

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.

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

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.

Composting Operating Parameters:

The following identifies some of the operating parameters which are to be used or are planned to be used to monitor the composting programs.

Existing Programs:

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

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 mesopyllic 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:

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

COORDINATION EFFORTS:

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

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

COSTS & FUNDING:

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

Management, capital, and operational and maintenance costs for the selected system are included in municipal budgets, hauling contracts, disposal fees, contracts between homeowners and refuse collection firms, and private sector budgets. The cost for various components cannot be separated from these budgets and local fees.

System Component¹	Estimated Costs	Potential Funding Sources
<u>Resource Conservation Efforts</u>		
<u>Resource Recovery Programs</u>		Municipalities
<u>Volume Reduction Techniques</u>		
<u>Collection Processes</u>		
<u>Transportation</u>		
<u>Disposal Areas</u>		
<u>Future Disposal Area Uses</u>		
<u>Management Arrangements</u>	Approximately \$50,000 to monitor and implement the Plan.	
<u>Educational & Informational Programs</u>	Macomb County budgets approximately \$80,000 for household hazardous waste disposal and various solid waste education programs.	

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

EVALUATION SUMMARY OF THE SELECTED SYSTEM:

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

The selected 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.

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 curbside 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.
- 4.
- 5.
- 6.
- 7.
- 8.

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:

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.
- 2.
- 3.
- 4.
- 5.
- 6.
- 7.
- 8.

DISADVANTAGES:

- 1.
- 2.
- 3.
- 4.
- 5.
- 6.
- 7.
- 8.

APPENDIX C
PUBLIC PARTICIPATION

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

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6/10/98

Robin Demuyneck

Subscribed and sworn to before me on this 15 th

day JUNE A. D., 19 98

Susan G. Charlton

Notary Public in and for said County
SUSAN G. CHARLTON

Notary Public, Macomb County, Michigan
My Commission Expires: May 20, 1999

Commission expires: ACTING IN MACOMB COUNTY

PRINTER'S BILL

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201 05C

25307 MACOMB COUNTY PLANNING COMM.

MACOMB-SOLID WASTE

**Notice of
Public Hearing**
**Macomb County Solid Waste
Management Plan**

Date: September 8, 1998

Time: 4:00 p.m.

Place: Board of Commissioners'
Conference Room
Second Floor
Macomb County Court Bldg.
Downtown Mt. Clemens

Copies of the Plan are available
for inspection at:

Macomb County Library
16480 Hall Road
Clinton Township

Macomb County Health
Department
Environmental Health Division
County Service Center
43525 Elizabeth
Mount Clemens

Macomb County Board of
Commissioners' Office
Second Floor
Macomb County Court Building
Downtown Mount Clemens
Macomb County Planning and
Economic Development
115 South Groesbeck Highway
Mount Clemens

Copies may also be purchased
from the Offices of the Macomb
County Planning and Economic
Development Department. Please
call for details (810) 469-5285.

John C. Hertel

Chairman
Macomb County
Board of Commissioners

James McKiernan

Chairman
Macomb County Solid Waste
Planning Committee

**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

RE: June, 1998 Draft of Macomb County Solid Waste Management
Plan Update, prepared by RMT, Inc., Michigan

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. McKiernan

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.

SOLID WASTE PUBLIC HEARING
SEPTEMBER 8, 1998 MEETING
SIGN-IN SHEET

NAME	AGENCY	ADDRESS
1. <u>TERRY PAUL</u>	<u>CITY OF STER. HTS</u>	<u>7200 18 MILE STER. HTS., MD 48314</u>
2. <u>JOS CASHAM</u>	<u>SHAWNEE 22001</u>	<u>22001 HOOVER WALK RD #8089</u>
3. <u>GREG CARPENTER</u>	<u>CITY MANAGER</u>	<u>366025 MILE RD LENT MD</u>
4. _____		
5. _____		
6. _____		
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SEP 4 1998

PLANNING & ECONOMIC DEVELOPMENT

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:

Oakland County	150,000 cubic yds.
St. Clair County	50,000 cubic yds.
Wayne County	150,000 cubic yds.

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 BFI 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.

Draft Macomb Solid Waste Plan
September 3, 1998
Page 2

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 advertized 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.

Draft Macomb Solid Waste Plan
September 3, 1998
Page 3

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,



Kathleen A. Klein
Market Development Manager
BFI Arbor Hills Center for Resource Management



CORPORATE HEADQUARTERS
22001 HOOVER ROAD • WARREN, MI 48089
Phone (810) 939-3322
Fax (810) 756-7927

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.

A handwritten signature in black ink, appearing to read 'Dominic Campo', is written over the word 'Sincerely,'.

Dominic Campo
Executive Vice President

1709 DRYDEN ROAD, P.O. BOX 360
METAMORA, MI 48455

Phone (810) 678-2269
Fax (810) 678-8135

9450 U.S. TURNPIKE
NEWPORT, MI 48166

Phone (313) 379-4624
Fax (313) 379-0775

14003 GODDARD ROAD
DETROIT, MI 48212

Phone (313) 869-4200
Fax (313) 869-4205



Richmond Township

75701 Memphis Ridge • Richmond, MI 48062
(810) 727-7134 • Fax (810) 727-5208

KEITH RENGERT
Supervisor

1500 Memphis Ridge 727-7134

CAROLYN FUERSTENAU
Clerk

75727 Olive Plank 727-7104

DIANE ANAS
Treasurer

1500 Venus Road 727-7134

SHARRON HASK
Trustee

1500 Armada Ridge 727-7134

FRED BARTONIEWICZ
Trustee

75701 Memphis Ridge 727-7134

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

RE: Support of June 1998 Draft of Macomb County Solid Waste Management Plan.

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



ADMINISTRATION BUILDING
5 Utica Road • P.O. Box 8009
Sterling Heights, MI 48311-8009
TEL 810.977.6123 • FAX 810.977.6239
WEBSITE www.ci.sterling-heights.mi.us

CITY COUNCIL
Mayor Richard J. Nott
Mayor Pro Tem Kimberley A. Weiland
Councilwoman Deanna F. Koski
Councilman Ken Nelson
Councilman Jay P. Clark
Councilman Steve Rice
Councilman Joseph V. Romano
CITY MANAGER
Steve M. Duchane

September 2, 1998

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

RE: June, 1998 Draft of Macomb County Solid Waste Management Plan Update, prepared by RMT, Inc., Michigan

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

Solid Waste Planning Committee Members
June, 1998 Draft of M.C.S.W Management Plan Update
September 2, 1998
Page 2

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

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



ST. CLAIR SHORES

Flagship of
LAKE ST. CLAIR

MAYOR:
CURTIS L. DUMAS

MAYOR PRO-TEM:
ROBERT G. SOULLIERE

COUNCILMEMBERS:
FRANK P. BENSON
MICHAEL A. BOTLE
ROBERT A. HISON
WILLIAM J. NEARON
PATRICIA M. REAVER

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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 1-4, 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

Mr. Bernard E. Giampetroni
Page 2
November 9, 1998

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

Mr. Bernard E. Giampetroni
Page 2
November 9, 1998

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



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.

- I. *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 sec.

