents propose that the Pine Tree Acres landfill would be authorized to receive up to 500,000 gateyards of wastes annually that were generated within Oakland County. Additionally, it is proposed that Macomb County waste generators could export up to 430,000 gateyards annually to disposal facilities in Oakland County.

Oakland suggests that these authorized annual flow levels be increased in size and scope and be made identical in value. Specifically, we recommend that up to 750,000 gateyards per year be established as the authorized levels and that the facilities be identified as existing and future facilities. These levels are well beyond that currently produced by the free market but would establish high peak export rates for use should some unforeseen circumstances occur.

Specifically, it is being proposed that the Oakland County document will be drawn as follows. Wastes generated within Oakland County will be authorized for export to existing and future disposal facilities (whose operators are legally and willing to receive such wastes) which are located in other counties who have properly authorized such imports. Limitations on such exports from Oakland County to another specific county, if any, will be established as determined by the receiving county's solid waste management plan. Imports from that county into existing and future disposal facilities located in Oakland County (where the operators are legally and willing to receive such wastes) will only be limited at a reciprocal level which matches limitations placed on imports from Oakland County or at specific export limitation levels established by the other county, whichever amount is lower.

Thank you for offering this opportunity to comment. Should you have questions on the Oakland County approach, please give me a call.

Respectfully,

Roger James Smith, P.E.
October 14, 1998

Mr. Bernard E. Giampetroni
Macomb County Department of Planning
and Economic Development
115 S. Grossbeck Highway
Mount Clemens, MI 48043

Dear Mr. Giampetroni:

This letter is written to request that Lenawee County be included in the Macomb County Solid Waste Management Plan update.

Lenawee County will allow intercounty flow of waste with the same counties that were listed in the 1991 Lenawee County Solid Waste Plan. Therefore, the draft Lenawee County indicates that Macomb County will continue to be eligible for intercounty exchange of waste with Lenawee County.

The draft Lenawee County plan update contains the following conditions regarding the import of solid waste into Lenawee County:

1. The total solid waste received at any Lenawee County facility shall not cumulatively exceed 6,600 tons per week. Using a six day operating week, the cumulative total is therefore equivalent to a 1,100 ton per day cap yet provides some latitude for typically encountered daily operating tonnage fluctuations.

2. Solid waste disposal facilities in Lenawee County shall accept all waste generated within Lenawee County. In order to ensure capacity for Lenawee County waste, solid waste disposal facilities shall, on a weekly basis, reserve capacity for 1,800 tons per week of Lenawee County solid waste. If Lenawee County waste disposal does not equal or exceed 1,800 tons per week at a Lenawee County solid waste disposal facility, the facility may accept additional waste from other authorized sources not to exceed the maximum weekly cumulative cap of 6,600 tons per week. This cap of 6,600 tons per week shall be a condition of consistency to the operation of a solid waste disposal facility.

3. Intercounty transfer of solid waste agreements shall not be required.

4. Counties exporting waste to Lenawee County shall comply with Lenawee County's policy to encourage waste reduction, reuse and recycling.
The first draft of the solid waste plan will be reviewed at the October 22, 1998 meeting of the Lenawee County Solid Waste Management Planning Committee. It is anticipated that the Plan update will be released for public comment before the end of the year.

If you have any questions, please feel free to give me a call at (517) 768-6703.

Sincerely,

[Signature]

Timothy Anderson
Senior Planner
FACILITY DESCRIPTIONS

Facility Type: Class B transfer station

Facility Name: Rollin Township Transfer Station

County: Lenawee Location: Town: 6S Range: 1E Section(s):

Map identifying location included in Attachment Section: X Yes No

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

X Public Private Owner: Rollin Township

Operating Status Waste Types Received
X open X residential
_____ closed
_____ licensed
_____ construction permit
_____ open, but closure
_____ pending

_____ commercial
_____ industrial
_____ construction and 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 site for use: ______ acres
Total area permitted: ______ acres
Operating: ______ acres
Not excavated: ______ acres

Current capacity: ______ tons or cubic yards
Estimated lifetime: ______ years
Estimated days open per year: 52 days
Estimated yearly disposal volume: ______ tons or cubic yards

(if applicable)
Annual energy production:
Landfill gas recovery projects: ______ megawatts
Waste-to-energy incinerators: ______ megawatts

III-9
FACILITY DESCRIPTIONS

Facility Type: Class B transfer station and compost facility

Facility Name: Irish Hills Transfer Station

County: Lenawee Location: Town: 5S Range: 2E Section(s): 7

Map identifying location included in Attachment Section: X Yes No

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

Public X Private Owner: Larry K. Wibbeler

Operating Status Waste Types Received
X open X residential
closed X commercial
licensed X industrial
construction permit X construction and demolition
open, but closure X contaminated soils
pending X special wastes*
other: Compost

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

Site Size:
Total area of facility property: 3 acres
Total area site for use: 1.5 acres
Total area permitted: 3 acres
Operating: 3 acres
Not excavated: acres

Current capacity: tons or cubic yards
Estimated lifetime: years
Estimated days open per year: 120 days
Estimated yearly disposal volume: 2,000 cubic yards

(if applicable)
Annual energy production:
Landfill gas recovery projects: megawatts
Waste-to-energy incinerators: megawatts
FACILITY DESCRIPTIONS

Facility Type: Type II landfill
Facility Name: Adrian Landfill
County: Lenawee Location: Town: 7,8 S Range: 4E Section(s): 6,7

Map identifying location included in Attachment Section: X Yes No

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

Public X Private Owner: Great Lakes Waste Services

Operating Status
X open
_____ closed
X licensed
_____ construction permit
_____ open, but closure
_____ pending

Waste Types Received
X residential
X commercial
X industrial
X construction and demolition
X contaminated soils
X special wastes*
X other:

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

Asbestos and slurges per operating policy.

Site Size:
Total area of facility property: 421 acres
Total area site for use: 287 acres
Total area permitted: 40 acres
Operating: 19 acres
Not excavated: 20 acres

Current capacity: 2,002,000 cubic yards
Estimated lifetime: 6.8 years
Estimated days open per year: 307 days
Estimated yearly disposal volume: 97,731 tons

(if applicable)
Annual energy production:
Landfill gas recovery projects: 20,148 megawatts
Waste-to-energy incinerators: megawatts

III-12
July 21, 1998

Mr. Bernard E. Giampetroni  
Macomb County Department of Planning  
and Economic Development  
115 South Groesbeck Highway  
Mount Clemens, MI 48043  

ATTN:  Mr. Bernard E. Giampetroni  
County Solid Waste Planning Agency  

Dear Mr. Giampetroni:

In the preparation of our 1998 update of the County Solid Waste Plan, Wayne County will consider recognizing all 83 counties in Michigan for import/export authorization if that is the desire of your County, and subject to the conditions outlined in the Plan. Wayne County will require a reciprocal agreement for the transfer of solid waste to your county in the event that your County has, or in the future sites, a solid waste facility.

If your County requests to be identified in our plan as an exporter of waste to Wayne County, your County should identify the maximum quantity of solid waste that your County wants authorization to export into Wayne County each year. Similarly each County willing to accept waste from Wayne County should identify the maximum volume of waste which Wayne County would be authorized to export to your County.

Wayne County will also require that each municipality within your County that wishes to export waste to Wayne County comply with the waste reduction and resource recovery goals of the Wayne County Plan. Compliance with this requirement is established by the submission of the appropriate resolutions from each County municipality to each solid waste facility within Wayne County that will receive waste from your County. Upon adoption, a copy of each municipal resolution should also be sent to this office.
Wayne County will accept a reciprocity agreement from your County if that is the method which you will utilize to document the agreements by the County to import and export solid waste. If you require a particular form for such a reciprocal agreement, please provide me with a copy of the form for our review.

You may want to review facility descriptions for the Wayne County solid waste facility or facilities, which your county, or a municipality in your county, proposes to export Type II or other waste from your County. You should contact each facility within Wayne County directly to determine if there are any specific stipulations, conditions, or restrictions that will affect the import of waste into each facility. As indicated above, Wayne County does require the submission of the appropriate resolutions from each County municipality that will export its waste to both this Department and the facility.

We do not yet have an estimated date for the completion and approval of the 1998 update of the Wayne County Solid Waste Plan. If I can provide any further information at this time, please let me know.

Future correspondence should be directed to my attention at this address.

Very truly yours,

[Signature]

Robert H. Fredericks, Director
Land Resource Management Division
October 21, 1998

Mr. Bernard E. Giampetroni, Executive Director
Macomb County Department of Planning and Economic Development
115 South Groesbeck Highway
Mount Clemens, Michigan 48043

Dear Mr. Giampetroni:

I have received a copy of the draft Macomb County Solid Waste Management Plan Update (Plan). I will address our comments in the same order as the topics appear in the Plan. In my opinion, the following areas of the County's Plan may be of cause for concern and may require revision or additional information:

Cover Page  Please be sure to indicate the date when the Plan is submitted to the Department of Environmental Quality (DEQ) for approval. If different versions of the Plan are prepared during the update process, listing the date can ensure that discussions between the DEQ and the County are referring to the correct document.

Although several Wayne County communities are listed on page one, the resolutions from the Macomb and Wayne County boards of Commissioners were not included in Appendix D.

Pages I-3, I-6, 7  Goals one and four as listed do nothing more than describe the planning process and necessary parts of the Plan. The goals and objectives should describe what the County intends to accomplish through the use of the planning process and by implementation of the Plan.

Page II-12  Verify the current operator of the Warren transfer station. Through corporate mergers, USA Waste is now called Waste Management, Inc. The solid waste businesses of City Management were purchased by USA Waste prior to their acquisition of Waste Management, Inc. The facility description pages in the data base and Selected System should also show current ownership. This will also affect the table on Pages II-30 and II-31.
This appears to be a discussion of the existing system, not an analysis of alternative systems. The existing system is only one alternative available to the county. Although one different management component is mentioned on page II-41, this does not satisfy the requirement for development and evaluation of alternative systems. Rule 711(d) of part 115 requires evaluation of alternatives, each of which contain the component parts listed on pages II-40 and II-41 of the Plan, not an evaluation of each component individually. The Plan should present alternative systems (at least one) and evaluate those systems. See pages 19-22 of the Guide to Preparing the Solid Waste Management Plan Format for a discussion on what is required in this section.

This part of the Plan is not asking for County regulations to promote resource conservation, but is asking what the County intends to do to promote resource conservation for the term of the Plan. Due to the fact that nothing is listed here, it would appear that the County intends to do nothing in this area but encourage other agencies and the private sector to assume all responsibilities for resource conservation.

By listing only sanitary landfill as a disposal type that may not be sited, the Plan implies that other disposal area types may be sited when they cannot. This should either be deleted or filled in to include all disposal area types.

This page says that 568 acres are sited for use by Pinetree Acres. However, the facility description sheets on pages II-25 and III-19 say the site is 568 acres, but that only 460 acres are sited for use. These should all match.

Other composting programs are mentioned in the Plan, but are not mentioned on this page. If the information is available, it should be included as well.

I find it hard to believe that no cost estimates are available for any of these items. With the county seeming to have little involvement or interest in these efforts, I am assuming that there is no county funding available for these efforts other than what may be made available by action of the Board of Commissioners. Some indication or estimates of funding from the Board of Commissioners and from other sources should be included if possible.

Even though the County evaluated other solid waste systems in prior Plans, it is still the intent of the Planning process that the County evaluate various solid waste management systems that may be available, in order to select the best system for the future. Details of the current evaluation of those systems should be included in this portion of the Plan document, not simply a reference to past Plans.

All meeting dates of the Solid Waste Planning Committee should be listed along with documentation, such as minutes of the meetings, that those meetings were open for public comment. When the Plan is submitted for approval, any public involvement that has already occurred should be included as long as the public involvement that will be done as the planning process moves along.

How will the County implement the Plan? There appears to be no provision for Plan Enforcement. There should be some local authority identified in the Plan that has the power to enforce the Plan, including the power to identify and bring suit for violations of the Plan.
I appreciate the efforts that you have shown in the development of the Plan and the degree to which the Plan Format has been utilized. This makes the document much easier to review. I hope that these comments are useful to Macomb County as you attempt to develop an approvable Plan. If you have any further questions or comments, please feel free to contact me.

Sincerely,

James E. Johnson
Solid Waste Management Unit
Waste Management Division
517-373-4738
e-mail: johnsoj1@state.mi.us

cc: Mr. Seth Phillips, DEQ
SOLID WASTE PLANNING COMMITTEE MEETING NOTICES

AND

SOLID WASTE PLANNING COMMITTEE MEETING AGENDAS
February 1, 1999

MEMORANDUM

TO: Members of the Macomb County Solid Waste Planning Committee

FROM: James McKiernan, Chairperson
Macomb County Solid Waste Planning Committee

RE: Meeting, February 10, 1999

A meeting of the Solid Waste Planning Committee has been scheduled as follows:

TIME: 4:00 p.m.

DATE: February 10, 1999

PLACE: Macomb County Board of Commissioners
Conference Room, Ninth Floor of the New Macomb County Administration Building

If you have any questions relative to this Agenda, the enclosed material or unable to attend the meeting, please call the Macomb County Department of Planning and Economic Development at (810) 469-5285.

Enclosure

L:\Jennifer Bch\meeting notice.doc
MACOMB COUNTY BOARD OF COMMISSIONERS
 ADMINISTRATION BUILDING
 MOUNT CLEMENS, MICHIGAN 48043
 Phone (810) 469-5125
 Fax (810) 469-5993
 Web http://www.macomb.lib.mi.us/macomb

JOHN C. HERTEL
CHAIRMAN
RALPH A. LIBERATO
VICE-CHAIRMAN

MACOMB COUNTY
SOLID WASTE PLANNING COMMITTEE

February 10, 1999
4:00 P.M.
Board of Commissioners Chambers
Macomb County Court Building
Second Floor
Mount Clemens, Michigan

AGENDA

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<td>8. Adjournment</td>
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SOLID WASTE PLANNING COMMITTEE
FEBRUARY 10, 1998 MEETING
SIGN-IN SHEET

NAME

1. Kaitlyn McAuley  BFI
2. Terry Gibb  MSU Extension
3. John Brennan  MACOMB TWP
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September 9, 1998

MEMORANDUM

To: Macomb County Solid Waste Planning Committee Members

From: James McKiernan, Chairperson
Macomb County Solid Waste Planning Committee

Re: Next Meeting of the Solid Waste Planning Committee

The next meeting of the Solid Waste Planning Committee has been scheduled as follows:

TIME: 4:00 p.m.
DATE: November 12, 1998
PLACE: Macomb County Board of Commissioners
Conference Room, Second Floor of the
Macomb County Court House

A copy of the agenda and selected information will be forwarded to you prior to the meeting.

THIS IS A VERY IMPORTANT MEETING, AS THE SOLID WASTE PLANNING COMMITTEE WILL BE CONSIDERING THE FINAL CHANGES TO THE DRAFT AND VOTING ON THE DRAFT TO BE SUBMITTED FOR CONSIDERATION BY THE MACOMB COUNTY BOARD OF COMMISSIONERS. PLEASE MARK THE DATE ON YOUR CALENDER.

If you have any questions relative to this meeting, please call the Macomb County Department of Planning and Economic Development at (810) 469-5285.

/cb
MACOMB COUNTY BOARD OF COMMISSIONERS
COURT BUILDING
MOUNT CLEMENS, MICHIGAN 48043
Phone (810) 469-5125
Fax (810) 469-5993
Web http://www.macomb.lib.mi.us/macomb

MACOMB COUNTY
SOLID WASTE PLANNING COMMITTEE

November 12, 1998
4:00 P.M.

Board of Commissioners Chambers
Macomb County Court Building - Second Floor
Mount Clemens, Michigan

AGENDA

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8. New Business
9. Public Participation
10. Adjournment
SOLID WASTE PLANNING COMMITTEE
NOVEMBER 12, 1998 MEETING
SIGN-IN SHEET

NAME

1. Guy Kebbe, Sterling Heights DPW
2. Terry Gibbs, Macomb MSU Extension
3. Dick Haines, Utica (MRC)
4. Bizi Carpentier, Sherry Talent Environmental
5. Kim North, Dickson Free Press
6. Bill Kowalski, RMT
7. George Kola, Town Ltd.

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SOLID WASTE MANAGEMENT PLAN UPDATE
PUBLIC HEARING

SEPTEMBER 8, 1998
4:00 P.M.
Board of Commissioners’ Chambers
Macomb County Court Building
Second Floor
Mount Clemens, Michigan

AGENDA

ITEM
Call To Order
Opening Remarks
Macomb County Solid Waste Management Plan Update, Presentation By RMT, Inc.
Public Comment Period
Adjournment
<table>
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<tr>
<th>NAME</th>
<th>AGENCY</th>
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<tr>
<td>Terry Paul</td>
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<td>Joe Carpenter</td>
<td>City Manager</td>
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MEMORANDUM

TO: Members of the Macomb County Solid Waste Planning Committee

FROM: James McKiernan, Chairperson
Macomb County Solid Waste Planning Committee

RE: Meeting, June 9, 1998

A meeting of the Solid Waste Planning Committee has been scheduled as follows:

TIME: 4:00 p.m.

DATE: June 9, 1998

PLACE: Macomb County Board of Commissioners
Conference Room, Second Floor of the
Macomb Macomb County Court House

If you have any questions relative to this Agenda, the enclosed material or unable to attend the meeting, please call the Macomb County Department of Planning and Economic Development at (810) 469-5285.

Enclosure
MACOMB COUNTY
SOLID WASTE PLANNING COMMITTEE

June 9, 1998
4:00 p.m.
Board of Commissioners' Chambers
Macomb County Court Building
Second Floor
Mount Clemens, Michigan

AGENDA

1. Call To Order
2. Roll Call
3. Adoption of Agendas
4. Public Participation
5. Approval of Solid Waste Planning Committee Minutes-March 12, 1998
6. Macomb County Solid Waste Management Plan Update,
   Presentation by RMT, Inc.
7. Public Hearing for the Solid Waste Management Plan Update
   DATE: September 8, 1998
   TIME: 4:00 p.m.
   PLACE: Board of Commissioners' Conference Room, Second Floor
   Macomb County Court Building
8. New Business
9. Next Meeting
10. Public Participation
11. Adjournment

MACOMB COUNTY BOARD OF COMMISSIONERS

John C. Hertel
Vice-Chairman

Ralph A. Liberato
Chairman

Marvin E. Sauger
Sergeant-at-Arms

A STATE OF MICHIGAN "COMMUNITY OF ECONOMIC EXCELLENCE"
SOLID WASTE PLANNING COMMITTEE
JUNE 9, 1998 MEETING
SIGN-IN SHEET

NAME

1. Terry Gibb  MSU Extension
2. Guy Kebbe  City of Sterling Heights
3. Geoff Donaldson  St. Clair County
4. Michael Baunoir  City Management
5. Kathleen Oden  BF1

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February, 1998

MEMORANDUM

TO: Members of the Macomb County Solid Waste Planning Committee

FROM: John C. Hertel, Chairman
Macomb County Board of Commissioners

RE: Meeting, March 12, 1998

A meeting of the Solid Waste Planning Committee has been scheduled as follows:

TIME: 4:00 p.m.

DATE: March 12, 1998

PLACE: Macomb County Board of Commissioners Chambers, Second Floor of the Macomb County Court House

If you have any questions relative to this Agenda, the enclosed material, or unable to attend the meeting, please call the Macomb County Department of Planning and Economic Development at (810) 469-5285.

/cb

Enclosure
MACOMB COUNTY BOARD OF COMMISSIONERS
COURT BUILDING
MOUNT CLEMENS, MICHIGAN 48043
Phone (810) 469-5125
Fax (810) 469-5993

MACOMB COUNTY
SOLID WASTE PLANNING COMMITTEE

March 12, 1998
4:00 p.m.
Board of Commissioners Chambers
Macomb County Court Building
Second Floor
Mount Clemens, Michigan

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<td>▶ Goals and Objectives</td>
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<td>▶ Other Items</td>
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<td>8. Public Participation</td>
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<td>9. Adjournment</td>
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</tbody>
</table>
MAILING LIST
SOLID WASTE COMMITTEE MEMBERS

Mr. Sanford Rosen
Great Lakes International Recycling
30615 Groesbeck Highway
Roseville MI 48066

Hon. Richard Notte, Mayor
City of Sterling Heights
4478 Bloomfield
Sterling Heights MI 48310

Mr. Edwin T. Hoover, VP Operations
City Disposal Systems, Inc.
1550 Harper
Detroit MI 48211

Mr. James Sinnamon, Supervisor
Township of Clinton
40700 Romeo Plank Road
Clinton Township MI 48038

Mr. Douglas W. Bruce
Refuse Equipment Service, Inc.
29400 25 Mile Road
Chesterfield MI 48047

Mr. Charles Hersey
SEMCOG
660 Plaza Drive, 1900 Edison Plaza
Detroit MI 48226

Mr. Ted Wahby, Chairman
South Macomb Disposal Authority
County Building
Mount Clemens MI 48043

Mr. James Furstenau
73901 Lowe Plank Road
Richmond MI 48062

Mr. John Gardner, Industrial Rep.
Lenox Township Offices
63975 Gratiot
Lenox MI 48050

Mr. James McKiernan
31680 Furstenau
Richmond MI 48062

Mr. Ralph Liberato
Michigan United Conservation Clubs
1951 Waltz
Warren MI 48091

Mrs. Marietta Crabtree
3677 Cottontail Lane
Utica MI 48317

Mr. Russ LaBarge, Chairman
Blue Ribbon Committee/Lake St. Clair
19900 10 Mile Road
St. Clair Shores MI 48081

Ms. Ann Klein
Commissioner, District 5
8163 Farnum
Warren MI 48093
INDIVIDUALS REQUESTING PACKAGES

Mr. John Briscoe  
Lapeer County Solid Waste Authority  
255 Clay Street  
Lapeer MI 48446

Mr. Jim Johnson  
M-DEQ Waste Management Division  
Solid Waste Management Unit  
P O Box 30241  
Lansing MI 48909-7741

Mr. Gary Bright  
56 Macomb Place  
Mount Clemens MI 48043

Ms. Terri Gibb  
MSU Extension  
21885 Dunham Road  
Clinton Township MI 48036

Ms. Kathleen Klein  
SE Michigan/Northern Ohio  
10690 Six Mile Road  
Northville MI 48167

Mr. Guy Kebee  
Sterling Heights Superintendent, DPW  
7200 18 Mile Road  
Sterling Heights MI 48014

Jaffe Raitt  
ATTN: Sarah French  
One Woodward Avenue  
Suite 2400  
Detroit MI 48226

Mr. Dick Haines  
46237 Hecker  
Utica MI 48317
COUNTRIES INCLUDED IN THE PLAN

SEMCOG
Attn: Mr. Pat Brunett
Environmental Section
660 Plaza Drive, Suite 1900
Detroit MI 48226

Mr. Thomas Goergen
Assistant Director
Genesee County Metropolitan Planning Commission
1101 Beach Street, Room 223
Flint MI 48502

Mr. Carl J. Osentoski
Huron County Economic Development Corporation
250 East Huron Street, #303
Bad Ax MI 48413

Mr. Charles C. Reisdorf
Regional II Planning Commission
County Tower Bldg., 16th Floor
120 West Michigan Avenue
Jackson MI 49201

Ms. Pam Morgan
Lapeer County Solid Waste Authority
County Complex
255 Clay Street
Lapeer MI 48446

Mr. Tim Anderson
Lenawee County Planning Commission
C/O Region II Planning Commission
Jackson County Tower Bldg.
120 West Michigan Avenue, 16th Floor
Jackson MI 49201

Mr. Gordon Ruttan, Director
St. Clair County Metro Planning Comm.
108 McMorran Boulevard
Port Huron MI 48060

Mr. James E. Murray
Wayne County Department of Environment
415 Clifford Street
Detroit MI 48226

Mr. John Hanifan
Livingston County Solid Waste Coordination
304 East Grand River
Howell MI 48843

Ms. Maureen Montgomery, R.S.
Monroe County Planning/Environmental Health Division
29 Washington Street
Monroe MI 48161-2234

Mr. Roger J. Smith, P.E.
Oakland County Solid Waste Planning One Public Works Drive
Waterford MI 48328-1907

Mr. William Wright, Director
Saginaw County Planning Dept.
400 Court Street
Saginaw MI 48602

Ms. Helen Takcs
Sanilac County Board of Comm.
C/O County Courthouse
Sandusky MI 48471

Mr. Dennis C. Dunnigan
Community Development Director
Shiawassee County Planning Comm.
201 North Shiawassee Street
Corunna MI 48817

Mr. Michael R. Hoagland
Tuscola County Solid Waste Planning Committee
207 East Grant
Caro MI 48723

Ms. Susan Todd
Dept. Environmental & Infrastructure Public Works Division
110 North Fourth Ave., P O Box 8645
Ann Arbor MI 48107-8645
COMMUNITIES

Mr. Elbert Tharp, Supervisor
Township of Chesterfield
47275 Sugarbush
Chesterfield MI 48047

Mr. James R. Sinnamon, Supervisor
Township of Clinton
40700 Romeo Plank
Clinton MI 48038

Hon. Gregory Bayer
Mayor, City of New Baltimore
36535 Green
New Baltimore MI 48047

Brett Harris, President
Village of New Haven
58725 Havenridge
PO Box 429
New Haven MI 48048

John C. Hart, Supervisor
Township of Harrison
38151 L'Anse Creuse
Harrison MI 48045

Hon. William J. Tatton
Mayor, City of Memphis
35095 Potter Street
Memphis MI 48041

Hon. Quinneke E. Cody
Mayor, City of Mt. Clemens
One Crocker Boulevard
Mount Clemens MI 48043

Lyle Ballard, President
Village of Armada
74274 Burk Street
PO Box 903
Armada MI 48005

Mr. Donald Maertens, Supervisor
Township of Ray
64255 Wolcott
Ray MI 48096

Mr. John P. Gardner
Township of Lenox
63975 Gratiot
Lenox MI 48050

Hon. Harvey M. Curley
Mayor, City of Eastpointe
23200 Gratiot
Eastpointe, MI 48021

Hon. Joseph J. Blanke, Jr.
Mayor, City of Fraser
33000 Garfield Road
Fraser MI 48026

Mr. John Brennan, Supervisor
Township of Macomb
19925 Twenty-Three Mile Road
Macomb MI 48042

Hon. Timothy Rix
Mayor, City of Richmond
68225 Main
PO Box F
Richmond MI 48062

Joan R. Parnagian, Supervisor
Township of Armada
23121 Main
PO Box 578
Armada MI 48005

Mr. Gary C. Schocke, Supervisor
Township of Bruce
223 East Gates
PO Box 98
Romeo MI 48065
COMMUNITIES (CONTINUED)

Hon. Mary Ann Zielinski
Mayor, City of Center Line
7070 Ten Mile Road
Center Line MI 48015

Paul Reiz, President
Village of Romeo
121 W. St. Clair
Romeo MI 48065

Hon. Curtis L. Dumas, Jr.
Mayor, City of St. Clair Shores
27600 Jefferson Circle Drive
St. Clair Shores MI 48081

Hon. Richard J. Notte
Mayor, City of Sterling Heights
40555 Utica Road
PO Box 8009
Sterling Heights MI 48311-8009

Hon. Mark A. Steenbergh
Mayor, City of Warren
29500 Van Dyke
Warren MI 48093

Richard F. Fox, Supervisor
Lake Township
795 Lakeshore
Grosse Pointe Shores MI 48236

Mr. Keith Rengert, Supervisor
Township of Richmond
75701 Memphis Road
Richmond MI 48062

Hon. Gerald K. Alsip
Mayor, City of Roseville
29777 Gratiot
PO Box 290
Roseville MI 48066

Rick Bottcher, Supervisor
Township of Shelby
52700 Van Dyke
Shelby Township MI 48316

Hon. Jacqueline K. Noonan
Mayor, City of Utica
7550 Auburn Road
Utica MI 48317

Gary R. Kirsh, Supervisor
Township of Washington
57900 Van Dyke
PO Box 94067
Washington MI 48094
RESOLUTIONS
Resolution Passed By
The Solid Waste Planning Committee
On February 10, 1999

MOTION: GARDNER

SUPPORT: LIBERATO

THAT THE MACOMB COUNTY SOLID WASTE PLANNING COMMITTEE APPROVE THE MACOMB COUNTY SOLID WASTE MANAGEMENT PLAN UPDATE AND THAT THE CHAIRMAN BE AUTHORIZED TO FORWARD THE PLAN TO THE MACOMB COUNTY BOARD OF COMMISSIONERS FOR THEIR CONSIDERATION AND APPROVAL.

RECORDED VOTE

Approve 9 Members
(CRABTREE, GARDNER, HERSEY, HOOVER, LaBARGE, LIBERATO, McKIERNAN, ROSEN, WAHBY)

Disapprove 1 Member
(NOTTE)

Absent 3 Members
(BRUCE, FURSTENAU, SINNAMON)
Resolution Passed By
The Solid Waste Planning Committee
On November 12, 1998

MOTION: LIBERATO

SUPPORT: KLEIN

THAT THE MACOMB COUNTY SOLID WASTE PLANNING COMMITTEE APPROVE THE MACOMB COUNTY SOLID WASTE MANAGEMENT PLAN UPDATE AND THAT THE CHAIRMAN BE AUTHORIZED TO FORWARD THE PLAN TO THE MACOMB COUNTY BOARD OF COMMISSIONERS FOR THEIR CONSIDERATION AND APPROVAL.

RECORDED VOTE

Approve 11 Members
(CRABTREE, GARDNER, HERSEY, HOOVER, KLEIN, LabARGE, LIBERATO, McKIERNAN, SINNAMON, WAHBY)

Disapprove 1 Member
(NOTTE)

Absent 2 Members
(BRUCE, ROSEN)
RESOLUTION NO. 99-42
OFFICIAL RESOLUTION
OF THE BOARD OF COMMISSIONERS
MACOMB COUNTY, MICHIGAN

THAT THE BOARD OF COMMISSIONERS APPROVE THE RESOLUTION TO INCLUDE BOTH THE ST. CLAIR AND MACOMB COUNTY PORTIONS OF THE CITY OF MEMPHIS IN THE MACOMB COUNTY PLAN AREA AND AUTHORIZE THE CHAIRMAN OF THE BOARD OF COMMISSIONERS TO SUBMIT THE PLAN TO THE 27 COMMUNITIES IN THE PLAN AREA FOR THEIR APPROVAL AND THAT UPON APPROVAL BY 67 PERCENT OF THE COMMUNITIES, THAT THE PLAN BE FORWARD TO THE MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY FOR THEIR APPROVAL.
RES. NO. 99-42


IN TESTIMONY WHEREOF, I have hereunto set my hand and affixed the Seal of the Court at Mount Clemens, Michigan, this 22nd day of February, 1999.

CARMELLA SABAUGH, CLERK
MACOMB COUNTY BOARD OF COMMISSIONERS
ADMINISTRATION BUILDING
MOUNT CLEMENS, MICHIGAN 48043
Phone (810) 469-5125
Fax (810) 469-5993
Web http://www.macomb.lib.mi.us/macomb

RESOLUTION NO. 99-11
OFFICIAL RESOLUTION
OF THE BOARD OF COMMISSIONERS
MACOMB COUNTY, MICHIGAN

A RESOLUTION APPROVING THE INCLUSION OF THE PORTION OF THE CITY OF MEMPHIS OUTSIDE OF MACOMB COUNTY TO BE INCLUDED IN THE COUNTY SOLID WASTE MANAGEMENT PLAN AREA

WHEREAS, the Macomb County Board of Commissioners has accepted the responsibility to prepare the State required Solid Waste Management Plan Update under Part 115, Solid Waste Management of the Natural Resources and Environmental Protection Act, 1994 as amended, and

WHEREAS, the act specifies that the planning area essentially be the political jurisdictions composing that county, and

WHEREAS, jurisdictions located in two or more counties or adjacent to a county may be included, provided, by resolution, the involved counties approve the inclusion, and

WHEREAS, since the approval of the original Macomb County Solid Waste Management Plan in 1982 and the Michigan Department of Environmental Quality prepared Update in 1994, the City of Memphis which is in both St. Clair and Macomb County has been included in the Macomb County Solid Waste Management Plan area, and

WHEREAS, the Macomb County Solid Waste Plan Update 1998 proposes to continue this planning relationship of nearly 20 years.

NOW, THEREFORE, BE IT RESOLVED that the Macomb County Board of Commissioners approve the inclusion of the total geographical area of Memphis in the Macomb County Solid Waste Management Plan Update planning area pursuant to Act 451 of 1994 as amended.

C:\Data Files\SOLIDWAS\PLAN97\Plan Area\Macomb Resolution.doc
COMMUNITY VOTE ON SOLID WASTE PLAN

BREAKDOWN OF VOTE

- YES
- NO
MACOMB COUNTY COMMUNITIES

CITIES
CENTER LINE
EASTPOINTE
FRASER
MEMPHIS
MT. CLEMENS
NEW BALTIMORE
RICHMOND
ROSEVILLE
ST. CLAIR SHORES
STERLING HEIGHTS
UTICA
WARREN

TOWNSHIPS
ARMADA
BRUCE
CHESTERFIELD
CLINTON
HARRISON
LAKE
LENOX
MACOMB
RAY
RICHMOND
SHELBY
WASHINGTON

VILLAGES
ARMADA
NEW HAVEN
ROMEO
Resolution for Approval or Disapproval
of the
1999 Macomb County Solid Waste Management Plan Update

By action of the City Council of the City of Center Line on
May 3, 1999, it is hereby resolved that we:

X approve

disapprove

the 1999 Solid Waste Management Plan Update, prepared pursuant to the
Natural Resources and Environmental Protection Act, P.A. 451, 1994, as
amended, and the rules promulgated thereunder, for Macomb County, with the
contingency that a procedure be put into place for the siting of
landfills within the County of Macomb in the future, should it become necessary
to do so.

Date: May 4, 1999

Mary Ann Zielinski
Mayor

Nancy E. Bourgeois
City Clerk

Witnessed By

Please complete this form and return by May 31, 1999 to:

John C. Hertel, Chairman
Macomb County Board of Commissioners
One South Main, Ninth Floor
Mount Clemens, MI 48043
RESOLUTION NO. 1419

Resolution for Approval or Disapproval of the 1999 Macomb County Solid Waste Management Plan Update

By action of the City Council of the City of Eastpointe on May 4, 1999, it is hereby resolved that we:

       ___ approve

       ___ disapprove

the 1999 Solid Waste Management Plan Update, prepared pursuant to the Natural Resources and Environmental Protection Act, P.A. 451, 1994, as amended, and the rules promulgated thereunder, for Macomb County.