(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)

Township or Municipality Name	Population	% Land Use			% of Economic Base*			
		Rural	Urban	Ag	For	Ind	Com	Oth
<u>Armada</u>	<u>1673</u>	<u>58</u>	<u>42</u>	<u>27</u>	<u>NA</u>	<u>3</u>	<u>12</u>	<u>58</u>
<u>Armada Twp.</u>	<u>4079</u>	<u>89</u>	<u>11</u>	<u>99</u>	<u>NA</u>	<u>0</u>	<u>0</u>	<u>1</u>
<u>Bruce Twp.</u>	<u>6426</u>	<u>66</u>	<u>44</u>	<u>58</u>	<u>NA</u>	<u>34</u>	<u>1</u>	<u>7</u>
<u>Center Line</u>	<u>8337</u>	<u>24</u>	<u>76</u>	<u>0</u>	<u>NA</u>	<u>40</u>	<u>25</u>	<u>34</u>
<u>Chesterfield Twp.</u>	<u>33733</u>	<u>74</u>	<u>23</u>	<u>54</u>	<u>NA</u>	<u>17</u>	<u>11</u>	<u>19</u>
<u>Clinton Twp.</u>	<u>96836</u>	<u>43</u>	<u>57</u>	<u>1</u>	<u>NA</u>	<u>12</u>	<u>28</u>	<u>58</u>
<u>Eastpointe</u>	<u>34527</u>	<u>22</u>	<u>78</u>	<u>0</u>	<u>NA</u>	<u>4</u>	<u>43</u>	<u>53</u>
<u>Fraser</u>	<u>15135</u>	<u>28</u>	<u>72</u>	<u>1</u>	<u>NA</u>	<u>51</u>	<u>22</u>	<u>27</u>
<u>Harrison Twp.</u>	<u>26105</u>	<u>66</u>	<u>33</u>	<u>0</u>	<u>NA</u>	<u>3</u>	<u>7</u>	<u>90</u>
<u>Lenox Twp.</u>	<u>5960</u>	<u>91</u>	<u>9</u>	<u>87</u>	<u>NA</u>	<u>4</u>	<u>1</u>	<u>8</u>
<u>Macomb Twp.</u>	<u>38969</u>	<u>79</u>	<u>21</u>	<u>82</u>	<u>NA</u>	<u>1</u>	<u>2</u>	<u>15</u>
<u>Memphis</u>	<u>1030</u>	<u>72</u>	<u>28</u>	<u>65</u>	<u>NA</u>	<u>2</u>	<u>4</u>	<u>29</u>
<u>Mount Clemens</u>	<u>17685</u>	<u>36</u>	<u>64</u>	<u>1</u>	<u>NA</u>	<u>29</u>	<u>31</u>	<u>39</u>
<u>New Baltimore</u>	<u>7545</u>	<u>71</u>	<u>29</u>	<u>31</u>	<u>NA</u>	<u>6</u>	<u>15</u>	<u>48</u>
<u>New Haven</u>	<u>2960</u>	<u>79</u>	<u>21</u>	<u>45</u>	<u>NA</u>	<u>22</u>	<u>5</u>	<u>28</u>
<u>Ray Twp.</u>	<u>4154</u>	<u>91</u>	<u>9</u>	<u>92</u>	<u>NA</u>	<u>0</u>	<u>0</u>	<u>8</u>
<u>Richmond</u>	<u>5241</u>	<u>55</u>	<u>45</u>	<u>31</u>	<u>NA</u>	<u>26</u>	<u>17</u>	<u>26</u>
<u>Richmond Twp.</u>	<u>3084</u>	<u>92</u>	<u>8</u>	<u>98</u>	<u>NA</u>	<u>1</u>	<u>0</u>	<u>1</u>
<u>Romeo</u>	<u>3913</u>	<u>48</u>	<u>52</u>	<u>16</u>	<u>NA</u>	<u>53</u>	<u>5</u>	<u>26</u>
<u>Roseville</u>	<u>49757</u>	<u>24</u>	<u>76</u>	<u>0</u>	<u>NA</u>	<u>36</u>	<u>37</u>	<u>27</u>
<u>St. Clair Shores</u>	<u>65277</u>	<u>21</u>	<u>79</u>	<u>0</u>	<u>NA</u>	<u>8</u>	<u>28</u>	<u>55</u>
<i>Summers</i>	<i>68107</i>	<i>5%</i>	<i>95%</i>	<i>0</i>		<i>1%</i>	<i>10%</i>	<i>89%</i>

Chris Data Agrees

B.G.D. JC



DEPARTMENT OF ENVIRONMENT AND INFRASTRUCTURE SERVICES

PUBLIC WORKS DIVISION

110 NORTH FOURTH AVENUE

P.O. BOX 8645, ANN ARBOR, MI 48107-8645

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,

[Handwritten signature]

Susan Todd
Solid Waste Coordinator
Enc.

RECEIVED
AUG 14 1998
PUBLIC WORKS DIVISION

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	Dickinson	Lake	Oceana
Alger	Eaton	Lapeer	Ogemaw
Allegan	Emmet	Leelanau	Ontonagon
Alpena	Genesee	Lenawée	Osceola
Antrim	Gladwin	Livingston	Oscoda
Arenac	Gogebic	Luce	Otsego
Baraga	Grand Traverse	Macinac	Ottawa
Barry	Gratiot	Macomb	Presque Isle
Bay	Hillsdale	Manistee	Roscommon
Benzie	Houghton	Marquette	Saginaw
Berrien	Huron	Mason	Saint Clair

EXHIBIT A

As Proposed: 08/10/98

Alcona	Dickinson	Lake	Oceana
Alger	Eaton	Lapeer	Ogemaw
Allegan	Emmet	Leelanau	Ontonagon
Alpena	Genesee	Lenawee	Osceola
Antrim	Gladwin	Livingston	Oscoda
Arenac	Gogebic	Luce	Otsego
Baraga	Grand Traverse	Macinac	Ottawa
Barry	Gratiot	Macomb	Presque Isle
Bay	Hillsdale	Manistee	Roscommon
Benzie	Houghton	Marquette	Saginaw
Berrien	Huron	Mason	Saint Clair
Branch	Ingham	Mecosta	Saint Joseph
Calhoun	Ionia	Menominee	Sanilac
Cass	Iosco	Midland	Schoolcraft
Charlevoix	Iron	Missaukee	Shiawasee
Cheyboygan	Isabella	Monroe	Tuscola
Chippewa	Jackson	Montcalm	Van Buren
Clare	Kalamazoo	Montmorency	Wayne
Clinton	Kalkaska	Muskegon	Wexford
Crawford	Kent	Newago	
Delta	Keweenaw	Oakland	

This authorization is contingent upon the receiving County explicitly authorizing the receipt of Washtenaw County waste in their approved Part 115 Solid Waste Plan.



**Saginaw County Metropolitan
Planning Commission**

400 Court Street

Saginaw, Michigan 48602

Phone: (517) 797-6800 • Fax: (517) 797-6809

Date: September 23, 1998

To: Bernard E. Giampetroni, Executive Director
Macomb County Department of Economic Development

From: Christina Pecoraro, Associate Planner CP

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.

SEP 25 1998

PLANNING AND ECONOMIC
DEVELOPMENT

**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

DB
JB

Roger J. Smith, P.E., Manager

November 9, 1998

FAX TRANSMITTAL 810-469-6787

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.

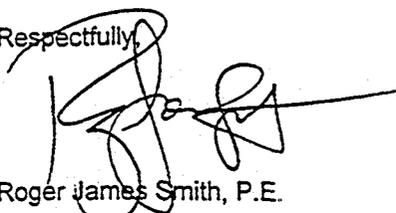
We understand that the Macomb County Plan Update is currently drafted to allow for the inter-county flows of wastes between Macomb County and Oakland County. Specifically, the Macomb County documents propose that the Pine Tree Acres landfill would be authorized to receive up to 500,000 gateyards of wastes 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.

RECEIVED

NOV 12 1998

PLANNING AND ECONOMIC
DEVELOPMENT



Region 2 Planning Commission

Jackson County Tower Building - 16th Floor
120 West Michigan Avenue
Jackson, Michigan 49201

Fax: 517-788-4635

517-788-4426

Email: Region2@dmci.net

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.

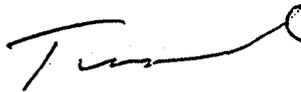
The draft Lenawee County plan update contains the following conditions regarding the import of solid waste into Lenawee County:

- 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,

A handwritten signature in black ink, appearing to read 'Tim Anderson', with a long horizontal stroke extending to the right.

Timothy Anderson
Senior Planner

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: 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: Larry K. Wibbeler

Operating Status

open
 closed
 licensed
 construction permit
 open, but closure
 pending

Waste Types Received

residential
 commercial
 industrial
 construction and demolition
 contaminated soils
 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: 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: 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: Rollin Township

Operating Status	Waste Types Received
<input checked="" type="checkbox"/> open	<input checked="" type="checkbox"/> residential
<input type="checkbox"/> closed	<input type="checkbox"/> commercial
<input type="checkbox"/> licensed	<input type="checkbox"/> industrial
<input type="checkbox"/> construction permit	<input type="checkbox"/> construction and demolition
<input type="checkbox"/> open, but closure	<input type="checkbox"/> contaminated soils
<input type="checkbox"/> pending	<input type="checkbox"/> special wastes*
	<input type="checkbox"/> other:

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

Site Size:

Total area of facility property: 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

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	Waste Types Received
<u> X </u> open	<u> X </u> residential
<u> </u> closed	<u> X </u> commercial
<u> X </u> licensed	<u> X </u> industrial
<u> </u> construction permit	<u> X </u> construction and demolition
<u> </u> open, but closure	<u> X </u> contaminated soils
<u> </u> pending	<u> X </u> special wastes*
	<u> X </u> other:

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

Asbestos and sludges per operating policy.

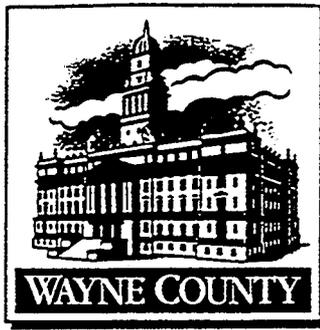
Site Size:

Total area of facility property:	<u> 421 </u> acres
Total area site for use:	<u> 287 </u> acres
Total area permitted:	<u> 40 </u> acres
Operating:	<u> 19 </u> acres
Not excavated:	<u> 20 </u> acres

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

(if applicable)

Annual energy production:	
Landfill gas recovery projects:	<u> 20,148 </u> megawatts
Waste-to-energy incinerators:	<u> </u> megawatts



Edward H. McNamara
County Executive

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.

DEPARTMENT OF ENVIRONMENT
3600 COMMERCE COURT • BUILDING E • WAYNE, MICHIGAN 48184
(734) 326-3936 FAX (734) 326-4421

Mr. Giampetroni
July 21, 1998
Page Two

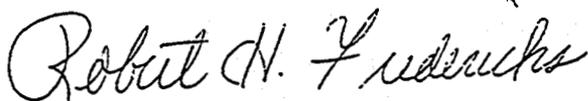
Wayne County will accept a reciprocity agreement from your County if that is the method which you will utilize to document the agreements by the County to import and export solid waste. If you require a particular form for such a reciprocal agreement, please provide me with a copy of the form for our 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,



Robert H. Fredericks, Director
Land Resource Management Division



JOHN ENGLER, Governor

DEPARTMENT OF ENVIRONMENTAL QUALITY

"Better Service for a Better Environment"

HOLLISTER BUILDING, PO BOX 30473, LANSING MI 48909-7973

INTERNET: www.deq.state.mi.us

RUSSELL J. HARDING, Director

REPLY TO:

WASTE MANAGEMENT DIVISION
PO BOX 30241
LANSING MI 48909-7741

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.

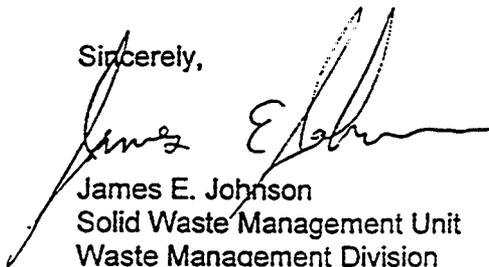
Page II-12

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.

- Page II-39 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.
- Page III-25 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.
- Page III-45 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.
- Page IV-1 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.
- Page A-3 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.
- Page A-5 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.
- Page B-2 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.
- Page C-1, 2 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.
- Page D-1 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

MACOMB COUNTY BOARD OF COMMISSIONERS

ADMINISTRATION BUILDING

MOUNT CLEMENS, MICHIGAN 48043

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JOHN C. HERTEL
CHAIRMAN

RALPH A. LIBERATO
VICE-CHAIRMAN

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 Belch\meeting notice.doc

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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

ITEM

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| 1. | Call To Order | |
| 2. | Adoption of Agenda | 1 |
| 3. | Roll Call | |
| 4. | Public Participation | |
| 5. | Approval of Solid Waste Planning Committee Minutes – November 12, 1998 | 2 - 9 |
| 6. | Revisions to the Macomb County Solid Waste Management Plan Update, Presentation by RMT, Inc. | 10 - 12 |
| 7. | Public Participation | |
| 8. | Adjournment | |

SOLID WASTE PLANNING COMMITTEE
FEBRUARY 10, 1998 MEETING
SIGN-IN SHEET

NAME

1. Kathleen Allen BFI
2. Terry Gibb MSU Extension
3. JOHN BRENNAN MAUMB TWP.
4. _____
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16. _____
17. _____

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District 25

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

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District 25

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

	<u>ITEM</u>	<u>PAGE</u>
	1. Call To Order	
Linda M. McGrail District 11	2. Adoption of Agenda	1
Fran Gillett District 12	3. Roll Call	
Don Brown District 13	4. Public Participation	
John C. Hertel Chairman District 14	5. Approval of Solid Waste Planning Committee Minutes - June 9, 1998	2
Nicholyn Brandenburg District 15	6. Informational - Solid Waste Management Plan Update Public Hearing Proceedings - September 8, 1998	18
James M. Biernat District 16	7. Macomb County Solid Waste Management Plan Update - Presentation/Approval	28
Bobby L. Hill District 17	8. New Business	
Michael C. Sessa District 18	9. Public Participation	
James M. Perna District 19	10. Adjournment	
Nancy M. White District 20		
Michael Switalski District 21		
Elizabeth M. Slinde District 22		
Thomas L. Raymus District 23		
Roland R. Frascetti District 24		
Clifford F. Kabacinski District 25		