Date: May 10, 1999

S. Wesley Meallister, Jr. City Clerk

Witnessed By: Kathleen M. Griak

Please complete this form and return by May 31, 1999 to:

John C. Hertel, Chairman
Macomb County Board of Commissioners
One South Main, Ninth Floor
Mount Clemens, MI 48043
Resolution for Approval or Disapproval
of the
1999 Macomb County Solid Waste Management Plan Update

By action of the City Council of the City of Fraser on
Thursday, May 13, 1999, it is hereby resolved that we:

____________ approve

____________ disapprove

the 1999 Solid Waste Management Plan Update, prepared pursuant to the
Natural Resources and Environmental Protection Act, P.A. 451, 1994, as
amended, and the rules promulgated thereunder, for Macomb County.

Date: 5-17-99

Joseph J. Blanke
Mayor

Thomas B. Van Damme
City Clerk

Pamela J. Lavers
Witnessed By

Please complete this form and return by May 31, 1999 to:

John C. Hertel, Chairman
Macomb County Board of Commissioners
One South Main, Ninth Floor
Mount Clemens, MI 48043
Resolution for Approval or Disapproval of the 1999 Macomb County Solid Waste Management Plan Update

By action of the City Council of the City of Memphis on APRIL 20, 1999, it is hereby resolved that we:

_________________ approve

_________________ disapprove

the 1999 Solid Waste Management Plan Update, prepared pursuant to the Natural Resources and Environmental Protection Act, P.A. 451, 1994, as amended, and the rules promulgated thereunder, for Macomb County.

Date: APRIL 21, 1999

Mayor WILLIAM J. TATTON

City Clerk MARY I. BRUSCA

Witnessed By JEANNIE L. DIAZ

Please complete this form and return by May 31, 1999 to:

John C. Hertel, Chairman
Macomb County Board of Commissioners
One South Main, Ninth Floor
Mount Clemens, MI 48043
Resolution for Approval or Disapproval
of the
1999 Macomb County Solid Waste Management Plan Update

By action of the City Council of the City of Mount Clemens on
JUNE 21, 1999, it is hereby resolved that we:

_________ approve

_________ disapprove

the 1999 Solid Waste Management Plan Update, prepared pursuant to the
Natural Resources and Environmental Protection Act, P.A. 451, 1994, as
amended, and the rules promulgated thereunder, for Macomb County.

Date:

[Signature]
Mayor

[Signature]
City Clerk

[Signature]
Witnessed By

Please complete this form and return by May 31, 1999 to:

John C. Hertel, Chairman
Macomb County Board of Commissioners
One South Main, Ninth Floor
Mount Clemens, MI 48043
Resolution for Approval or Disapproval of the
1999 Macomb County Solid Waste Management Plan Update

By action of the City Council of the City of New Baltimore on
June 14, 1999

it is hereby resolved that we:

X _______ approve

___________ disapprove

the 1999 Solid Waste Management Plan Update, prepared pursuant to the
Natural Resources and Environmental Protection Act, P.A. 451, 1994, as
amended, and the rules promulgated thereunder, for Macomb County.

Date:

[Signature]
Mayor

[Signature]
City Clerk

[Signature]
Witnessed By

Please complete this form and return by May 31, 1999 to:

John C. Hertel, Chairman
Macomb County Board of Commissioners
One South Main, Ninth Floor
Mount Clemens, MI 48043
Resolution for Approval or Disapproval of the
1999 Macomb County Solid Waste Management Plan Update

By action of the City Council of the City of Richmond on
____________, it is hereby resolved that we:

x approve

________________________ disapprove

the 1999 Solid Waste Management Plan Update, prepared pursuant to the
Natural Resources and Environmental Protection Act, P.A. 451, 1994, as
amended, and the rules promulgated thereunder, for Macomb County, contingent upon
the inclusion of the City of Richmond's recycling and composting program information
in the final copy of the plan update submitted to the Michigan Department of Environ-
mental Quality.

Date: April 22, 1999

Mayor Timothy Rix
City Clerk Karen M. Stagl
Witnessed By Darwin D. Parks, City Manager

Please complete this form and return by May 31, 1999 to:

John C. Hertel, Chairman
Macomb County Board of Commissioners
One South Main, Ninth Floor
Mount Clemens, MI 48043
Resolution for Approval or Disapproval
of the
1999 Macomb County Solid Waste Management Plan Update

By action of the City Council of the City of Roseville on
May 25, 1999, it is hereby resolved that we:

　　　　　　　　　　　7 approve
　　　　　　　　　　　0 disapprove

the 1999 Solid Waste Management Plan Update, prepared pursuant to the
Natural Resources and Environmental Protection Act, P.A. 451, 1994, as
amended, and the rules promulgated thereunder, for Macomb County.

Date: May 27, 1999

Mayor GERALD K. ALSIP

City Clerk RONALD A. MAC KOOL

Witnessed By KATHLEEN J. KARSCHNIA

Please complete this form and return by May 31, 1999 to:

John C. Hertel, Chairman
Macomb County Board of Commissioners
One South Main, Ninth Floor
Mount Clemens, MI 48043
Minutes of the Regular Meeting of the City Council of the City of Roseville, County of Macomb, Michigan, held in said City on May 25, 1999 at 7:00 p.m., local time.

PRESENT: Mayor Gerald Alsip, Councilpersons Harold Haugh, James Zelmski, Richard Steenland, Bill Shoemaker, Christine Gorecki and John Chirkun.

ABSENT: None.

COUNCILWOMAN CHRISTINE GORECKI moved, COUNCILMAN HAROLD HAUGH seconded, to adopt the Resolution approving the 1999 Solid Waste Management Plan Update, prepared pursuant to the Natural Resources and Environmental Protection Act, P.A. 451, 1994, as amended, and the rules promulgated thereunder, for Macomb County, with the stipulation that before the next five year review the County Board of Commissioners review the feasibility of additional Macomb County sites for future plans, and authorizing the Mayor and Clerk to sign required documents.

MOTION CARRIED UNANIMOUSLY

STATE OF MICHIGAN)
    SS)
COUNTY OF MACOMB )

I, RONALD A. MAC KOOL, the duly qualified and acting City Clerk of the City of Roseville, Macomb County, Michigan, do hereby certify that the foregoing is a true and complete copy of a Resolution adopted by the City Council of the City of Roseville, Macomb County, Michigan, on Tuesday, May 25, 1999, and that said meeting was conducted and public notice of said meeting was given pursuant to and in full compliance of the Open Meetings Act being Act 267 of the Michigan Public Acts of 1976, as amended, and that the minutes of said meeting were kept and will be or have been made available as required by said act.

[Signature]

RONALD A. MACKool
City Clerk
Resolution for Approval or Disapproval of the 1999 Macomb County Solid Waste Management Plan Update

By action of the City Council of the City of St. Clair Shores on May 17, 1999, it is hereby resolved that we:

Hison, Nearon, Benson, Boyle, Dumas approve

None disapprove

Reaver, Soulliere absent

the 1999 Solid Waste Management Plan Update, prepared pursuant to the Natural Resources and Environmental Protection Act, P.A. 451, 1994, as amended, and the rules promulgated thereunder, for Macomb County.

Date: May 19, 1999

Mayor, CURTIS L. DUMAS

City Clerk, ROGER W. CARDAMONE

Witnessed By DENISE CARPENTER

Please complete this form and return by May 31, 1999 to:

John C. Hertel, Chairman
Macomb County Board of Commissioners
One South Main, Ninth Floor
Mount Clemens, MI 48043
John C. Hertel, Chairman  
Macomb County Board of Commissioners  
One South Main, Ninth Floor  
Mount Clemens, Michigan 48043  

Reference: 1999 Macomb County Solid Waste Management Program  
AEW Project No. 150-138  

Dear Mr. Hertel:

Based upon the recommendation of its Consulting Engineers, the City of St. Clair Shores has approved the 1999 Macomb County Solid Waste Management Plan Update. The City Council authorized the Mayor and City Clerk to sign the enclosed resolution indicating approval of the Update. The existing site (with future expansion areas) has adequate capacity in excess of 10 years and the Plan must be updated every 5 years in accordance with MDEQ requirements.

However, the City is concerned that the Plan Update does not include an approvable siting process, except for the only existing site, and criteria for additional solid waste disposal facilities. Therefore, the City has stipulated that any future Update contain an approvable siting process which will possibly create competition.

If you have any questions, please contact me at your earliest convenience.

Very truly yours,

Mark Wollenweber  
City Manager  

CC: Bernard E. Giampetroni  

MUNICIPAL OFFICES  
27600 Jefferson Circle Drive, St. Clair Shores, MI 48081-2093  
Phone: (810) 445-5200 Fax: (810) 445-0469  
www.stclairshores.net
Resolution for Approval or Disapproval
of the
1999 Macomb County Solid Waste Management Plan Update

By action of the City Council of the City of Sterling Heights on
MAY 4, 1999
(date), it is hereby resolved that we:

☑ approve

☐ disapprove

the 1999 Solid Waste Management Plan Update, prepared pursuant to the
Natural Resources and Environmental Protection Act, P.A. 451, 1994, as
amended, and the rules promulgated thereunder, for Macomb County.

Community
Seal/Stamp

Date: MAY 4, 1999

Richard J. Nutter
Mayor

Walter D. 
City Clerk

Witnessed By

Please complete this form and return by May 31, 1999 to:

John C. Hertel, Chairman
Macomb County Board of Commissioners
One South Main, Ninth Floor
Mount Clemens, MI 48043
Resolution for Approval or Disapproval of the
1999 Macomb County Solid Waste Management Plan Update

By action of the City Council of the City of Utica on
________________________, it is hereby resolved that we:

_________________________ votes to ___ approve

_________________________ disapprove

the 1999 Solid Waste Management Plan Update, prepared pursuant to the
Natural Resources and Environmental Protection Act, P.A. 451, 1994, as
amended, and the rules promulgated thereunder, for Macomb County.

Date: May 14, 1999

__________________________
Mayor Jacqueline K. Noonan

__________________________
City Clerk M. Catherine McGrail

Witnessed By Pamela R. Trendel

Please complete this form and return by May 31, 1999 to:

John C. Hertel, Chairman
Macomb County Board of Commissioners
One South Main, Ninth Floor
Mount Clemens, MI 48043
Resolution for Approval or Disapproval
of the
1999 Macomb County Solid Waste Management Plan Update

By action of the City Council of the City of Warren on
April 27, 1999, it is hereby resolved that we:

X approve 5-YES 4-NO

approve disapprove

the 1999 Solid Waste Management Plan Update, prepared pursuant to the
Natural Resources and Environmental Protection Act, P.A. 451, 1994, as
amended, and the rules promulgated thereunder, for Macomb County.

Date:

Mayor

City Clerk

Witnessed By

Please complete this form and return by May 31, 1999 to:

John C. Hertel, Chairman
Macomb County Board of Commissioners
One South Main, Ninth Floor
Mount Clemens, MI 48043
Resolution for Approval or Disapproval of the
1999 Macomb County Solid Waste Management Plan Update

By action of the Board of Trustees of the Township of Armada on
May 12, 1999, it is hereby resolved that we:

____ x ______ approve

________________________ disapprove

the 1999 Solid Waste Management Plan Update, prepared pursuant to the
Natural Resources and Environmental Protection Act, P.A. 451, 1994, as
amended, and the rules promulgated thereunder, for Macomb County.

Date: 5/12/99

Supervisor Joan Parnagian

Township Clerk Margaret M. Rutenberg

Witnessed By Pat Ternes

Please complete this form and return by May 31, 1999 to:

John C. Hertel, Chairman
Macomb County Board of Commissioners
One South Main, Ninth Floor
Mount Clemens, MI 48043
Resolution for Approval or Disapproval
of the
1999 Macomb County Solid Waste Management Plan Update

By action of the Board of Trustees of the Township of Bruce on
May 19, 1999, it is hereby resolved that we:

☑ approve

☐ disapprove

the 1999 Solid Waste Management Plan Update, prepared pursuant to the
Natural Resources and Environmental Protection Act, P.A. 451, 1994, as
amended, and the rules promulgated thereunder, for Macomb County.

Date:

[Signature]
Supervisor

[Signature]
Township Clerk

[Signature]
Witnessed By

Please complete this form and return by May 31, 1999 to:

John C. Hertel, Chairman
Macomb County Board of Commissioners
One South Main, Ninth Floor
Mount Clemens, MI 48043
Resolution for Approval or Disapproval of the
1999 Macomb County Solid Waste Management Plan Update

By action of the Board of Trustees of the Township of Chesterfield on
April 19, 1999, it is hereby resolved that we:

[ ] [ ] approve

[ ] [ ] disapprove

the 1999 Solid Waste Management Plan Update, prepared pursuant to the
Natural Resources and Environmental Protection Act, P.A. 451, 1994, as
amended, and the rules promulgated thereunder, for Macomb County.

Date: April 21, 1999

[Signature]
Supervisor

[Signature]
Township Clerk

[Signature]
Witnessed By

Please complete this form and return by May 31, 1999 to:

John C. Hertel, Chairman
Macomb County Board of Commissioners
One South Main, Ninth Floor
Mount Clemens, MI 48043
Resolution for Approval or Disapproval
of the
1999 Macomb County Solid Waste Management Plan Update

By action of the Board of Trustees of the Township of Clinton on
MAY 18, 1999
it is hereby resolved that we:

X approve WITH ATTACHED CONTINGENCIES
OUTLINED IN CORRESPONDENCE DATE
MAY 17, 1999 FROM JOHN DOLAN,
ATTORNEY

_________________________
disapprove

date

the 1999 Solid Waste Management Plan Update, prepared pursuant to the
Natural Resources and Environmental Protection Act, P.A. 451, 1994, as
amended, and the rules promulgated thereunder, for Macomb County.

Date:

_________________________
Supervisor JAMES E. SNNAMON

_________________________
Township Clerk DENNIS C. TOMLINSON

_________________________
Witnessed By THERESA OLIVIO

Please complete this form and return by May 31, 1999 to:

John C. Hertel, Chairman
Macomb County Board of Commissioners
One South Main, Ninth Floor
Mount Clemens, MI 48043
May 17, 1999

Honorable Board of Trustees
Charter Township of Clinton
40700 Romeo Plank Road
Clinton Township, Michigan 48038

Re: Summary of Comments - Macomb County Solid Waste Management Plan

Dear Board Members:

It appears as though the plan was put together following a September 1998 public hearing and has not been updated. References to the Grosse Pointe Clinton Refuse Disposal Authority Incinerator being operational until April of 1998 need to be corrected. We would suggest that you act to approve the plan subject to corrections and offer the following locations for corrections:

Page I-5 and 6: Eliminate reference to incineration at GPCRDA.

Page II-11: Refer to GPCRDA incinerator as being shut down. Include as additional site the City Transfer Station at I-75 for the Wayne County members.

Page II-24: Eliminate reference to GPCRDA incinerator since it is shut down.

Page II-31: Waste Management is our principal hauler, but other licensed haulers are permitted.

Page III-1: Clinton Township and Mt. Clemens may elect to use the Warren Transfer Station. Also eliminate reference to incineration, also on Page III-11.


We remain,

Very truly yours,

[Signature]

John A. Dolan
Resolution for Approval or Disapproval of the 1999 Macomb County Solid Waste Management Plan Update

By action of the Board of Trustees of the Township of Harrison on May 10, 1999, it is hereby resolved that we:

____________________ approve

x __________ disapprove

the 1999 Solid Waste Management Plan Update, prepared pursuant to the Natural Resources and Environmental Protection Act, P.A. 451, 1994, as amended, and the rules promulgated thereunder, for Macomb County.

Date: May 13, 1999

Supervisor John C. Hart

Township Clerk Carol A. Brazil

Witnessed By Charles S. Pierce

Please complete this form and return by May 31, 1999 to:

John C. Hertel, Chairman
Macomb County Board of Commissioners
One South Main, Ninth Floor
Mount Clemens, MI 48043
May 19, 1999

John C. Hertel, Chairman
Macomb County Board of Commissioners
Administration Building
Mount Clemens, MI 48043

Dear Mr. Hertel,

Please be advised that the Lake Township Board of Trustees met on April 19th, at which time they reviewed your letter of March 24, 1999 regarding the Macomb County Solid Waste Management Plan. While the Board approved of the Plan, they took no action on the matter as outlined in your letter because Lake Township is the Macomb County portion of the Village of Grosse Pointe Shores. As such, the solid waste is processed by the Village through Wayne County.

Should you have any questions you may call me at (313) 881-6565.

Sincerely,

Michael Kenyon
Asst. to the Lake Township Supervisor

MK:ak
Resolution for Approval or Disapproval of the
1999 Macomb County Solid Waste Management Plan Update

By action of the Board of Trustees of the Township of Lenox on 4/5/99, it is hereby resolved that we:

[ ] approve

[ ] disapprove

the 1999 Solid Waste Management Plan Update, prepared pursuant to the Natural Resources and Environmental Protection Act, P.A. 451, 1994, as amended, and the rules promulgated thereunder, for Macomb County.

Date:

[Signature]
Supervisor

[Signature]
Township Clerk

[Signature]
Witnessed By
Notary Public, Macomb County MI
My Commission Expires Apr. 3, 2002

Please complete this form and return by May 31, 1999 to:

John C. Hertel, Chairman
Macomb County Board of Commissioners
One South Main, Ninth Floor
Mount Clemens, MI 48043
Resolution for Approval or Disapproval
of the
1999 Macomb County Solid Waste Management Plan Update

By action of the Board of Trustees of the Township of Macomb on

[_______] April 14th, 1999 [_______]

date

it is hereby resolved that we:


X approve


disapprove

the 1999 Solid Waste Management Plan Update, prepared pursuant to the
Natural Resources and Environmental Protection Act, P.A. 451, 1994, as
amended, and the rules promulgated thereunder, for Macomb County.