SOLID WASTE PLANNING COMMITTEE
NOVEMBER 12, 1998 MEETING
SIGN-IN SHEET

NAME

1. Guy Kebbe, Sterling Heights DPW
2. TERRY GIBB, MACOMB MSU EXTENSION
3. Dick Haines, Utica (MRC)
4. GREG CARPENTER, SHELBY BALENT ENVIRONMENTAL
5. Kim North, Detroit Free Press
6. Bill Kotowski RMT
7. George Kala Team Ltd.
8. _____
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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

SOLID WASTE PUBLIC HEARING
SEPTEMBER 8, 1998 MEETING
SIGN-IN SHEET

NAME	AGENCY	ADDRESS
1. <u>TERRY PAUL</u>	<u>CITY OF STER. HTS</u>	<u>7000 18 MILE STER HTS., MD 483,</u>
2. <u>LOUIS CHANAM</u>	<u>SHAWDRAID 22001</u>	<u>22001 HOOVER WALKER DR</u>
3. <u>GREG CARPENTER</u>	<u>City Manager</u>	<u>36600 29 MILE RD LENT MD</u>
4. _____		
5. _____		
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DEPARTMENT OF
PLANNING AND ECONOMIC DEVELOPMENT
MACOMB COUNTY

115 S. Groesbeck Highway, Mount Clemens, Michigan 48043
(810) 469-5285 • FAX (810) 469-6787

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George Adams
Vice-Chairman

Clifford F. Kabacinski
Secretary

Bernard B. Calka
Dan G. Dirks
Joseph R. Kosmala
Elmer J. Kuss
Robert Mijac
Joseph J. Strizic

May 28, 1998

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

DIRECTORS

Bernard E. Giampetroni, AICP, PCF
Executive Director

Richard C. Roose, Director
Planning & Operations Division

James W. Baumgartner, Director
Community Development Division

Donald L. Morandini, Director
Economic Development Division

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

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Sergeant-at-Arms

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Michael Switalski - District 2
Elizabeth M. Slinde - District
Tom Raymus - District 23
Roland R. Frascchetti - District
Clifford F. Kabacinski - District

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Executive Director

Richard C. Roose, Director
Planning & Operations Division

James W. Baumgartner, Director
Community Development Division

Donald L. Morandini, Director
Economic Development Division

**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

<u>ITEM</u>	<u>AGENDA</u>	<u>PAGE</u>
1.	Call To Order	
2.	Roll Call	
3.	Adoption of Agenda	1
4.	Public Participation	
5.	Approval of Solid Waste Planning Committee Minutes- March 12, 1998	2 - 9
6.	Macomb County Solid Waste Management Plan Update, Presentation by RMT, Inc.	10 - 12
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	

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Clifford F. Kabacinski - District 25

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 Beaudoin City Management Co
5. Kathleen Owen BFI
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JOHN C. HERTEL
CHAIRMAN

RALPH A. LIBERAT
VICE-CHAIRMAN

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

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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

AGENDA

ITEM

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|----|--|-------|
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| 2. | Roll Call (Introduction of Members) | |
| 3. | Public Participation | |
| 4. | Election of Officers | |
| 5. | By-Laws | 2 - 3 |
| 6. | Overview of The Solid Waste Planning Process | 4 |
| 7. | RMT, Inc. - Status Report | 5 - 7 |
| | ▶ Mail Survey For Current Update Process | |
| | ▶ Goals and Objectives | |
| | ▶ Other Items | |
| 8. | Public Participation | |
| 9. | Adjournment | |

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

COUNTIES 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. Quinnie 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. Timoty 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

MACOMB COUNTY BOARD OF COMMISSIONERS

ADMINISTRATION BUILDING

MOUNT CLEMENS, MICHIGAN 48043

BOARD OF COMMISSIONERS

Ralph A. Liberato
Vice-Chairman
District 1

Marvin E. Sauger
Sergeant-at-Arms
District 2

Phillip A. DiMaria
District 3

Louis J. Burdi
District 4

Dennis Olshove
District 5

Joan Flynn
District 6

Sal Rocca
District 7

Diana J. Kolakowski
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Robert Mijac
District 9

Phillip DeSaele
District 10

Edward Szczepanski
District 11

Fran Gillett
District 12

Don Brown
District 13

John C. Hertel
Chairman
District 14

Nicholyn Brandenburg
District 15

Leon Drolet
District 16

Bobby L. Hill
District 17

Michael C. Sessa
District 18

James M. Perna
District 19

Nancy M. White
District 20

Leonard Haggerty
District 21

Elizabeth M. Slinde
District 22

Thomas L. Raymus
District 23

Richard R. Frascetti
District 24

Peggy A. Kennard
District 25

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

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)

MACOMB COUNTY BOARD OF COMMISSIONERS

ADMINISTRATION BUILDING

MOUNT CLEMENS, MICHIGAN 48043

BOARD OF COMMISSIONERS

Ralph A. Liberato
Vice-Chairman
District 1

Marvin E. Sauger
Sergeant-at-Arms
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District 24

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District 25

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JOHN C. HERTEL
CHAIRMAN

RALPH A. LIBERATO
VICE-CHAIRMAN

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)

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

BOARD OF COMMISSIONERS

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Abeth M. Slinde
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Thomas R. Frascetti
District 24

John A. Kennard
District 25

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.

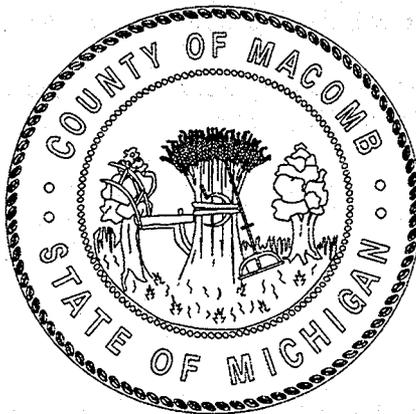
C:\Data Files\SOLIDWAS\PLAN97\Plan Area\Macomb Resolution.doc

RES. NO. 99-11

I, CARMELLA SABAUGH, CLERK OF THE MACOMB COUNTY BOARD OF COMMISSIONERS DO HEREBY CERTIFY THAT RESOLUTION 99-11 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 WAS ADOPTED ON FEBRUARY 18, 1999.

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>

JOHN C. HERTEL
CHAIRMAN

RALPH A. LIBERATO
VICE-CHAIRMAN

BOARD OF COMMISSIONERS

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Thomas A. Kennard
District 25

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 FORWARDED TO THE MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY FOR THEIR APPROVAL.