Community
Seal/Stamp

Date:

Supervisor

John D. Brennan

Township Clerk

Norah J. Nancy

Witnessed By

[_______]

[_______]

[_______]

[_______]

Please complete this form and return by May 31, 1999 to:

John C. Hertel, Chairman
Macomb County Board of Commissioners
One South Main, Ninth Floor
Mount Clemens, MI 48043
Resolution for Approval or Disapproval of the 1999 Macomb County Solid Waste Management Plan Update

By action of the Board of Trustees of the Township of Ray on March 18, 1999, it is hereby resolved that we:

☐ approve

☐ disapprove

the 1999 Solid Waste Management Plan Update, prepared pursuant to the Natural Resources and Environmental Protection Act, P.A. 451, 1994, as amended, and the rules promulgated thereunder, for Macomb County.

Date: March 18, 1999

[Signature]
Supervisor

[Signature]
Township Clerk

[Signature]
Witnessed By

Please complete this form and return by May 31, 1999 to:

John C. Hertel, Chairman
Macomb County Board of Commissioners
One South Main, Ninth Floor
Mount Clemens, MI 48043

Community Seal/Stamp
Resolution for Approval or Disapproval of the 1999 Macomb County Solid Waste Management Plan Update

By action of the Board of Trustees of the Township of Richmond on April 14, 1999, it is hereby resolved that we:

X approve

disapprove

the 1999 Solid Waste Management Plan Update, prepared pursuant to the Natural Resources and Environmental Protection Act, P.A. 451, 1994, as amended, and the rules promulgated thereunder, for Macomb County.

Date:

[Signature]
Supervisor

[Signature]
Township Clerk

Witnessed By

Please complete this form and return by May 31, 1999 to:

John C. Hertel, Chairman
Macomb County Board of Commissioners
One South Main, Ninth Floor
Mount Clemens, MI 48043
Resolution for Approval or Disapproval of the 1999 Macomb County Solid Waste Management Plan Update

By action of the Board of Trustees of the Township of Shelby on May 4, 1999, it is hereby resolved that we:

Parker, Bates, Bottcher, Holmes, Kady, Kowal approve

none disapprove

Stout absent

the 1999 Solid Waste Management Plan Update, prepared pursuant to the Natural Resources and Environmental Protection Act, P.A. 451, 1994, as amended, and the rules promulgated thereunder, for Macomb County.

Date: May 4, 1999

Supervisor

[Signature]

Township Clerk

[Signature]

Witnessed By

[Signature]

Please complete this form and return by May 31, 1999 to:

John C. Hertel, Chairman
Macomb County Board of Commissioners
One South Main, Ninth Floor
Mount Clemens, MI 48043
Resolution for Approval or Disapproval of the 1999 Macomb County Solid Waste Management Plan Update

By action of the Board of Trustees of the Township of Washington on April 7, 1999, it is hereby resolved that we:

x approve

_____________ disapprove

the 1999 Solid Waste Management Plan Update, prepared pursuant to the Natural Resources and Environmental Protection Act, P.A. 451, 1994, as amended, and the rules promulgated thereunder, for Macomb County.

Date: April 14, 1999

Supervisor Gary R. Kirsh

Township Clerk R. J. Brainard

Witnessed By Barbara A. Zajko

Please complete this form and return by May 31, 1999 to:

John C. Hertel, Chairman
Macomb County Board of Commissioners
One South Main, Ninth Floor
Mount Clemens, MI 48043
Resolution for Approval or Disapproval
of the
1999 Macomb County Solid Waste Management Plan Update

By action of the Board of Trustees of the Village of Armada on ____________, it is hereby resolved that we:

[ ] approve

[ ] disapprove

the 1999 Solid Waste Management Plan Update, prepared pursuant to the Natural Resources and Environmental Protection Act, P.A. 451, 1994, as amended, and the rules promulgated thereunder, for Macomb County.

Date:

[Signature]
Village President

[Signature]
Village Clerk

Witnessed By

[Signature]

Please complete this form and return by May 31, 1999 to:

John C. Hertel, Chairman
Macomb County Board of Commissioners
One South Main, Ninth Floor
Mount Clemens, MI 48043
VILLAGE OF NEW HAVEN
P.O. Box 429 • 58725 Havenridge Ave.
New Haven, Michigan 48048
(810) 749-5801

RESOLUTION PASSED BY
THE COUNCIL OF THE
VILLAGE OF NEW HAVEN


MOTION: MITCHELL

SUPPORT: FOWLER

APPROVE: 5 MEMBERS
(FOWLER, HARRIS, JONES, MACK, MITCHELL)

DISAPPROVE: NONE

ABSENT: 2 MEMBERS
(ASHFORD, RICHARD)

JOYANN M. WELLS-FLANIGAN
JOYANN M. WELLS-FLANIGAN, VILLAGE CLERK
Resolution for Approval or Disapproval
of the
1999 Macomb County Solid Waste Management Plan Update

By action of the Board of Trustees of the Village of Romeo on
May 17, 1999, it is hereby resolved that we:

[ ] approve
[ ] disapprove

the 1999 Solid Waste Management Plan Update, prepared pursuant to the
Natural Resources and Environmental Protection Act, P.A. 451, 1994, as
amended, and the rules promulgated thereunder, for Macomb County.

Date: May 17, 1999

[Signature]
Village President

[Signature]
Village Clerk

Witnessed By

Please complete this form and return by May 31, 1999 to:

John C. Hertel, Chairman
Macomb County Board of Commissioners
One South Main, Ninth Floor
Mount Clemens, MI 48043
APPENDIX D
ATTACHMENTS
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 Macomb County Board of Commissioners is the legislative, administrative and policy-making body of Macomb County government. Macomb County has a population currently estimated at 746,942, an annual budget of $209,000,000 with approximately 2300 employees. As such, the Macomb County Board of Commissioners is listed as the party for management and implementation of the Macomb County Solid Waste Management Plan.

All of the County departments, entities, persons and functions which relate to the various areas of the plan come under the aegis of the Macomb County Board of Commissioners in terms of purpose, mission, budgetary control and operational oversight. The Macomb County Department of Planning and Economic Development is the designated solid waste planning agency and the line department of the Macomb County Board of Commissioners charged with the implementation of plan.
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.
Maps

Maps showing locations of solid waste disposal facilities used by the County.
LEGEND - DISPOSAL FACILITIES

1) ARBOR HILLS
2) ARMADA TOWNSHIP TRANSFER STATION
3) ADRIAN LANDFILL
4) CARLETON FARMS LANDFILL
5) LIBERTY ENVIRONMENTALIST LANDFILL
6) EAGLE VALLEY RDF
7) OAKLAND HEIGHTS DEVELOPMENT
8) PINE TREE ACRES LANDFILL
9) RAY TOWNSHIP TRANSFER STATION
10) SAUK TRAIL HILLS DEVELOPMENT
11) SMDA TRANSFER STATION
12) TRI-CITY RECYCLING RDF
13) VENICE PARK RECYCLING RDF
14) WARREN TRANSFER STATION
15) WOODLAND MEADOWS RDF
16) GROSS POINTS-CLINTON REFUSE DISPOSAL AUTHORITY
17) ROCKWOOD LANDFILL

MACOMB COUNTY SOLID WASTE MANAGEMENT PLAN
DISPOSAL FACILITY LOCATION MAP

DRAWN BY: SGH  PROJECT NUMBER: 4085.01
CHECKED BY: SGH  FILE NUMBER: 40850103.DWG
APPROVED BY: WJK  DATE: OCTOBER 1998

1143 HIGHLAND DRIVE, SUITE B
ANN ARBOR, MI  48106-2237

RMT INC., MICHIGAN
P.O. BOX 991  48106-0991
PHONE: 734-971-7080
FAX: 734-971-5022

FIGURE 1
Inter-County Agreements

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

Special conditions affecting import or export of solid waste.

Macomb County authorizes the import of solid waste as noted in Table I-A with the following conditions.

1) Sufficient capacity is available in the listed disposal facilities to meet the five year and 10 year planning periods for Macomb County.

2) Authorized importation into the SMDA transfer station will not impact the county's disposal capacity if the waste is disposed of at facilities outside of Macomb county. Therefore, Condition 1) above will not apply to the import of waste to the SMDA that is exported to another county.
EDUCATIONAL INFORMATION

The following are examples of information provided to the public regarding recycling, composting, and household hazardous waste programs.
May 26, 1998

Mr. William Kotowski, P.E.
Project Manager
RMT Inc., Michigan
1143 Highland Dr.
Suite B
P.O. Box 991
Ann Arbor, MI. 48106-0991

Dear Mr. Kotowski:

Consideration has been given to your request that Pine Tree Acres Landfill Inc. (PTA) agree to being designated as the prime landfill site for all communities in the Macomb County area, thereby creating a state of total self-reliance for all of the County. By approving your request, PTA would maintain sufficient capacity to accept part, or all of the solid waste that is generated in the county for the long term life of the landfill site. This would satisfy your concern about guaranteed disposal capacity for all Macomb communities who express interest in utilizing the landfill, and meet the Guiding Concepts that are expressed in the Macomb County Solid Waste Management Plan. This action would also assure Macomb County of sufficient capacity to meet the disposal requirements for many years to come, and eliminate the necessity for additional landfill development in the county area.

PTA will commit to the arrangement you have proposed, providing the following two points are found to be acceptable.

1. **Inclusion of Available Land Owned By Pine Tree Acres Inc., in the 1998 Update of the Solid Waste Management Plan**
   
   There is land that has been acquired by PTA in the last few years, that can be used for future landfill space, that is not specifically designated in the current County Plan. This land includes 108 acres which is adjacent and contiguous to the east of the existing PTA site. (See attached map, page 3.) By including the land, it can be assured that there will be sufficient space for disposal of solid waste from all Macomb communities, while permitting Pine Tree to maintain all of its regular line of customers.

2. **Require Other Counties Who Use Pine Tree Acres Facilities to Meet the Guiding Concepts of the Macomb Plan**

   The current plan identifies use of PTA by other counties and defines annual amounts of waste that are anticipated from each. It does not consider the parameters of the Macomb...
planning criteria. The method that PTA proposes would guarantee the effectiveness of the Macomb County Solid Waste Management Plan, as waste that is received at PTA from users in other Michigan counties would meet the provisions of the Macomb Plan before the waste is accepted at PTA landfill. This approach would assure that the Guiding Concepts of the Macomb Plan are met.

PTA is agreeable to the steps that are outlined above. These points will promote self-reliance in Macomb County, which is one of the two major Guiding Concepts that are expressed in the Macomb Plan. The above steps will also provide the citizens of the Macomb County area a long term solution to waste disposal problems.

We trust this approach is satisfactory.

Very Truly Yours,

George D. Asciutto
Division Vice President
Everyone knows how to recycle, what is recyclable, and how to separate, but few know what becomes of it all once it leaves the curb. Well, St. Clair Shores has the answer.

**ALUMINUM**

Batteries are physically disassembled and components are separated. Plastics are used in making new automotive parts. Glass goes to production of new "glassphalt". Nickel, zinc, lead and/or metals are separated and sold to smelters for reuse.

**BATTERIES**

Aluminum cans become new aluminum cans or any other aluminum product since aluminum is 100% recyclable.

**GLASS**

Glass bottles are recycled into auto glass, fiber glass, new glass bottles, or mixed with asphalt to make "glassphalt", depending on the purity of the cullet.

**PAPER PRODUCTS**

Cereal boxes, paper towel rolls, etc. become new board.

**STEEL CANS**

Junk Mail is recycled into brown paper towels. Newsprint is made into more newspaper, boxboard for cereal boxes, paper towel rolls, or brown paper towels.

**PLASTICS**

Steel and bi-metal cans are returned to steel companies for melting and then are returned into any steel product from cars to cans.

Don't throw away a good thing.
WHAT & HOW to recycle

MOST RECYCLABLES

Please place these recyclable materials inside your bin:

METAL CANS
- Clean. Labels are OK.
- Put metal lids inside metal cans (for safety) and flatten if possible.
- NO foil, aluminum trays.
- NO aerosols.

GLASS
- Clean. NO Caps. Labels are OK.
- NO window glass, mirrors, light bulbs or glassware.
- NO broken glass.
- NO ceramics or dishes.

PLASTICS
- Clean. NO Caps. Labels are OK.
- Flatten if possible.
- ONLY narrow neck containers marked 1(PETE) or 2(HDPE) on bottom, such as:
  - Milk jugs, water jugs
  - Laundry and hair bottles.
- NOT ALLOWED:
  - Wide mouth jars for margarine, yogurt, cottage cheese, etc.
  - NO motor oil or chemical containers and microwave trays.

PAPER PRODUCTS

Please place the following paper products in a brown paper bag first, then set bag inside, on top of, or beside your bin.
Do not set out papers alone without your bin.

- Publications:
  - Newspapers (with glossy inserts)
  - Magazines, catalogues and advertisements
  - (save phone books for special collection)

- Communication Papers:
  - Junk mail, envelopes (windows are OK)
  - Office paper, white and colored paper, computer paper,
    notebook paper, etc.
  - Index cards, post-it notes, postcards and posterboard.

- Gray/White bond:
  - Cereal boxes, snack boxes, food mixes (remove liners),
    gift boxes, tissue boxes, shoe boxes, 100p boxes,
    beverage cases.
  - Paper towel and toilet tissue rolls, paper egg cartons,
    cigarette cartons, backs of note paper pads.

- NOT ALLOWED:
  - Wax or foil box liners, wax-coated boxes, milk and juice
    cartons, microwave boxes, frozen juice cans,
    food-contaminated paper or board, corrugated cardboard.

BATTERIES

Place batteries in a clear plastic zip-lock bag, seal
and place on top of bin. Do not place bag inside bin.

- Household Batteries:
  - AAA, AA, C, D, 9-Volt (including rechargeable).
- NO automotive, marine or 6-volt batteries.

RECYCLE!

Don't throw away a good thing.
HOME COMPOSTING IS SMART RECYCLING .... AND SMART GARDENING

Fact sheet distributed by the St. Clair Shores Recycling Education Advisory Committee

Compost is a free gift from nature .... worth its weight in gold to the home gardener. Extra additives or compost "starters" are not needed to make excellent compost. The tips presented here are designed to increase your home composting efficiency .... while assuring that nuisances and odors are avoided.

FOUR EASY STEPS:

1. COLLECT THE MATERIALS FOR COMPOSTING:
   - Shredded leaves -- 50% of total volume
   - Green grass clippings (or other green, nitrogen-based material) -- 25% of total volume (if available)
   - Soil from your yard (or compost) -- 25% of volume
   - Chopped fruit and vegetable peelings (small amounts)

   Tip: Mow your leaves and grass clippings together in the fall -- this is a great "starter" mix!

2. SELECT A LOCATION FOR YOUR COMPOST BIN

   Best locations are:
   - Directly on the soil -- so decomposer organisms can move up into the bin.
   - Near the garden, where the compost will be used.
   - Partial shade or partial sun.
   - Away from tree roots which can grow up into the compost.
   - Away from the neighbor's entertainment area.

   Tip: Make sure the bin's appearance and placement is acceptable to your neighbors ... as well as your family. Some citizens create an "outdoor work area" near the garage or garden.

3. BUILD THE COMPOST PILE

   - Mix all of the yard waste materials together, gradually filling the compost bin.
   - Water the pile as you build it. The mixture should be as wet as a "wring-out" sponge.
   - When adding fruit and vegetable peelings, bury them deep in the pile and cover. Reduce the volume of peelings or blend them into a liquid if odors, small flies, or other nuisances occur.

   Tip: It is not necessary to fill the bin all at once -- unless you want a hot compost pile immediately.

4. TURN THE PILE FROM TIME TO TIME -- EVERY 3 - 4 WEEKS ... or LESS FREQUENTLY

   - A compost pile which is damp will decompose naturally within 6 - 9 months -- even with very little turning. Periodic mixing and turning of the composting material will speed up the process.
   - Don't worry about the temperature of the pile -- either hot or cold composting is fine. The resulting compost is the same!

   Tip: To turn the compost in a bin with a single compartment (such as a black plastic bin,) first move the bin to an adjacent location; then use a spade or pitchfork to replace the composting material in the bin, mixing as you go.
A SHOPPING LIST OF INGREDIENTS FOR A HEALTHY COMPOST PILE IN ST. CLAIR SHORES

YES
Grass clippings
Leaves
Hedge trimmings
Pine needles
Spent flowers
Straw
Sawdust
Young weeds
Plant waste from garden
Fruit and vegetable peelings
Coffee grounds
Wood ash from fireplace
Clean, ground egg shells
Fertilizer (organic or synthetic)
(only needed if no other source of nitrogen-rich material such as grass clippings)
Soil from yard (contains valuable micro-organisms)
Compost

NO
Dairy products
Oils and fats
Cooked food
Bread pieces
Pet manure
Meat, fish, bones
Weed with seeds
Diseased plants
Black walnut leaves
Charcoal briquets & ashes
Soiled paper
Cat litter

** Manure from cows, horses, chickens, and rabbits is a standard composting material in rural areas. St. Clair Shores' background composting education emphasizes yard waste and household wastes which are easily available and easily composted in an urban setting.
Hazardous products line our kitchen, basement and garage shelves. A careful inventory in your own home may reveal a deadly array of these substances. Many cleaning products, solvents and pesticides contain moderately to highly toxic chemicals, or may be dangerous in other ways.

These products can pose a threat to your health since misuse or improper disposal can lead to accidental poisoning in the home. Long term or cumulative problems can also occur, such as contamination of drain fields, septic systems, as well as surface and groundwater.

What can you do?

The best way to deal with household hazardous waste is to avoid generating it in the first place.

Use an alternative. Safer substitutes are available for many household hazardous products, but there are certain tradeoffs.

Time and some convenience are the primary tradeoffs. In days past, the sink was scrubbed with baking soda. Extra effort was needed to maintain a stain free sink. Wood floors were cleaned with oil and vinegar and polished with mineral oil or oil soap. This eliminated the need for wax, but required more work. Today, most households contain safe products that can be combined to do the job currently being done by a hazardous product. You can reduce handling, use and disposal hazards associated with dangerous household products by substituting safer alternatives. Some of these alternatives are as simple as immediately mopping up spills with cold water or club soda. Full strength vinegar or lemon juice applied to rust stains or hard water deposits will fade and perhaps eliminate the stain. These options sometimes may require more effort to get the desired results, but the benefits of avoiding hazardous products are worth the trouble.

Reducing the amount of hazardous products you purchase not only saves you money, but also eliminates the threat of accidental exposure to and pollution of the environment.

What should you do if you have hazardous products in your home?

Be aware of the hazards indicated on the label before using the product. By carefully following label directions concerning use, storage and disposal you will get the best results and minimize potential hazards. In most cases, there will be no specific directions for disposal of the “left over” product. The best disposal route for hazardous products is to use them up according to the directions, or share with a friend.

What to do – General Guidelines

Whenever available, follow label directions for proper use, storage, handling and disposal. The following recommendations may be used for general information if label instructions are not complete for a specific product.
BEFORE YOU BUY

- **Think before you buy.**
  - Do you really need this product?
  - Try to find non-toxic alternatives to use.

- **Read the label before you buy.**
  - Make certain that you are buying the product for its intended use.

- **Buy only as much as you will use.**
  - Storage and/or disposal costs can eat up any savings from buying large “economy” size.

STORAGE

- **Follow label directions for storage, if available.**
  - A cool, dry place is usually suitable.
  - Do not allow chemicals to spill or mix together. Toxic or explosive reactions may occur.

- **Keep unused products in their original containers.**
  - The label directions and list of contents may be needed for reference in the case of accidental poisonings and for future use of the product.

- **Never store near food.**

- **Keep all chemicals out of reach of children and pets.**

- **Be aware of what you have on hand to eliminate duplication and more waste.**

USE AND HANDLING

- **Read the label carefully and thoroughly for directions and precautions before using any household chemical.**

- **Use common sense and avoid creating hazards.**
  - Make sure you use all chemical products with adequate ventilation.
  - Avoid splashing, skin contact and breathing of fumes.

- **Do not overuse a product.**
  - Twice as much does not mean twice the results.

- **Do not mix different chemicals together for use.**
  - Explosive or poisonous chemical reactions may occur.

DISPOSAL DO's

- If available, follow label disposal directions.

- Solidify liquid wastes and then dispose of with other household solid waste.

- Dispose of solid waste in original container whenever possible.

- Wrap empty container in several layers of newspaper (to prevent environmental contamination and human and/or animal exposure) and dispose of with other household garbage.

- Keep all chemical wastes out of reach of children and pets.

- Contact the proper authorities if you are not certain what to do.

- Leftover products may be given to others who can use them ONLY if in the original, labeled containers, and ONLY if precautionary statements accompany them.

DISPOSAL DON'Ts

- Do not bury containers, leftover chemicals or products in your yard or garden.

- Do not burn containers or leftover chemicals.

- Do not dispose of liquid chemicals as household waste.

- Never reuse any pesticide or chemical containers yourself (although the chemical itself is gone, residues of the chemical remain in the container and will contaminate whatever is subsequently placed in the container).

- Do not mix wastes together.

- Do not collect various containers and leftover chemicals to dispose of at one time.

For more information, contact:

Michigan State University Extension
Macomb County
(810) 469-5180

County Hazardous Household Products
Collection... (810) 469-5467

Michigan State University Extension programs and materials are open to all without regard to race, color, national origin, sex, handicap, age or religion. Michigan State University, U.S. Department of Agriculture, and Macomb County Board of Commissioners cooperating. MSU is an affirmative action equal opportunity institution.

Printed on recycled paper.
RECYCLING IN MACOMB COUNTY

WHAT TO RECYCLE

NEWSPAPER
Tie in bundles or bag in paper bags. Newsprint only.

GLASS
Rinse clean, separate by color. Labels need not be removed. Remove lids and recycle them with metals.

METAL (TIN) CANS
Magnetic metals; remove labels, rinse clean and flatten to save space.

ALUMINUM
Non-magnetic; pie pans, foil, TV dinner trays, lawn furniture, etc. Rinse clean and flatten.

PLASTIC
Look for recycling symbol with #1 or #2 on bottom. These are the only plastics currently acceptable in this area. Includes: milk jugs, detergent & shampoo bottles, clear containers with a "nipple" on bottom, eg: peanut butter jars. Rinse clean, flatten, discard lids.

USED MOTOR OIL
Collect in sturdy container. Used oil only; no additives, gasoline, antifreeze, etc.

BATTERIES
Car and household batteries. These are both hazardous when disposed of in garbage. Please recycle!
<table>
<thead>
<tr>
<th>PRODUCT</th>
<th>TOXIC EFFECT</th>
<th>DISPOSAL</th>
<th>NON-TOXIC ALTERNATIVE</th>
</tr>
</thead>
<tbody>
<tr>
<td>AUTOMOTIVE PRODUCTS</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Antifreeze</td>
<td>POISON</td>
<td>Hazardous Waste Facility or solidify &amp; dispose.</td>
<td>None.</td>
</tr>
<tr>
<td>Brake &amp; Transmission Fluids</td>
<td>FLAMMABLE</td>
<td>Recycle w/ waste oil, or solidify &amp; dispose.</td>
<td>None.</td>
</tr>
<tr>
<td>Car Batteries</td>
<td>CORROSIVE</td>
<td>Recycle/repair.</td>
<td>None.</td>
</tr>
<tr>
<td>Gasoline &amp; Diesel Fuel</td>
<td>FLAMMABLE/POISON</td>
<td>Reuse after sediment settles/evaporate&amp;dispose</td>
<td>None.</td>
</tr>
<tr>
<td>Waste Oil</td>
<td>FLAMMABLE</td>
<td>Recycle.</td>
<td>None.</td>
</tr>
<tr>
<td>PAINT PRODUCTS</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Enamel, Oil Based, Latex,</td>
<td>FLAMMABLE</td>
<td>Donate to others. Evaporate/solidify &amp; dispose, or take to hazardous waste facility.</td>
<td>Use latex or water-based paints if possible. Take off can lid and allow to harden in outdoor area before throwing away in trash.</td>
</tr>
<tr>
<td>Paint Solvents &amp; Thinners</td>
<td>FLAMMABLE</td>
<td>Recycle, donate, or use hazardous waste facility</td>
<td>Latex and water-based paints don't require thinner.</td>
</tr>
<tr>
<td>PESTICIDES/HERBICIDES AND FERTILIZERS</td>
<td>POISON, SOME ARE FLAMMABLE</td>
<td>Donate to hazardous waste facility, or call Dept. of Agriculture/Coop. Extension.</td>
<td>Keep a &quot;clean&quot; garden—many organisms like to live under plant debris or wood. Remove and destroy infected plants. Take measures against pests. Encourage beneficial organisms which live off pests.</td>
</tr>
<tr>
<td>Chemical Fertilizers</td>
<td>POISON</td>
<td>same as above.</td>
<td>Peat moss or compost. Chemical fertilizers are fast-acting, short-term boosters which may deplete soil's growing capacity with extended use.</td>
</tr>
<tr>
<td>Houseplant Insecticide</td>
<td>POISON</td>
<td>Solidify &amp; dispose.</td>
<td>Soapy water on leaves, then rinse.</td>
</tr>
<tr>
<td>MISCELLANEOUS PRODUCTS</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Outdated Medicines</td>
<td>Hazardous to others</td>
<td>Dilute small amts. and flush down toilet.</td>
<td>Clean out medicine cabinet once a year and throw away outdated medicines.</td>
</tr>
<tr>
<td>Pool Acids &amp; Chlorine</td>
<td>CORROSIVE</td>
<td>Hazardous Waste Facility</td>
<td>None.</td>
</tr>
</tbody>
</table>

Poison Control Center: 745-5711 (metro Det.)  1-800-462-6642 (313 area)  1-800-572-1655 (outside 313)  
County Health Dept.: 1-517-353-6469  1-517-487-6003  697-7830  
DNR Hazardous Waste Division—District Office: 344-4670  
MICHIGAN STATE UNIVERSITY EXTENSION
# Hazardous Household Substances Chart

<table>
<thead>
<tr>
<th>PRODUCT</th>
<th>TOXIC EFFECT</th>
<th>DISPOSAL</th>
<th>NON-TOXIC ALTERNATIVE</th>
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<tbody>
<tr>
<td><strong>Household Cleaners</strong></td>
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<tr>
<td>Abrasive Scouring Powders</td>
<td>CORROSIVE</td>
<td>Hazardous Waste Facility</td>
<td>Baking soda may work as well and there is no abrasion to surface being cleaned or irritation to skin of person using it.</td>
</tr>
<tr>
<td>Aerosols</td>
<td>FLAMMABLE</td>
<td>Turn can upside down. Hold until all pressure is released.</td>
<td>Use non-aerosol products when possible. Mist particles from the aerosol enter the lungs and then the bloodstream. They are also more expensive.</td>
</tr>
<tr>
<td>Air Fresheners</td>
<td>None</td>
<td>Wrap in plastic bag before throwing away.</td>
<td>Ventilate! Or set vinegar out in open dish. Air fresheners coat nasal passages with an oil film, diminishing sense of smell.</td>
</tr>
<tr>
<td>Ammonia and Ammonia-based Cleaners</td>
<td>CORROSIVE (Never mix with chlorine based product—they produce a deadly gas.)</td>
<td>Hazardous Waste Facility, or dilute small amounts.</td>
<td>Vinegar with salt and water is a good general surface cleaner. Well-diluted ammonia is a good general household cleaner.</td>
</tr>
<tr>
<td>Chlorine Bleach</td>
<td>CORROSIVE (Never mix with toilet bowl cleaner)</td>
<td>Dilute small amounts</td>
<td>Use dry bleaches or baking soda—they are safer and less destructive than chlorine bleach. Use Borax to whiten—it is a good grease cutter.</td>
</tr>
<tr>
<td>Drain Openers</td>
<td>CORROSIVE</td>
<td>Solidify with clay or kitty litter and dispose.</td>
<td>Pour boiling water down drain twice a week. Unclog drains with a metal snake or plunger.</td>
</tr>
<tr>
<td>Furniture Polish</td>
<td>FLAMMABLE</td>
<td>Donate to others or solidify, evaporate and dispose.</td>
<td>Melt 1 tbsp. Carnauba Wax into 2 c. mineral oil. For lemon oil polish: dissolve 1 tsp. lemon oil in 1 pint of mineral oil.</td>
</tr>
<tr>
<td>Glass Cleaners</td>
<td>IRRITANT</td>
<td>Dilute small amounts</td>
<td>2 tbsp. vinegar diluted with 1 quart warm water. Use newspapers to dry.</td>
</tr>
<tr>
<td>Oven Cleaner</td>
<td>CORROSIVE</td>
<td>Solidify with clay or kitty litter &amp; dispose.</td>
<td>Keep oven clean as you use it. For baked on grease, put 1/2c. ammonia in overnight, then scrub with baking soda.</td>
</tr>
<tr>
<td>Shoe Polish</td>
<td>FLAMMABLE</td>
<td>Solidify or evaporate and dispose.</td>
<td>Use polishes which do not contain trichloroethylene, methyl chloride, or nitrobenzene.</td>
</tr>
<tr>
<td>Silver Polish</td>
<td>FLAMMABLE</td>
<td>Solidify or evaporate and dispose.</td>
<td>Soak silver in 1 quart warm water with 1 tsp. baking soda, 1 tsp. salt, and small piece of alum. foil</td>
</tr>
<tr>
<td>Spot Removers</td>
<td>FLAMMABLE</td>
<td>Solidify or evaporate</td>
<td>Use professional dry cleaners if possible.</td>
</tr>
<tr>
<td>Toilet Bowl Cleaner</td>
<td>CORROSIVE</td>
<td>Solidify and dispose.</td>
<td>Clean often, use baking soda to scrub.</td>
</tr>
<tr>
<td>Upholstery/Carpet Cleaner</td>
<td>FLAMMABLE and/or CORROSIVE</td>
<td>Hazardous Waste Facility.</td>
<td>Club soda, or immediate cold water, or corn meal and water soak, or large quantities of salt.</td>
</tr>
</tbody>
</table>
As Natural Resources Public Policy Agent, I am pleased to provide you with the enclosed information. I invite you to make use of the many educational programs available through Michigan State University Extension.

Please let me know if I can be of further assistance.

Terry Gibb
NR/PP Agent
BUSINESS HOURS
8:30 A.M.-5:00 P.M.

Agriculture/Horticulture .......... 469-6440
4-H/Youth Development .......... 469-6431
Natural Resources .......... 469-5180
Public Policy
Sea Grant ......... 469-6085
Home Economics .......... 469-6430
4C Child Care .......... 469-6993
Food & Nutrition Education ....... 469-6432

HOTLINES
Master Gardener ...... 469-5063
Gypsy Moth .......... 469-6661
Food Hotline .......... 469-5060
Hotline Hours
Monday, Wednesday, Friday
9:00 A.M.-4:00 P.M.

Toll Free Calling from the following communities:
Center Line, Warren .......... 979-7020
Armada, Romeo .......... 752-4506
Memphis, Richmond .......... 727-3175

Michigan State University Extension programs and materials are open to all without regard to race, color, national origin, sex, handicap, age or religion.
PUBLIC NOTICE

VILLAGE OF ROMEO
YARD WASTE PICK-UP

Please note that Waste Management will be picking up yard waste material for the residents of the Village of Romeo, on Thursdays, April through November. Yard waste material is defined as follows: leaves, grass clippings, vegetable or other garden debris, shrubbery, brush or tree trimmings less than 4 feet in length and 2 inches in diameter, that can be converted to compost humus. Yard waste material does not include stumps, agricultural wastes, animal waste, roots, sewage sludge, or garbage.

Please follow the instructions below for preparing your compost material.

All yard waste must be placed in carts or cans clearly marked with a large "X" (at least 1 foot high on the side of the can) by using masking tape, duct tape or paint. Brown paper compost bags (which are available for purchase at most hardware stores, lawn and garden centers and some of the larger discount stores) may also be used and do not need to be specially marked.

Yard waste may not be placed in plastic bags. Clear plastic and biodegradable plastic will not be accepted.

Brush and branches must be bundled in lengths not to exceed four (4) feet.

All materials should be placed to the curb away from the regular garbage.

If you have any questions about service please contact Waste Management of MI-Mideast, 810-798-3955.

Marian T. McLaughlin, CMC
Romeo Village Clerk

Publish: March 27, 1996
WHAT TO PLACE IN YOUR RECYCLE AMERICA BIN:

PLASTIC - Milk and water jugs, laundry detergent bottles or anything "PET" or "HDPE" stamped on the bottom. Rinse and discard any cap or top. Also, NO plastic motor oil or brake fluid containers will be accepted.

GLASS - Clear, brown or green food and beverage bottles or jars. Rinse clean and remove lid. Labels NEED NOT be removed.

CANS - Soup, vegetable, tuna fish, etc. Rinse clean, REMOVE PAPER LABELS, and flatten.

NEWSPAPERS - NO COLOR GLOSSY INSERTS. Tuck neatly to one side of the bin, or bundle with string and place next to bin. Papers printed in color ink are acceptable (i.e. USA TODAY and SUNDAY COMICS).

STYROFOAM - Rinse, clean, crush and place in "CLEAR" plastic bag, and place in recycling bin.

CARDBOARD - Bundle with twine CLEAN, NON-PLASTIC LINED OR WAX COATED CORRUGATED cardboard and place next to recycling bin (NO PIZZA BOXES).

AUTOMOTIVE BATTERIES - Place next to recycling bin.

Simply place all recyclables together in bin (EXCEPT CARDBOARD AND BATTERIES) and set out next to regular rubbish on your normal pick-up day.

We do not accept:
Plastic containers which are not marked with "PET #1 or "HDPE" #2 (i.e. yogurt and cottage cheese containers). No motor oil or brake fluid containers, light bulbs, window panes, ceramics or Pyrex containers. No phone books, catalogs, magazines and paperboards such as cereal boxes, shoe boxes, etc.

QUESTIONS?
Call Waste Management of Michigan-Mideast
(810) 798-3955
TRASH COLLECTION RULES AND REGULATIONS

We will accept all household garbage.

Items Not Accepted Include:
- Carpet
- Explosives
- Hazardous Wastes
- Herbicides
- Medical Wastes
- Paint Thinners
- Tires and Stumps
- Oil Base Paints
- Construction Debris
- Corrosive Acids
- Flammable Liquids
- Pesticides
- Poisons
- Bulk Items
- Appliances

RECYCLING COLLECTION RULES AND REGULATIONS

Glass - Brown, Green and Clear
- NO broken glass
- Rinse with labels removed
- Lids are to put in with aluminum

Cardboard and Paper
- All boxes must be clean and broken down to conserve space
- No wax board or feed bags
- All papers, magazines and phone books must be in brown paper bags or bundled. NO LOOSE PAPERS.

Plastic
- No antifreeze or oil container can be recycled
- Rinse with labels removed
- Flatten all containers to conserve space

Aluminum
- Rinse with labels removed

For construction and demolition debris, please call our office direct for roll-off containers in 10, 20, 30 and 40 cubic yard capacities.