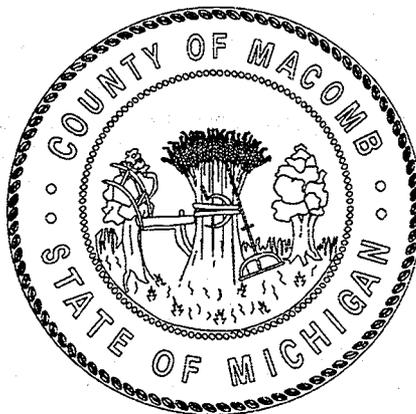
C:\DATA FILES\SOLIDWAS\PLAN97\PLAN APPROVAL\PLAN APPROVAL 2-18-99.DOC

RES. NO. 99-42

I, CARMELLA SABAUGH, CLERK OF THE MACOMB COUNTY BOARD OF COMMISSIONERS DO HEREBY CERTIFY THAT RESOLUTION 99-42 MACOMB COUNTY SOLID WASTE MANAGEMENT PLAN UPDATE 1998 WAS ADOPTED ON FEBRUARY 18, 1999.

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



RESOLUTION 99-05

ST. CLAIR COUNTY SOLID WASTE MANAGEMENT PLAN

WHEREAS, Part 115 of PA 451 of 1994, as amended, requires in part that "a municipality located on 2 Counties. . . may request to be included in the adjacent County's plan; and

WHEREAS, the request shall be approved by a resolution of the County Boards of Commissioners of the counties involved in order for such a municipality to be included in the Solid Waste Management Plan of the adjacent County; and

WHEREAS, the City of Memphis is located in both Macomb and St. Clair County; and

WHEREAS, the City of Memphis adopted a resolution at its regular meeting on December 15, 1998 to be included in and to adopt the Macomb County Solid Waste Management Plan when implemented.

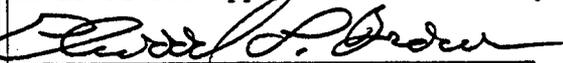
WHEREAS, the City of Memphis was formerly included in the St. Clair County Solid Waste Management Plan, approved by the MDEQ in 1990; and

WHEREAS, it is the intent of St. Clair County to approve the inclusion of the City of Memphis in the Macomb County Solid Waste Management Plan and to omit all of the City of Memphis from the 1999 St. Clair County Solid Waste Management Update Plan planning area.

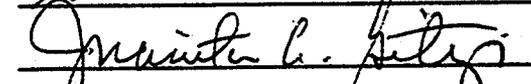
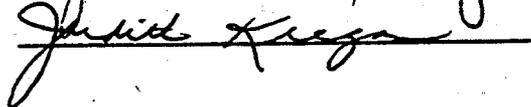
NOW, THEREFORE, BE IT RESOLVED, that the St. Clair County Board of Commissioners approve the inclusion of the City of Memphis in the Macomb County Solid Waste Management Plan Update planning area pursuant to Act 451 of 1994 as amended.

DATED: February 10, 1999

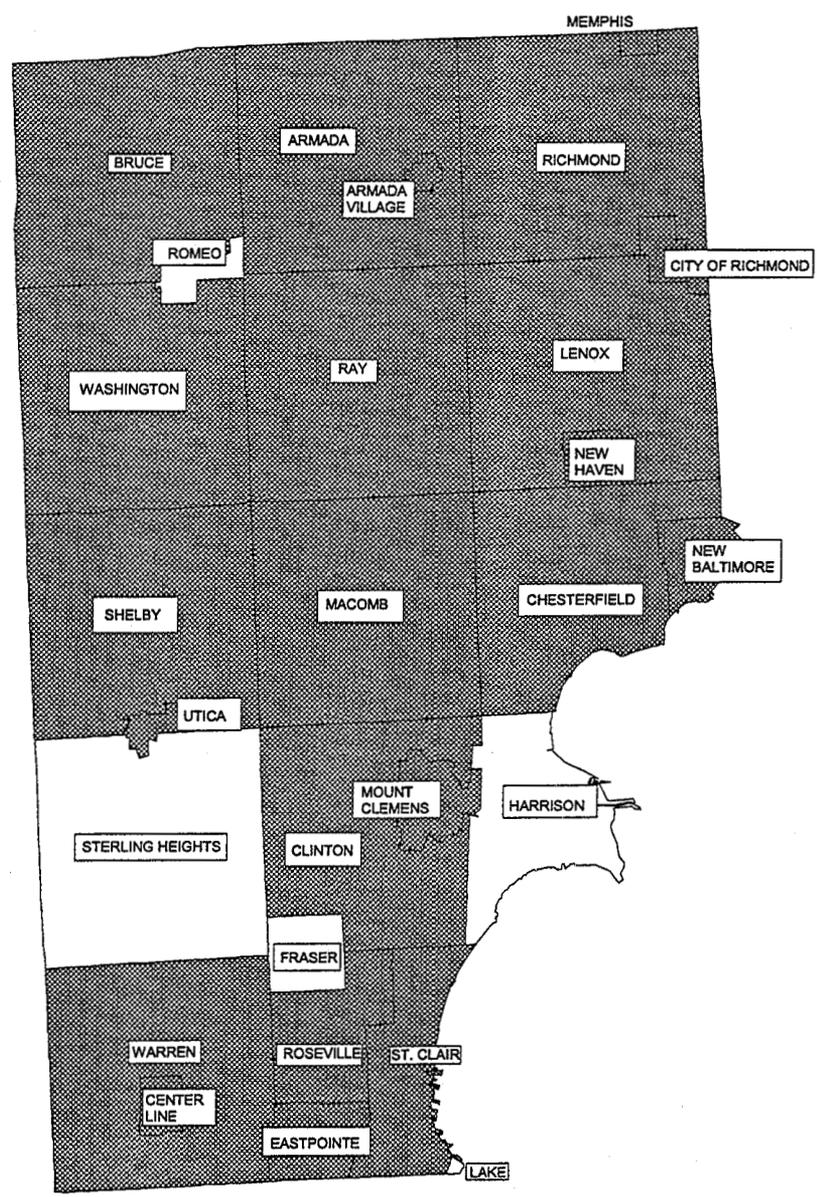
Reviewed and Approved as to Form by:



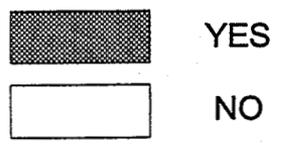
ELWOOD L. BROWN
County Corporation Counsel
301 County Building
Port Huron, MI 48060

COMMUNITY VOTE ON SOLID WASTE PLAN



BREAKDOWN OF VOTE



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:
date

_____ 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.

*Community
Seal/Stamp*

Date: May 4, 1999

Mary Ann Zielinski
Mayor Mary Ann Zielinski

Nancy L. Bourgeois
City Clerk Nancy L. Bourgeois

Margaret Romatowski
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 Fraser on
Thursday, May 13, 1999, it is hereby resolved that we:
date