THANK YOU FOR CHOOSING CITY
APRIL 1, 1996

SPRING AND YARD CLEANUP INFORMATION

COMPOST COLLECTION—Leaves, Grass, Yard and Garden Materials must be curbside by 7:00 a.m. on your regular day of collection, from April 8th through December 6th. As a result of a State Law, "Compost" (Leaves, Grass, Brush/Branches, Yard Material) is "BANNED" from Landfills. Therefore, all compost-type material will be collected separately. These items will only be collected if placed out according to the following rules:

A. NO PLASTIC BAGS! Clear, black, or colors are NOT ACCEPTABLE. NO EXCEPTIONS!
B. 30-35 GALLON CANS with our COMPOST STICKER (blue on white). These compost stickers are available FREE at City Hall, DPW, and Parks and Recreation Dept.
C. 30 GALLON BROWN KRAFT PAPER BAG. This is the ONLY acceptable bag. Available at City Hall—20 Bags for $7.00. Also available at local retailers.
D. BUNDLES FOR TREE TRIMMINGS, BRUSH/BRANCHES (less than 2 inches in diameter). Each bundle can be up to 4 feet long and 18 inches in diameter. Please tie securely.
E. "COMPOST" placed out improperly WILL NOT BE PICKED UP.
F. THIS SEPARATE "COMPOST" Curbside Collection begins on Monday, April 8, 1996 and concludes on December 6th.

DPW CHIPPER SERVICE FOR UNBUNDLED BRUSH, TREES AND BRANCHES.
Unbundled Brush and Tree Branches (larger than 2 inches in diameter) will NOT be picked up with the CURBSIDE COLLECTION. The DPW Forestry Chipper Service is available for $50.00 per hour, with a 1/2 hour ($25.00) minimum charge. A simple contract must be signed before this work can be scheduled. Call the DPW (445-5470) for more information. In most cases the charge for this service is the $25.00 minimum charge.

MORE INFORMATION
Approved COMPOST BAGS will be sold, 20 bags for $7.00, at our HOUSEHOLD HAZARDOUS WASTE DAY on Saturday April 20th.

-SEE OTHER SIDE FOR HOUSEHOLD HAZARDOUS WASTE DAY INFORMATION-
ROSEVILLE HOUSEHOLD HAZARDOUS WASTE DAY
SATURDAY, APRIL 20TH - 10:00 A.M. TO 2:00 P.M.

On Saturday, April 20, 1996, the City of Roseville will sponsor a **HOUSEHOLD HAZARDOUS WASTE DAY** at the Department of Public Works, located at 29411 Calahan, between the hours of 10:00 a.m. and 2:00 p.m. This is **NO CHARGE** for this City Service.

This event is for **Roseville residents only** (no commercial businesses) to **BRING** their hazardous waste materials to the collection area where it will be properly prepared for environmentally safe disposal, reuse or recycling. **Proof of residency will be required** (driver's license)!

Containers over five (5) gallons will not be accepted. More than fifty (50) pounds of a single item likewise will **not** be accepted. **LATEX PAINT** is not considered a hazardous waste. Before placing latex paint in your regular weekly refuse collection, take off the lid and allow the paint to solidify. If the can contains too much paint, add sand or "kitty litter" to hasten solidification. **DO NOT BRING LATEX PAINT TO THE HAZARDOUS WASTE COLLECTION DAY ON APRIL 20, 1996.**

Following are some examples of household hazardous waste products which will be accepted at the site:

**BATHROOM:** Deodorizer, disinfectant sprays, expired medications, fingernail polish/removers

**KITCHEN:** Drain/oven cleaners, home cleaning products, furniture polishes

**GARAGE:** Motor oil, antifreeze, car/marine batteries, **GARDEN:** Pesticides, fertilizers, pool car polishes, solvents & degreasers, engine cleaners, chemicals, weed killers, pet care products and gasoline

**WORKSHOP/BASEMENT:** Oil base paints, paint brush cleaners/solvents, glue (solvent based), paint thinners/stripners, turpentine, varnish and wood preservatives

**MISCELLANEOUS:** Artist paints, dry cleaning solvents, hobby supplies, photographic chemicals, household batteries, aerosol cans

**HOUSEHOLD WASTES WE CANNOT ACCEPT:**

- Injection needles/syringes
- Commercial/industrial wastes
- Compressed gas cylinders/tanks
- Radioactive materials
- Smoke detectors
- Explosives
- Shock sensitive compounds
- Latex paints

**Transporting Materials:**

Please bring materials to the Department of Public Works in the trunk of your car. Do not place them in your back seat where they may spill. Be sure products are in sealed containers and away from children and pet traveling with you. Do not repack materials from the original container to save space. If containers are leaking, dirty or unstable, place them in a box packed with kitty litter, or other absorbent material. We will not clean up spills in your car. Do not mix materials into the same container - a chemical reaction may occur that could cause injury.

When you arrive at the site, you will be directed to the drop off area in the D.P.W. yard. Stay in your vehicle. The Hazardous Disposal Team will unpack your vehicle.

**COMPOST BAGS WILL BE SOLD - 20 for $7.00**

**PINE SEEDLINGS WILL BE GIVEN AWAY FREE TO ALL PARTICIPANTS.**

For more information call 445-5470 (D.P.W.)
ROSEVILLE HOUSEHOLD HAZARDOUS WASTE DAY
APRIL 20, 1996

A. Check for City of Roseville I.D. (Driver's License) for each car
B. Circle or slash number (60 per sheet)
C. Tell participants to follow the orange coned road. The vehicle will be unloaded on the other side of the building (the participants will not have to get out of the vehicle to be unloaded).
D. Reminder—NO LATEX PAINT will be accepted today.
E. Compost bags for sale- 20 for $7.00. Also free Compost stickers.
F. Pick up your FREE pine seedling upon leaving.

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ROSEVILLE HOUSEHOLD HAZARDOUS WASTE DAY  
SATURDAY, APRIL 18TH - 9:00 A.M. TO 1:00 P.M.

On Saturday, April 18, 1998, the Roseville Department of Public Works will host its annual HOUSEHOLD HAZARDOUS WASTE DAY at 29411 Calahan, between the hours of 9:00 a.m. and 1:00 p.m. There is NO CHARGE for this City Service. THE D.P.W. RECYCLING DROP-OFF CENTER WILL ALSO BE OPEN.

This event is for Roseville residents only (no commercial businesses) to bring their hazardous waste materials to the collection area where it will be properly prepared for environmentally safe disposal, reuse or recycling. Proof of residency will be required (driver's license)!

Containers over five (5) gallons will not be accepted. More than fifty (50) pounds of a single item likewise will not be accepted. LATEX PAINT is not considered a hazardous waste. Before placing latex paint in your regular weekly refuse collection, take off the lid and allow the paint to solidify. If the can contains too much paint, add sand or "kitty litter" to hasten solidification. DO NOT BRING LATEX PAINT TO THE HAZARDOUS WASTE COLLECTION DAY ON APRIL 18, 1998.

Following are some examples of household hazardous waste products which will be accepted at the site:

**BATHROOM:** Deodorizer, disinfectant sprays, expired medications, fingernail polish/removers

**KITCHEN:** Drain/oven cleaners, home cleaning products, furniture polishes

**GARAGE:** Motor oil, antifreeze, car/marine batteries, car polishes, solvents & degreasers, engine cleaners

**GARDEN:** Pesticides, fertilizers, pool chemicals, weed killers, pet care products and gasoline

**WORKSHOP/BASEMENT:** Oil base paints, paint brush cleaners/solvents, glue (solvent based), paint thinners/stripppers, turpentine, varnish and wood preservatives

**MISCELLANEOUS:** Artist paints, dry cleaning solvents, hobby supplies, photographic chemicals, household batteries, aerosol cans

**HOUSEHOLD WASTES WE CANNOT ACCEPT:**

- Injection needles/syringes
- Commercial/industrial wastes
- Compressed gas cylinders/tanks
- Mercury
- Smoke detectors
- Explosives
- Shock sensitive compounds
- Latex paints

**TRANSPORTING MATERIALS:**

Please bring materials to the Department of Public Works in the trunk of your car. Do not place them in your back seat where they may spill. Be sure products are in sealed containers and away from children and pet traveling with you. Do not repack materials from the original container to save space. If containers are leaking, dirty or unstable, place them in a box packed with kitty litter, or other absorbent material. We will not clean up spills in your car. Do not mix materials into the same container - a chemical reaction may occur that could cause injury. When you arrive at the site, you will be directed to the drop off area in the D.P.W. yard. Stay in your vehicle. The Hazardous Disposal Team will unpack your vehicle.

Please call or stop by the D.P.W. for more information.

D.P.W.

Phone 445-5470 Fax 445-5472
29411 Calahan - 1/2 mile west of M-97 (Groesbeck) and 1/4 mile north of 12 Mile Rd.
EFFICIENT SANITATION INC. WASTE MANAGEMENT PICKS UP REFUSE AND OTHER MATERIALS PLACED CURBSIDE FOR THE CITY OF ROSEVILLE. ON YOUR COLLECTION DAY, A SEPARATE TRUCK PICKS UP REGULAR REFUSE, RECYCLABLES, COMPOST MATERIALS, AND SPECIAL (BULKY) ITEMS... 4 SEPARATE TRUCKS.

1. Q. When can I place Regular Refuse, Recyclables, Compost or Special (bulky) items curbside for residential collection?
   A. By ordinance, not before 6 P.M. the day before pickup. Make sure all items are out by 7 A.M. on your day of collection.

2. Q. Who should I call if I have problems with the refuse collections or to schedule a Special (bulky) pick-up?
   A. Call E.S.I.-W.M. at 791-5458 for the quickest response. Call the D.P.W. after hours or for collection guidelines, rules and information.

3. Q. What is Special (bulky) pickup?
   A. A separate pick up for large heavy metal items only, such as appliances. Call ESI-WM, 791-5458, to schedule, at least a day in advance.

4. Q. What about mattresses, box springs, stuffed and wooden furniture?
   A. These items are picked up with the Regular Refuse Collection. place items curbside, NO NEED TO CALL OR SCHEDULE.

5. Q. Briefly describe refuse containers, bundles and weight limits.
   A. CANS - plastic or metal 35 gallon or less. BAGS - 30 gallons or less, plastic bags for Regular Refuse, paper (Kraft) bags for Compost. BUNDLES - tied securely, less than 4 1/2 feet long. WEIGHT - 60 pounds or less per Bag, Can or Bundle.

6. Q. How many bags, cans & bundles can be placed our for weekly collection?
   A. No limit as long as items are placed out in proper containers. (bags or cans) and within the weight limit.

7. Q. What about building materials?
   A. Limited quantities are collected with the Regular Refuse Collection. Items must be bundled or in proper cans or bags, all nails and sharp edges removed or pounded down.

8. Q. How and when are grass, leaves, and yard materials picked up?
   A. These materials are picked up with Compost Collection which begins on March 23rd and ends on December 4, 1998.

9. Q. What are the Compost Collection guidelines?
   A. BAGS - 30 gallon (large) approved paper (Kraft) compost bags. No plastic bags! CANS - 35 gallon or less. must have City "blue on white COMPOST sticker" on can. BUNDLES - brush, branches, etc. must be tied securely. Branches must be less than 4 1/2 feet in length and 2 inches in diameter.

10. Q. How do I dispose of unbundled or large volumes of brush, tree limbs etc?
    A. You can dispose of these on your own or schedule the D.P.W. Chipper Service. There is a fee, usually the $25 minimum, and you must sign up. Call the D.P.W. 445-5470, to schedule and for more information.

11. Q. What can I put in the Orange Recycling Bin?
    A. Cans - Tin (aluminum) food/drink containers. Rinse can and remove paper label. Glass containers - food/drink jars and bottles, clear, brown or green. Rinse and discard caps. Newspaper - Newsprint and all that you receive with your paper. Phonebooks also. Place in orange recycling bin or put in paper bags and place on top or side of bin. Plastic containers - only #1 or #2. No motor oil containers, plastic bags or styrofoam. Rinse and crush milk jugs.

12. Q. How do I dispose of Household Hazardous Wastes such as oil based paints/stains, cleaners, solvents, chemicals, glues, lawn and garden sprays, fertilizer, motor oil, anti-freeze etc.?
    A. Bring these items to our Annual Household Hazardous Waste Day on Saturday, April 18th 9 a.m. to 1 p.m. at the D.P.W., 29411 Calahan. No charge, Roseville Residents only. Latex Paint is NOT accepted on Household Hazardous Waste Day. Call the D.P.W. 445-5470 for disposal tips and more information.
ROSEVILLE HOUSEHOLD HAZARDOUS WASTE DAY
SATURDAY, APRIL 19TH - 9:00 A.M. TO 1:00 P.M.

On Saturday, April 19, 1997, the City of Roseville will sponsor a HOUSEHOLD HAZARDOUS WASTE DAY at the Department of Public Works, located at 29411 Calahan, between the hours of 10:00 a.m. and 2:00 p.m. There is NO CHARGE for this City Service. THE D.P.W. RECYCLING DROP-OFF CENTER WILL ALSO BE OPEN.

This event is for Roseville residents only (no commercial businesses) to BRING their hazardous waste materials to the collection area where it will be properly prepared for environmentally safe disposal, reuse or recycling. Proof of residency will be required (driver's license)!

Containers over five (5) gallons will not be accepted. More than fifty (50) pounds of a single item likewise will not be accepted. LATEX PAINT is not considered a hazardous waste. Before placing latex paint in your regular weekly refuse collection, take off the lid and allow the paint to solidify. If the can contains too much paint, add sand or "kitty litter" to hasten solidification. DO NOT BRING LATEX PAINT TO THE HAZARDOUS WASTE COLLECTION DAY ON APRIL 19, 1997.

Following are some examples of household hazardous waste products which will be accepted at the site:

**BATHROOM:** Deodorizer, disinfectant sprays, expired medications, fingernail polish/removers  **KITCHEN:** Drain/oven cleaners, home cleaning products, furniture polishes

**GARAGE:** Motor oil, antifreeze, car/marine batteries  **GARDEN:** Pesticides, fertilizers, pool car polishes, solvents & degreasers, engine cleaners, chemicals, weed killers, pet care products and gasoline

**WORKSHOP/BASEMENT:** Oil base paints, paint brush cleaners/solvents, glue/solvent based, paint thinners/stripners, turpentine, varnish and wood preservatives  **MISCELLANEOUS:** Artist paints, dry cleaning solvents, hobby supplies, photographic chemicals, household batteries, aerosol cans

**HOUSEHOLD WASTES WE CANNOT ACCEPT:**

- Injection needles/syringes
- Commercial/industrial wastes
- Compressed gas cylinders/tanks
- Radioactive materials

- Smoke detectors
- Explosives
- Shock sensitive compounds
- Latex paints

**Transporting Materials:**

Please bring materials to the Department of Public Works in the trunk of your car. Do not place them in your back seat where they may spill. Be sure products are in sealed containers and away from children and pet traveling with you. Do not repack materials from the original container to save space. If containers are leaking, dirty or unstable, place them in a box packed with kitty litter, or other absorbent material. We will not clean up spills in your car. Do not mix materials into the same container - a chemical reaction may occur that could cause injury.

When you arrive at the site, you will be directed to the drop off area in the D.P.W. yard. Stay in your vehicle. The Hazardous Disposal Team will unpack your vehicle.

For more information call 445-5470 (D.P.W.)
Helping You put Knowledge to work

Michigan State University Extension helps people improve their lives through an educational process that applies knowledge to critical issues, needs and opportunities. This is helping people put knowledge to work.

The Extension Service also provides information based on Michigan State University research through printed bulletins that are available through the Extension office.

Michigan State University Extension

Robert A. VerKuilen Building
21885 Dunham
Clinton Twp., MI 48036

(810) 469-5180

Homeowners Guide to Yard Waste Reduction

How to Save Money, Time and Energy and Still Have an Attractive, Healthy Yard!

BUSINESS HOURS
8:30 A.M. - 5:00 P.M.

Agriculture/Horticulture............. 469-6440
4-H/Youth Development............. 469-6431
Natural Resources................... 469-5180
Public Policy
Sea Grant........................... 469-6085
Home Economics..................... 469-6430
4C Child Care......................... 469-6993
Food & Nutrition Education........ 469-6432

HOTLINES
Master Gardener................. 469-5063
Gypsy Moth......................... 469-6661
Food Hotline......................... 469-5060
Hotline Hours
Monday, Wednesday, Friday
9:00 A.M. - 4:00 P.M.

Toll Free Calling from the following communities:
Center Line, Warren........... 919-7020
Armada, Romeo.................. 752-4896
Memphis, Richmond............. 727-3175

Michigan State University Extension is an educational agency with program open to all without regard to race, color, national origin, sex, handicap, age or religion.
Yard Waste makes up 20% of the waste stream annually... and can top 50% of waste collected during summer and fall!

Grasscycling...

... means leaving the grass clipping on the lawn.

Benefits of Grasscycling

♦ Grass clippings are mostly water and nitrogen. They decompose into the grass quickly and return nutrients to your lawn which will result in a greener, healthier lawn.

♦ Chemicals, such as pesticides, herbicides, and insecticides stay on the lawn to do the intended job.

♦ Grasscycling saves money by reducing gas consumption, garbage bags and fertilizer. By returning clippings to the lawn regularly, you can reduce fertilizer use by one application per season.

Citizens are recognizing the advantages of handling yard waste at the source... at your own home.

Grasscycling, mulching and composting are three techniques homeowners can use to save time, money and energy while returning valuable nutrients back into their lawn and garden.

This brochure outlines how to use these techniques in your yard. If you have questions or need further information, please call the Macomb MSU Extension at (810) 469-5180.

Grasscycling quickly and spread them evenly over the lawn surface preventing clumps.

Cutting Small Pieces:

♦ Remove no more than one-third of the grass blade during cutting. This may mean more frequent mowing during the rapid growth times.

♦ Mow grass when it's dry. It will scatter more easily and not form clumps on the lawn.

♦ Cut grass high - at least 2½ - 3". This allows the clippings to filter down to the roots and encourages a larger, deeper root system.

♦ Keep the mower blade sharp. Sharp blades prevent ripping the grass and cut the clippings smaller.

Preventing Clumps:

♦ Using side discharge mowers may result in clumps or "windrows". So mow towards the discharged clippings to re-cut and distribute them over the lawn.

♦ Most rear bagger mowers have a flap that covers the discharge shoot when the bag is removed. This allows the clippings to drop right down onto the grass.

♦ "Mulching" mowers pull the clips up into the mower so they can be re-cut into smaller pieces before depositing on the lawn.

The key to grasscycling is to cut the grass clippings small enough to decompose quickly and spread them evenly over the lawn surface preventing clumps.
Mulching...

...is spreading organic materials over the soil to conserve water, control weeds, moderate soil temperatures and prevent soil erosion. Many yard waste materials can be used successfully as a mulch to reduce yard waste, improve the soil and make gardening easier.

Grass Clippings

When you can't leave the clips on the lawn, collect grass and use as a mulch. Use clippings in a thin (1/2-1") layer around annual and perennial plantings.

Remove all weeds before applying mulch. Grass clippings can be mixed with shredded leaves and spread around plants also.

Leaves

Shredded: Can be spread in 1-1 1/2" deep layer around annual and perennial plants.

Unshredded: Use on perennial beds in autumn.

Wood Chips

Fine chips (less than 1" length) can be spread around trees and shrubs 2-3" deep. Larger chips can be spread to a depth of 6" around trees and shrubs.

Composting...

...is the biological decomposition of organic yard waste under controlled conditions to produce a beneficial soil amendment.

WATER... SOIL... LEAVES... + GRASS... COMPOST

Benefits of Composting

► Increases organic matter in soil
► Builds sound root structure
► Improves soil structure
► Attracts earthworms
► Balances pH of soil
► Helps control soil erosion
► Reduces reliance upon fertilizer
► Reduces watering

The Basics of Composting

There are 4 necessary components of the compost process: materials from your yard; air; moisture; and microorganisms.

Microorganisms:

Your compost pile is alive with microbial activity. Bacteria start the decaying process. Fungi & protozoans join the bacteria and finally centipedes, millipedes, beetles and earthworms complete the process. Each stage of organisms has their own temperature range and they leave and re-enter the pile as temperatures increase & decrease throughout the process.

Air & Moisture

Compost piles should remain "aerobic" (with oxygen) to be most effective. Incorporating air into the pile can be done in 2 ways.

1) Using large pieces of leaves or wood chips. These provide air pockets for oxygen in the pile which are used by the microorganisms during the decomposition process.

2) Turn the pile regularly. This action introduces air into the pile and may provide new air pockets. A rule of thumb for turning relates to the temperature of the pile. When the temperature begins to drop, turn the pile. After turning, the temperature will rise to 140-160°F. When it drops again, turn again.

If you plan to put weeds and plants with seeds into the pile, you should let the pile reach at least 140°F to insure that the seeds from these materials are killed.

If a pile uses up all the oxygen, it is then called an "anaerobic" pile and will begin to smell. Turning the pile usually corrects this problem.

Moisture is essential to composting. However, too much water can prevent the
Compost

Screened (fine) compost can be used around annual and perennial plants to a depth of 1-1½".  
Unscreened compost can be spread 1-2" deep around trees and shrubs.

NEVER use fresh wood chips or sawdust to mulch annual plants. These materials will compete for the nitrogen in the soil resulting in yellow, stunted plants.

Using Mulch Material

*Spread over entire planting area or garden bed.
*Spread in rings around individual plants. Around trees and shrubs mulch should be spread to the drip line (the plant's outermost branches).
*Keep mulch several inches away from plant stem or tree trunk.
*Remove all weeds and grass from the entire area before applying mulch. Loosen compacted soil so that water and air can reach plant roots.

Materials

Anything growing in your yard is potential food for the organisms to decompose. All plant materials contain carbon & nitrogen in different amounts. Carbon is used by microorganisms as an energy source. Nitrogen provides the compost organisms with the raw elements of protein.

The ideal carbon to nitrogen (C:N) ratio for a successful compost pile is 30:1 or 30 parts carbon to 1 part nitrogen. This balance ratio can be achieved by mixing materials of different carbon & nitrogen ratios. (See chart) For example leaves have a high carbon ratio (60:1) while grass clippings have a very low C:N ratio (20:1). By mixing 3 parts leaves with 1 part grass, a 30:1 ratio is achieved.

<table>
<thead>
<tr>
<th>Material</th>
<th>C:N Ratio</th>
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<td>grass</td>
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<td>700:1</td>
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Materials that should not be put in a compost pile:
- Dog/cat feces
- Bones
- Meat
- Dairy products
- Grease

Finally pile size can affect the compost process. A large pile will insulate itself and hold the heat of microbial activity.

Piles larger than 5 feet cubed (5x5x5) don't allow air to reach the microorganisms in the center. A small pile less than 3 cu. ft (3x3x3) will have trouble holding the heat.

The decomposition of materials into usable compost is complete if:
- The pile does not heat up when turned
- There are no (or very few) recognizable materials such as grass or leaves
- The material looks & smells like dirt
- The material has a course brown texture
- The volume of the original pile has decreased by 2/3 - 3/4.
Additional Materials Accepted at the Recycling Dropoff Centers

Used Motor Oil
- D.P.W. Site ONLY
- NO ANTIFREEZE

Car & Household Batteries
- Such as AA, AAA, C, D, 9 volt and rechargeable batteries.

Items NOT Accepted at the Recycling Centers
- Appliances & Furniture
- Building Materials
- Paint
- Plastic bags
- Styro-foam
- Trees/brush

Household Hazardous Waste
The Sterling Heights Recycling Centers DO NOT Accept Household Hazardous Waste for collection. However, the Macomb County Health Department DOES accept Household Hazardous Waste items such as those listed below. Please contact the Macomb County Health Department at (810) 469-5467 for disposal information.

Household Hazardous Waste items include:
- Antifreeze
- Cleaning and household products
- Gardening products

Thank you for recycling!

In compliance with the Americans with Disabilities Act, a copy of this publication will be made in an alternate format upon request.

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Sterling Heights
RECYCLING CENTERS
Open Dawn to Dusk • 7 Days-a-Week • 365 Days-a-Year

THREE
CONVENIENT
LOCATIONS!

DPW Site
Located at 7200 18 Mile Road

15 Mile Road Site
Located adjacent to Beaumartner Park

Clinton River Road Site
Located at 12260 Clinton River Rd.

If you have any questions about the recycling centers, please call the Department of Public Works at (810) 268-3110 or the Community Relations Department at (810) 977-6123, ext. 102
Sterling Heights Recycling Centers

Newspapers, Inserts and Junk Mail
- Newspaper and all inserts that come with the newspaper (staples OK). Newsprint Ads.
- Tie with string or place in paper bag.
- NO PLASTIC BAGS.

Magazines, Glossy Advertisements, Catalogs and Telephone Books
- Glossy magazines and catalogs.
- Glossy advertisements.
- Tie securely with string or put in paper bag with newspapers.

Paperboard/Boxboard Boxes
- Only clean empty paper boxes such as:
  - Cereal boxes
  - Detergent boxes
  - Paper towel roll (inside core)
  - Pizza boxes (outside box only)
  - Pop/beer cartons
- Remove all food, plastic, cellophane, foil and liners.
- NO milk or juice cartons. NO drink boxes.
- Flatten and put in paper bag with newspapers or tie with string.

Plastic Jugs & Bottles
- Clean. Discard caps.
- Only narrow-neck bottles marked 1 (PETE) or 2 (HDPE) on bottom such as:
  - detergent bottles,
  - hair care products,
  - Milk or water jugs.
- NO wide-mouth containers such as margarine tubs or yogurt containers.
- NO containers marked 3, 4, 5, 6, or 7 on bottom.
- NO motor oil containers; microwave dishes or plastic bags.

Glass Bottles & Jars
- Clean. Discard Lids.
- Clear, Brown and Green Glass.
- NO broken glass, mirrors, window glass, light bulbs, or ceramic mugs.

Tin Cans, Small Metal Items & Empty Aerosol Cans
- Clean. Remove both ends and flatten.
- Small metal items such as clothes hangers, silverware, pipe, clean pots and pans, etc. Aerosol cans must be empty.
- ONLY magnetic metals.

Corrugated Cardboard
- Discard packing material, loose food, or badly stained cardboard.
- Fold or cut into 2' x 3' pieces. Tie securely or bundle with paperboard/boxboard.

Aluminum
- NONMAGNETIC metals.
- Clean pie pans, TV dinner trays, lawn furniture, cans.
- Storm or screen doors, remove glass.

See Back Page for Additional Items
## REFUSE CALENDAR
(May, 1996 to April, 1997)

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- **Note:** Refuse collection dates are subject to change. Check the city's website or call 517-736-3580 for the most current information.

## CITY COUNCIL
Mayor Richard J. Notte
Mayor Pro Tem Deanna E. Koski
Councilman Ray R. Fillipchuk
Councilman Ken Nelson
Councilman Jay Pollard
Councilman Steve Rice
Councilwoman Kimberley A. Wiegand

## CITY MANAGER
Steve M. Duchane

---

**REFUSE COLLECTION INFORMATION AND YARD WASTE COLLECTION REGULATIONS**

Refuse must be at the curb by 7:00 A.M.

Set yard waste a few feet away from regular trash.
(If possible, place on opposite sides of your driveway.)

Publishes by:
The City of Sterling Heights
Community Relations Department
810/977-6123, ext. 102
and Department of Public Works
810/977-6123, ext. 177/178

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Printed on Recycled Paper

In compliance with the Americans with Disabilities Act, a copy of this brochure will be made in an alternate format upon request.
NOTICE TO RESIDENTS:
Thank you for your cooperation and support in making the Sterling Heights Refuse Disposal Program more cost-effective and environmentally sound.

Yard waste collection in 1995 was successful in gathering 11,000 tons of grass/leaves for composting, saving landfill space and minimizing the escalating costs of solid waste disposal.

A. CURBSIDE REGULAR REFUSE COLLECTION REQUIREMENTS:
Place refuse containers near the street by 7 A.M. on your scheduled collection day. Use acceptable trash cans and bags (see section D). For disposal of bulky items and other non-yard waste refuse (see section F).

B. SEPARATE CURBSIDE COLLECTION FOR YARD WASTE
1. Place yard waste (see section C) into an acceptable container (see section D) — trash cans marked with an official Yard Waste Decal (see section E) or clear plastic bags (which do not require a Yard Waste Decal).
2. Place yard waste at the curb for pick-up on your regular trash collection day by 7 A.M.
3. Yard waste should be set several feet away on the opposite side of the driveway from regular trash to distinguish it for separate collection.
4. Do not mix yard waste in containers containing regular refuse. Yard waste in improper containers will not be collected.

C. YARD WASTES ACCEPTED FOR SEPARATE CURBSIDE COLLECTION:
- grass clippings
- leaves
- garden vegetables and fruit
- flowers and other "soft" material
- old potting soil
- Halloween pumpkins
- Branches/brush less than 4 feet long, securely tied and bundled

D. ACCEPTABLE REFUSE AND YARD WASTE CONTAINERS

<table>
<thead>
<tr>
<th></th>
<th>Regular Refuse</th>
<th>Yard Waste</th>
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</thead>
<tbody>
<tr>
<td>Trash Cans</td>
<td>32 gal. capacity, 60 lb. limit</td>
<td>Mark can with Yard Waste Decal, 32 gal. capacity, 60 lb. limit</td>
</tr>
<tr>
<td></td>
<td>when full.</td>
<td>when full.</td>
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<tr>
<td>Plastic Bags</td>
<td>30 gal. capacity, 40 lb. weight</td>
<td>Use only clear bags, 30 gal.</td>
</tr>
<tr>
<td></td>
<td>limit when full.</td>
<td>capacity, 40 lb. weight limit</td>
</tr>
<tr>
<td></td>
<td></td>
<td>when full.</td>
</tr>
<tr>
<td>Other</td>
<td>See section F for disposal of</td>
<td>Branches and brush cut less than</td>
</tr>
<tr>
<td></td>
<td>bulky items, paint, carpet,</td>
<td>4 ft. in length and securely</td>
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<tr>
<td></td>
<td>building debris, etc.</td>
<td>tied and bundled less than 3 ft.</td>
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<tr>
<td></td>
<td></td>
<td>around, weighing less than 50 lb.</td>
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</table>

E. YARD WASTE DECAL
Additional decals are available from the Community Relations Department, located on the lower level of City Hall, or from the Department of Public Works, located at 7200 18 Mile Road. Affix one decal per container.

F. DISPOSAL OF BULKY/OTHER REFUSE
Refuse which cannot be placed in containers MUST BE tied and bundled in lengths not exceeding four feet and weighing less than 50 pounds. Remove all nails, screws and protruding objects.

CARPETING AND PADDING should be tied and bundled as detailed above and put with regular refuse.

SMALL QUANTITIES of building debris will be collected with regular refuse if tied and bundled as detailed above.

WHITE GOODS: Large appliances (stoves, refrigerators, washers, dryers & hot water tanks) should be placed out with regular refuse.

The law requires that doors be removed on any refrigerator or freezer placed for collection in order to protect children.

A separate truck will pick up the white goods on your scheduled collection day and deliver them to a recycler.

OTHER BULKY household items such as old furniture and mattresses will be collected as part of regular refuse collection.

CANS OF PAINT: To dispose of paint with your refuse, open can and allow it to dry in open air away from children or pets. You may want to mix in sand, cat litter or other absorbent. Once paint is completely dried, place with lid off with regular refuse.

STERLING HEIGHTS' RECYCLING CENTERS
Residents are encouraged to use the city's three Recycling Centers for voluntary drop-off of newspapers, phonebooks, magazines & glossy inserts, cardboard, junk mail, pizza and cereal boxes, glass jars and bottles, tin & empty aerosol cans, aluminum, #1 & #2 type plastic bottles and jugs, and car and household batteries. Used motor oil may be dropped off at the Department of Public Works site.

The centers are open from dawn to dusk, seven days a week, 365 days a year.

THE THREE LOCATIONS ARE:
Department of Public Works Site located at 7200 18 Mile Road (west side of the D.P.W. building)
15 Mile Road Site located adjacent to Baumgartner Park (between Schoenherr Rd. and Maple Lane)
Clinton River Road Site located at 12260 Clinton River Road (S. side of street, across from Gainsley Dr.)
Recycling of Oil Containers

Although most plastic oil containers display the familiar recycling arrows, unfortunately, the plastic is coated with a thin film of oil and cannot be recycled.

The containers must, therefore, be discarded with the general refuse.

It is recommended that you call the recycling location first to determine:

- Exact Location
- Hours of Operation
- Quantity Limitations
- Residency Requirements

Produced by the Environmental Health Services Division of the Macomb County Health Department (810) 469-5467

Used Motor Oil Recycling

Don't Dump It!

Recycle It!
Waste Oil Statistics

- 60% of consumers change their own oil.

- EPA estimates 210 million gallons of waste oil is generated by “do it yourselves” each year.

- Less than 10% of used oil is recovered through recycling.

- One quart of oil can foul the taste of 250,000 gallons of drinking water.

- It takes only one gallon of used oil, versus 42 gallons of crude oil, to yield 2.5 quarts of lubricating oil.

Recycling saves money and the environment

Waste Oil Recycling Sites

Mt. Clemens/Clinton Twp./Harrison Twp./Fraser

- Valvoline: 42955 Hayes (247-7370)
- Autoworks: 50720 Gratiot (949-5880)
- Fraser DPW: 31250 Kendall (293-1977)
- Montgomery Ward: 35151 Gratiot (791-6380)
- Health Dept.: By Appointment (469-5467)

Sterling Heights

- Valvoline: 43955 Hayes (247-7370)
- D.P.W.: 7200 18 Mile (268-3110)
- Autoworks: 37160 Van Dyke (977-2055)

St. Clair Shores/Roseville/Eastpointe

- Valvoline: 27601 Harper (771-5040)
- Valvoline: 17830 9 Mile (773-0668)
- Autoworks: 36644 Gratiot (445-2920)
- Eastpointe DPW: 17800 10 Mile (445-5040)
- Roseville DPW: 29411 Calahan (445-5470)
- SCS Garage: 19800 Pleasant (445-5363)

Utica/Shelby

- Autoworks: 49125 VanDyke (254-4730)
- Valvoline: 42955 Hayes (247-7370)

Warren/Center Line

- Valvoline: 4117 13 Mile (795-5460)
- Valvoline: 4955 8 Mile (754-2900)
- Autoworks: 23211 VanDyke (754-4500)
- Warren Recycle: 23801 Flanders (775-1400)

Waste Oil Filter Disposal

- The EPA estimates 180 million used oil filters are generated each year by “do it yourselves”.

- Oil filters contain a pint to a quart of used oil.

- Oil filters, after draining, retain two to eight ounces of oil.

- Minimize the amount of oil remaining in oil filters by:
  1. Hot draining
  2. Allow to drain for 24 hours
  3. Puncture the dome end
  • Seal in leakproof container for disposal.

Revised 3/1/97
MACOMB COUNTY
HOUSEHOLD
HAZARDOUS WASTE
COLLECTION
FREE
MACOMB COUNTY
HEALTH DEPARTMENT
Environmental Health Services Division
(810) 469-5467
Call for an appointment

For an
appointment
call the
Macomb
County Health
Department
at
(810) 469-5467

Hazardous
Waste
In
My
Home?