_____ 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.

*Community
Seal/Stamp*

Date: 5-17-99

Joseph J. Blanke
Mayor Joseph J. Blanke

Thomas B. Van Damme
City Clerk Thomas B. Van Damme

Pamela J. Lavers
Witnessed By Pamela J. Lavers



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**

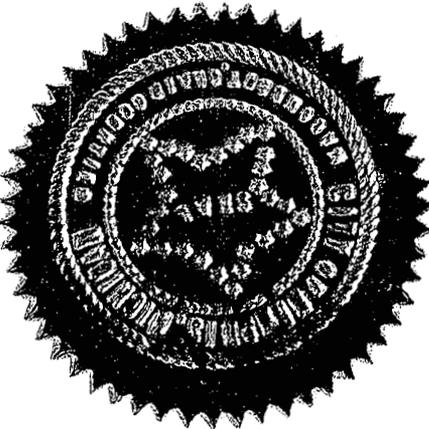
By action of the City Council of the City of Memphis on
APRIL 20, 1999, it is hereby resolved that we:
date

_____ **XX** _____ 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



William J. Tatton
Mayor WILLIAM J. TATTON

Mary I. Brusca
City Clerk MARY I. BRUSCA

Jeannie L. Diaz
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 New Baltimore on
June 14, 1999, it is hereby resolved that we:
date

 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:

[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
APRIL 19, 1999, it is hereby resolved that we:
date

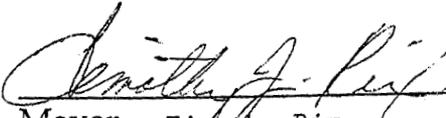
 x approve

 disapprove

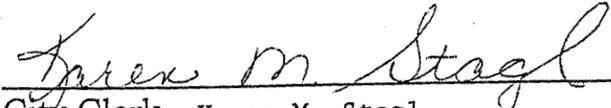
the 1999 Solid Waste Management Plan Update, prepared pursuant to the Natural Resources and Environmental Protection Act, P.A. 451, 1994, as amended, and the rules promulgated thereunder, for Macomb County, contingent upon the inclusion of the City of Richmond's recycling and composting program information in the final copy of the plan update submitted to the Michigan Department of Environmental Quality.

*Community
Seal/Stamp*

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:
date

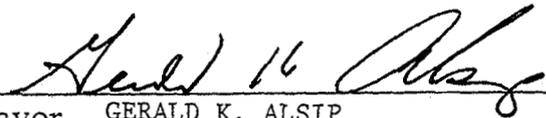
7 approve

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.

*Community
Seal/Stamp*

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

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:
date

Hison, Nearon, Benson, Boyle, Dumas approve

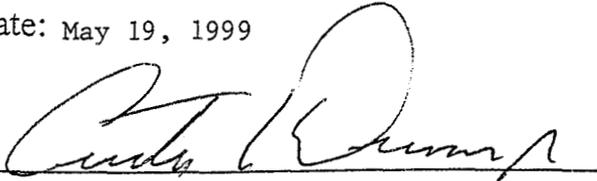
 None disapprove

 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.

*Community
Seal/Stamp*

Date: May 19, 1999



Mayor, CURTIS L. DUMAS



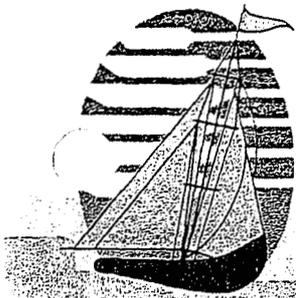
City Clerk, ROGER W. CARDAMONE



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



ST. CLAIR SHORES

Flagship of
LAKE ST. CLAIR

MAYOR:
CURTIS L. DUMAS

MAYOR PRO-TEM:
FRANK P. BENSON

COUNCILMEMBERS:
MICHAEL A. BOYLE
ROBERT A. HISON
WILLIAM J. NEARON
PATRICIA M. REAVER
ROBERT G. SOULLIERE

© City of St. Clair Shores
May 20, 1999

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

RECEIVED

JUN 1 1999

PLANNING & ECONOMIC
DEVELOPMENT

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 , it is hereby resolved that we:
date

_____ 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. Natta
Mayor

Walter C. [Signature]
City Clerk

Steve M. [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**

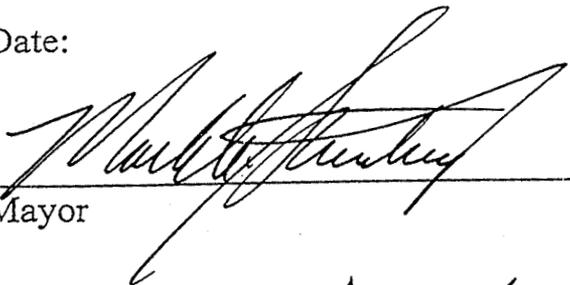
By action of the City Council of the City of Warren on
April 27, 1999, it is hereby resolved that we:
date

 X approve 5-YES 4-NO
 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*

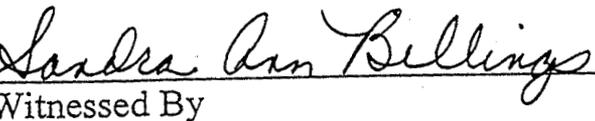
Date:



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 Chesterfield on
April 19, 1999, it is hereby resolved that we:
date

 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: April 21, 1999

Esther James Gray
Supervisor

Brenda Doughter
Township Clerk

John Sord
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

York, Dolan and Ciaramitaro, P.C.

Attorneys and Counselors at Law
42850 Garfield, Suite 101
Clinton Township, Michigan 48038
(810) 263-5050
FAX (810) 263-4763

Fred A. York
(1930-1989)

John A. Dolan
Joseph P. Ciaramitaro, Jr.
Matthew D. Tomlinson

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.

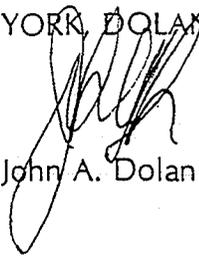
Page III-1: Clinton Township and Mt. Clemens may elect to use the Warren Transfer Station. Also eliminate reference to incineration, also on Page III-11.

Eliminate reference Page III-8 to GPCRDA incinerator. Also on III-19, III-28.

We remain,

Very truly yours,

YORK, DOLAN AND CIARAMITARO, P.C.


John A. Dolan

JAD/g

**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:
date

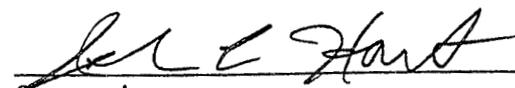
_____ approve

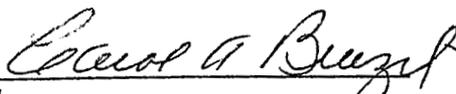
 x disapprove

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.