Macomb County Health Department
Environmental Health Services Division

Sponsored by the Macomb County
Board of Commissioners

Revised 3/1/97
PUT YOUR HAZARDOUS WASTE IN ITS PLACE

While much concern about hazardous waste has fallen upon manufacturers, your own household may have a hazardous waste problem. Many pesticides, weed killers, automotive, cleaning products, and hobby supplies contain toxic chemicals which become hazardous waste.

If we simply toss these products in the garbage or down the drain, the result can be pollution to our soil and water.

Do Bring:

Automotive Products
- Gasoline
- Motor Oil
- Battery Acid
- Solvents and Degreasers
- Brake Fluid
- Transmission Fluid
- Spray Paint

Gardening Products
- Pesticides
- Weed Killers
- Poisons
- Sprays and Dusts
- Fertilizers

Household Products
- Oven Cleaner
- Muriatic Acid
- Rat/Ant Poison
- Drain Cleaner
- Pool Chemicals
- Photo Chemicals
- Household Batteries
- Paint Thinner/Solvent
- Paint Stripper
- Nail Polish and Remover
- Aerosols (unless empty)
- Oil Based Paint

Do Not Bring:

- Automotive Batteries
- Smoke Detectors
- Ammunition/Flares/Explosives
- Latex Paint
  - May be dried or solidified and disposed in the regular refuse.

Reminders:

- Appointments are Required
- Only Macomb County households may participate – no business wastes accepted.
- We reserve the right to limit quantities.
- Keep substances in labeled or original containers; do not mix; avoid contact.
- Transport wastes in vehicle trunk.
- Contain leaking wastes in pail.
MACOMB COUNTY POST OFFICE DROP-OFF LOCATIONS:

- ARMADA
- CENTER LINE
- CLINTON TOWNSHIP
- EASTPOINTE
- FRASER
- MT. CLEMENS
- NEW BALTIMORE
- NEW HAVEN
- RICHMOND
- ROMEO
- ROSEVILLE
- ST. CLAIR SHORES
- SHELBY TOWNSHIP
- STERLING HEIGHTS
- UTICA
- WARREN
- WASHINGTON

HOUSEHOLD BATTERY RECYCLING PROGRAM

PARTNERS FOR A BETTER ENVIRONMENT

THE UNITED STATES POSTAL SERVICE AND MACOMB COUNTY HEALTH DEPARTMENT
http://www.macomb.lib.mi.us/mchd/index1.htm

IN COOPERATION WITH THE MACOMB COUNTY BOARD OF COMMISSIONERS
The United States Postal Service and the Macomb County Health Department are partnering to reduce the volume of household batteries destined for landfills and incinerators. Instead, many of the battery components are being recovered and reused.

- Household batteries contain mercury, cadmium, silver, nickel, zinc and lead.

- These elements can pose a significant risk to human health and the environment when disposed in landfills and incinerators.

- The objective of the household battery collection program is to provide Macomb County residents with a free, convenient drop-off location for household batteries.

- The goal of the program is to effectively reduce the volume of household batteries destined for landfills and divert them to recycling centers.

Simply deposit your household batteries in the collection container within the lobby of your local Post Office:

A, AA, AAA, C, D, 6v and 9v batteries from:
- Radios
- Toys
- Smoke Detectors
- Clocks
- Calculators
- Flashlights
- Lanterns

Button Cell batteries from:
- Watches
- Cameras
- Hearing Aids
- Calculators

Rechargeable (Nickel-Cadmium) batteries from:
- Cordless Telephones
- Cordless Appliances
- Cordless Tools

AUTOMOTIVE BATTERIES AND LIQUID CELL BATTERIES WILL NOT BE ACCEPTED

Prudent purchasing can reduce the need for batteries and effectively reduce the amount of pollutants entering our environment:

- Purchase non-battery operated items (solar calculators, direct wired smoke detectors) whenever possible.

- If batteries are necessary, purchasing rechargeable batteries can save money and help the environment.

- If disposable batteries are the only option, look for the low mercury or "environmentally friendly" batteries.

- Do not discard your batteries in the trash. Recycle old batteries through your community recycler or drop them off at your local post office.

FOR ADDITIONAL INFORMATION CALL (810) 469-5467
**Don't Bag It!**
Sterling Heights
Lawn Care Plan

The United States is slowly but surely running out of landfill space. A great variety of materials are placed in landfills, some of which are recyclable and some are not. One fairly significant solid waste product that does not have to go into a landfill at all and which is certainly recyclable is grass clippings.

By following proper landscape management procedures, you can play your part in reducing waste disposal costs and extending the life of existing landfills for as long as possible.

Consider not bagging your grass!

No textbook or research paper ever written about turf grass maintenance suggests that the bagging of grass clippings is a necessary part of lawn care.

The return of clippings to the lawn, and eventually to the soil has always been considered by turf experts to be a natural accepted part of maintaining a lawn.

---

Clippings contain the nutrients your lawn needs to grow!

Clippings contain about 4% nitrogen, .5% phosphorus, and about 2% potassium. You can reduce your fertilization needs by 20% to 30% by recycling lawn clippings back into the lawn. In fact, leaving clippings on the lawn is like applying an extra application of fertilizer during the growing season.

Grass clippings reduce water evaporation from the lawn. They also reduce lawn wear by creating a cushioning layer, and facilitate better growth by keeping soil temperature cool.

---

Clippings do not create thatch!

Research conducted at Michigan State University has shown that returning the clippings to the lawn has no effect on the accumulation of thatch. Thatch is made up of roots, dead leaf sheaths, and rhizomes, which decompose slowly. Grass clippings decompose rapidly and can help make your lawn more vigorous and durable.

---

**Don't Bag It!**

Lawn Care Tips

1. Mow when your grass is dry and 3" to 4" tall. Never cut it shorter than 2" to 2.5" in height. This will allow your lawn to have a larger and deeper root system - making a stronger defense against weeds and droughts.

2. Use a sharp mower blade. (mulcher mower if available) A sharp blade and frequent mowing will mean finer clippings that will decompose quickly.

3. Avoid over-fertilizing your lawn.
MISCELLANEOUS ITEMS

Efficient Sanitation is contracted by the city to pick up all garbage, furniture, appliances, wood (bundled in 50 lbs. or less, nails removed or pounded down), carpeting (rolled and tied) and miscellaneous household items. It is not necessary to call the D.P.W. office or Efficient Sanitation to schedule pickup. Efficient Sanitation will automatically pick up the items as long as they are set out with your garbage that morning. Items that are not set out will not be picked up until the following week. Appliances must either have the doors removed or tied shut for safety. When a holiday falls on a weekday, refuse will be picked up one day after your normal scheduled day.

CITY OF FRASER

RECYCLING INFORMATION

THE INFORMATION CONTAINED IN THIS BOOKLET EXPLAINS THE PROPER PROCEDURES FOR PLACING YOUR RECYCLABLE MATERIALS IN YOUR RECYCLING BIN FOR PICKUP BY EFFICIENT SANITATION. IF YOU HAVE ANY QUESTIONS CONCERNING ANY OF THIS INFORMATION, PLEASE CALL THE CITY OF FRASER, DEPARTMENT OF PUBLIC WORKS AT 293-1977.

THE RECYCLING BINS ARE PICKED UP ON YOUR REGULAR GARBAGE PICKUP DAY. RECYCLING BINS ARE POPULAR ITEMS. DO NOT LEAVE THEM OUT OVERNIGHT. RESIDENTS ARE RESPONSIBLE FOR THE BINS AND MUST REPLACE THEM IF LOST OR STOLEN. IF YOU NEED A REPLACEMENT BIN, WE WILL FURNISH ONE AT COST OF $5.00. IF YOU MOVE, PLEASE LEAVE YOUR BIN IN THE HOME FOR THE NEW RESIDENT.
MILK, JUICE CARTONS, & DRINK BOXES

Includes any size dairy or juice carton (e.g. half pint, pint, quart, half gallon for milk, cream, whipping cream, etc.), juice cartons with foil lining, juice cartons with plastic spout (leave spout in), egg cartons for liquid eggs, and drink boxes for juice, fruit drinks, milk or soy beverages. Empty out all liquid of the containers (put drink box straw in garbage), rinse cartons (do not rinse drink boxes). Flatten and place cartons and drink boxes in the same paper bag. Set out with your recycling bin. DO NOT MIX WITH OTHER PAPER OR CARDBOARD.

MOTOR OIL

Motor oil can be brought to the D.P.W. yard to dispose of. After dumping the motor oil in the proper drum, you must take your containers with you. Do not put motor oil in your recycling bin. Motor oil dumped in the ground or in sewers pollutes our land and ground water. Oil can be recycled.

BATTERIES

Household and auto batteries can also be brought to the D.P.W. yard. Do not put these items in your recycling bin.
PAINTS
(TURPENTINE & CHEMICALS)

Leftover paint is not recyclable. Latex paint can be disposed of by allowing the paint to dry in the can, or absorbing the liquid with sand or cat litter. The can with dried paint can then be placed in the regular trash for pickup. Oil based paint cannot be disposed of in any form with your trash. For more information regarding disposal of oil based paint, turpentine and miscellaneous chemicals, call their office at 469-5467.

ALL UNACCEPTABLE OR IMPROPERLY PREPARED MATERIALS WILL BE LEFT IN YOUR BIN.
NEWSPEPAPERS

Place newspapers in brown paper bags or tie in 6-8" bundles. Do not use plastic bags. Remove glossy inserts like coupons and ads. Comics, Sunday supplements and telephone books are OK. No magazines, junk mail, cardboard or other paper.

GLASS BOTTLES & JARS

Unbroken clear, green, or brown glass jars or bottles. Rinse and remove the lids. Recycle any metal lids. Labels do not have to be removed. No window glass, mirrors Pyrex, ceramics or dishes.

METAL & ALUMINUM CANS

Tin, aluminum and metal cans. Rinse clean, remove labels and flatten. A simple method is used to remove tops and bottoms of cans, put them inside of can, place the can seam on the floor and step on it to flatten.

PLASTIC CONTAINERS

Includes all milk and water jugs and some juice, detergent and health care product containers. Any container marked with the plastic code #1 or #2 on the bottom is acceptable.

BRUSH PICKUP

The department of Public Works will pick up brush on Thursday and Friday of each week weather permitting. Any brush to be picked up must be called into the D.P.W. office before 3:30 p.m. on Thursday of each week. Any calls after 3:30 p.m. on Thursday will be held for pickup on the Thursday and Friday of the following week. Pickups that are not called in will not be picked up. Do not place items out until the D.P.W. has been notified and date is set for pickup.

All brush shall be neatly piled at the curb with the butts of the limbs all facing the street. This pertains to tree limbs up to 3" in diameter. There cannot be any other rubbish, vines, thorns, or bushes in this pile, otherwise it will not be picked up.

Small twigs and branches can be cut in 3" lengths and tied in bundles with twine or strong cord, but under no circumstances is wire to be used; then place the bundles at the curb. Smaller brush trimmings that cannot be tied into bundles must be cut up and put in open containers and placed out on your regular garbage day for composting.

All bushes which are removed from the ground with roots must have the roots removed. Stumps will not be picked up by the D.P.W. It is the responsibility of the homeowner to dispose of the stumps.

There will be a $50.00/per hour charge rendered to any contractor for any of the above services.
MASTER COMPOSTER COURSE

The Macomb MSU Extension is offering the Master Composter course on yard waste composting and reduction.

Thursdays - 1:30 - 4 p.m. or 6:30 - 9 p.m.
October 2 - November 13, 1996
VerKullen Bldg. - Assembly Room
21885 Dunham Rd., Clinton Twp.

Become a Master Composter by returning the enclosed registration form to the Macomb MSU Extension.

Registration deadline: September 26, 1997

MSU Extension programs are open to all without regard to race, color, national origin, sex, disability, age or religion.
Why learn to compost?

Backyard composting will:

- reduce waste that must be disposed of
- improve your garden and flower beds at little or no cost
- provide a rich humus without producing odors or attracting critters
- comply with Michigan legislation that prohibits landfilling or incinerating yard waste

The Master Composter program has two objectives:

1. to provide individuals with current, correct knowledge and information on composting and
2. to promote the sharing of this knowledge with others in the community through a variety of volunteer activities.

The MSU Extension Master Composter classes are team taught by regional Extension agents, Michigan State University specialists and other local experts.

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<thead>
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<th>Course Topics</th>
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<td>History of composting</td>
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<td>Michigan Legislation &amp; local</td>
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<td>ordinances</td>
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<td>Composting composition &amp; chemistry</td>
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<td>Bin &amp; site selection</td>
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<td>Basic composting techniques</td>
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<td>Application to garden soils</td>
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<td>Uses of finished compost</td>
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<td>Worm composting &amp; bin building</td>
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</tbody>
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Option: Field trip to model compost facility
CENTERLINE - 757-6800
6685 Ten Mile Road, north of DPW
Mon-Fri 7:30-5, Wed 8-8, Sat 8-noon. Summer Sat. 7:30-5 Newspapers and inserts, magazines, glass 1 & 2 plastic, aluminum, tin. Residents only.

CHESTERFIELD TOWNSHIP - 1-800-495-6054 See City Environmental Services East

CITY ENVIRONMENTAL SERVICES EAST - 1-800-495-6054 (formerly Raska Disposal)
Offers curbside recycling to residents of communities listed. Also accepts styrofoam from schools and industry. Accepts furniture and appliances. No chemicals.

CLINTON TOWNSHIP - 286-8000
Public Works Garage, 38201 Garfield, M-F, 7am-3pm Motor oil, car batteries. Residents only. Curbside collection for homeowners.

EASTPOINTE - 445-6840
DPW, 17000 Ten Mile Rd., M-F, 8:30am-3pm Used motor oil, car and household batteries only. Residents only. Curbside collection for homeowners.

FRASER - 283-3102
D.P.W. 31250 Kendall, M-F, 7am-3pm. Glass, newspaper, tin, aluminum, plastic 1 & 2, car and household batteries, styrofoam, motor oil, antifreeze. Residents only.

GREAT LAKES PAPER COMPANY - 779-1310
30615 Groesbeck between 12 & 13 Mile, M-F: 7am-5pm, Sat: 8am-1pm. Newspaper, office paper, cardboard, computer paper, magazines, aluminum, metal, car batteries, paper, glass. No hazardous materials.

HARRISON TOWNSHIP - 468-0647
Curbside recycling: ESI 791-5458, City Disposal 468-0647, City Environmental Services East 1-800-495-6054.

LENNOX TOWNSHIP - 749-6306
Pine Tree Acres: 29 Mile Road, 2nd and 4th Sat. each month. Newspaper, glass, tin, 1 & 2 plastic. OPEN TO THE PUBLIC.

MACOMB COUNTY HEALTH DEPARTMENT - 469-5467
4325 Elizabeth Rd., Appointment only. Household hazardous waste and used motor oil, household batteries.

MACOMB TOWNSHIP - See City Environmental Services East.

MT. CLEMENS - 469-6845
145 Hubbard Mon-Sat, 8am-2pm. Newspaper, glass, aluminum, 1 & 2 plastic, metal, car and household batteries, corrugated cardboard, and while office paper. Residents only.

NEW BALTIMORE - See City Environmental Services East.

NEW HAVEN - See City Environmental Services East.

RAY TOWNSHIP - 749-5171
18091 29 Mile Rd., bet. Kunstman & Romeo Plank, 2nd Sat. each month 9am-4pm. Used motor oil only. Residents only. Call City Environmental Services East 1-800-495-6054 for curbside pickup.

RICHMOND - See City Environmental Services East.

ROMEO - 752-2684

ROSEVILLE - 445-5470
DPW: 29411 Callahan between 12 Mile & Common Rd., Mon-Fri. 7:30am-3pm and the first Sat. of each month 9am-11am. Newspaper, corrugated cardboard, glass, glossies, magazines, aluminum, tin, & 2 plastic, used motor oil, antifreeze, car batteries. Residents only.

ST. CLAIR SHORES - 445-5353
19700 Stephens, 7am-3:30pm. Cardboard, aluminum, batteries, car batteries, motor oil. Residents only. Curbside pickup for other items.

SHELBY TOWNSHIP - Curbside Pickup. 1-800-878-4626, or (248) 358-4626.

STERLING HEIGHTS - 288-3110
DPW, 7200 18 Mile Rd, bet. Mound & Van Dyke. Daylight to dusk, 7 days a week. Motor oil at DPW site only.
12850 15 Mile Rd. (next to fire station).
12260 Clinton River Rd. Sits accept newspaper, glass, metal, aluminum, 1 & 2 plastics, car batteries, household batteries. Residents only.

UTICA - Curbside pickup only.

WARREN - 775-1400
Sanitation Dept.: 25801 Flanders (off Frazho), Mon-Fri. 7:30am-4pm; Sat: 8am-12 noon. Newspaper, glass, metal, aluminum, 1 & 2 plastics, iron debris, appliances, old electrical cords, car batteries, used motor oil (5 gal limit). Residents only.

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OIL RECYCLING - If your community does not have a used oil collection site, take your oil to the following:
Check telephone book for locations.
+ Valvoline Quick Oil Change Shops.
+ Murray's Auto Stores
+ Pep Boys Auto Stores

HOUSEHOLD BATTERIES - All local Post Offices accept household batteries.

COUNTY HAZARDOUS HOUSEHOLD WASTE - 469-5467
COLLECTION PROGRAM - Appointment only.

FOR FURTHER INFORMATION, CONTACT THE MACOMB MSU EXTENSION AT 469-5180

MICHIGAN STATE UNIVERSITY EXTENSION
MACOMB COUNTY BOARD OF COMMISSIONERS

4-98
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