*Community
Seal/Stamp*

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

LAKE TOWNSHIP
795 Lake Shore Road
Grosse Pointe Shores, MI 48236
Tel: 313-881-6565 Fax: 313-881-2622

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:
date

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:

John P. Sand
Supervisor

Cassie Kether
Township Clerk

Nancy L. Hansen
Witnessed By **NANCY L. HANSEN**
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, it is hereby resolved that we:
date

 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:

John D. Brennan
Supervisor JOHN D. BRENNAN

Norman L. Snow
Township Clerk NORMAN L. SNOW

Michael D. Kocher
Witnessed By Michael D. Kocher

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:
date

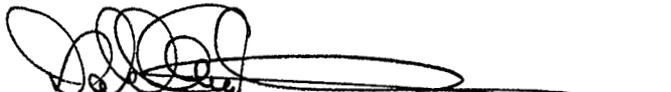
X approve

_____ 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*

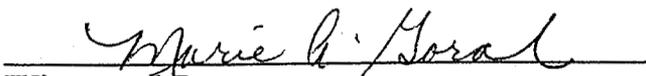
Date: MARCH 18, 1999



Supervisor



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 Richmond on
April 14, 1999, it is hereby resolved that we:
date

 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:

Keith L. Rupp
Supervisor

Gordon Fuustonen
Township Clerk

Deoni Jasak
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:
date

Parker, Bates, Bottcher,
Holmes, Kady, Kowal approve

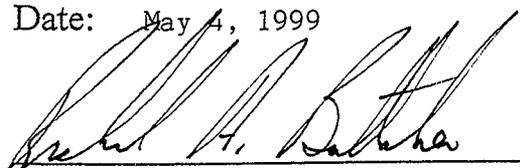
none disapprove

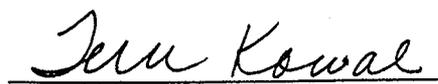
Stout absent

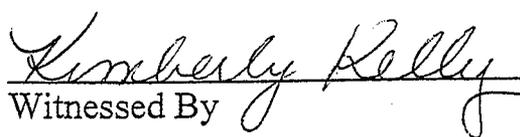
the 1999 Solid Waste Management Plan Update, prepared pursuant to the Natural Resources and Environmental Protection Act, P.A. 451, 1994, as amended, and the rules promulgated thereunder, for Macomb County.

*Community
Seal/Stamp*

Date: May 4, 1999


Supervisor


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 Village of Armada on
June 28, 1999, it is hereby resolved that we:
date

 ✓ 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:

[Signature]
Village President

[Signature]
Village 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



VILLAGE OF NEW HAVEN

P.O. Box 429 • 58725 Havenridge Ave.
New Haven, Michigan 48048
(810) 749-5301

JB.
RECEIVED

JUL 7 - 1999

PLANNING & ECONOMIC
DEVELOPMENT

RESOLUTION PASSED BY
THE COUNCIL OF THE
VILLAGE OF NEW HAVEN

THAT THE VILLAGE COUNCIL OF THE VILLAGE OF NEW HAVEN ON JUNE 8,
1999, APPROVE AND ADOPT THE 1999-MACOMB COUNTY SOLID WASTE
MANAGEMENT PLAN UPDATE AS PRESENTED.

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:
date

_____ 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.

*Community
Seal/Stamp*

Date: May 13, 1999

Paul Gering
Village President

Wanda M. Laughlin
Village Clerk

Louise Doucet
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

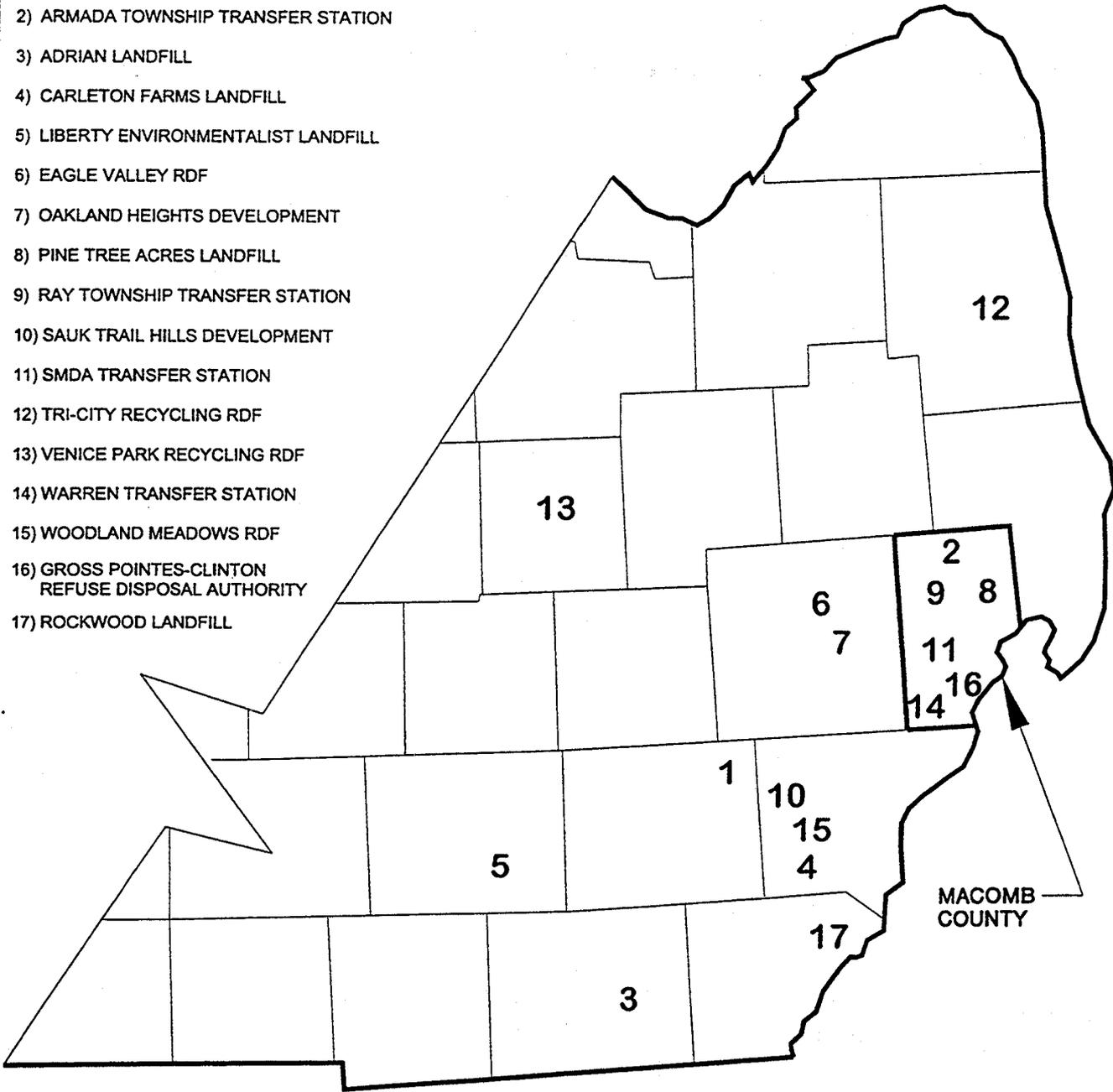
Documentation from landfills that the County has access to their listed capacity.

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 POINTES-CLINTON REFUSE DISPOSAL AUTHORITY
- 17) ROCKWOOD LANDFILL



Operator Name: LUCIDOS
 Scale: 1"=1"
 Drawing No.: J:\04085\01\40850103.DWG
 Plot Date: Tuesday, October 28, 1998
 Dwg Size: 2:41.3489 PM
 Plot Time: Attached Xref's: No Xref's Attached.

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. 48108-2237 P.O. BOX 991 48106-0991 PHONE: 734-971-7080 FAX: 734-971-9022	

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

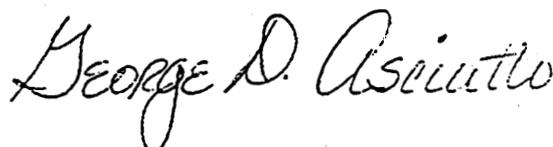


planning criteria. The method that PTA proposes would guarantee the effectiveness of the Macomb County Solid Waste Management Plan, as waste that is received at PTA from users in other Michigan counties would meet the provisions of the Macomb Plan before the waste is accepted at PTA landfill. This approach 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.

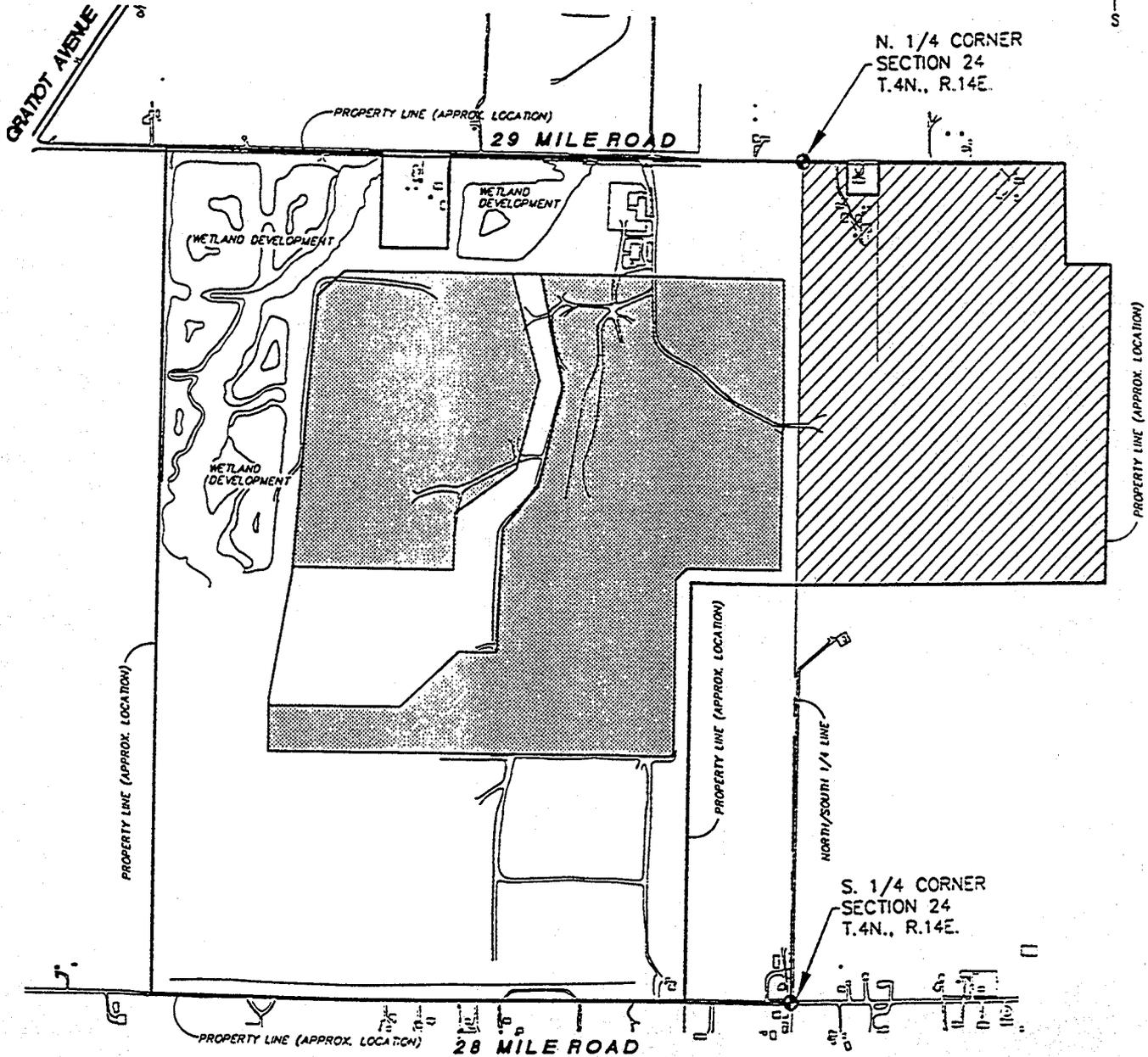
We trust this approach is satisfactory.

Very Truly Yours,



George D. Ascianto
Division Vice President

ATTACHMENT 'A'



PINE TREE ACRES, INC.
 PART OF SECTIONS 23 & 24 T.4S., R.14E.
 MACOMB COUNTY, MICHIGAN
 SCALE: 1" = 1000'

LEGEND



PROPERTY RECENTLY ACQUIRED
 BY PINE TREE ACRES



CURRENTLY PERMITTED
 WASTE DISPOSAL AREA



PINE TREE ACRES,
 APPROXIMATE 570 ACRES

McNEELY & LINCOLN
 Associates, Inc.
 CIVIL ENGINEERING & LAND SURVEYING
 PH. (313) 432-9777 FAX (313) 432-9786
 37741 PEBROKE, LYONIA, MICHIGAN 48152

DATE: 05/28/98
 JCB NO: 7245.05
 DWG NAME: 724505CP.DWG

WHAT HAPPENS *Next?*

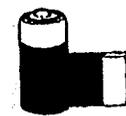
Everyone knows how to recycle, what is recyclable, and how to separate. But few know what becomes of it all once it leaves the curb. Well, St. Clair Shores, Michigan, knows.

ALUMINUM



Aluminum cans become new aluminum cans or any other aluminum product since aluminum is 100% recyclable.

BATTERIES



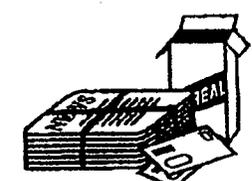
Batteries are physically disassembled and components are separated. Plastics are used in making new automotive parts. Glass goes to production of new "glassphalt". Nickel, zinc, lead and/or metal hydroxide are separated and sold to smelters for reuse.

GLASS



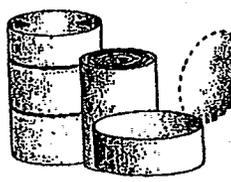
Glass bottles are recycled into auto glass, fiber glass, new glass bottles, or mixed with asphalt to make "glassphalt", depending on the purity of the cullet.

PAPER PRODUCTS



Cereal boxes, paper towel rolls, etc. become new boxboard. 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.

STEEL CANS



Steel and bi-metal cans are returned to steel companies for melting and then are reformed into any steel product from cans to cars.

PLASTICS



1
PETE

Clear bottles are melted and spun into threads that are then woven in carpet fibers, backing for carpets, or fiberfill for ski jackets.



2
HDPE

"Natural" HDPE gets a second life as plastic lumber for decks, playground equipment, or park benches.



2
HDPE

Colored HDPE is used in the middle layer of a new plastic bottle to add bulk and flexibility. The outer and/or inner layers of new bottles are usually made from "new" plastic for strength.



Don't throw away a good thing.

WHAT *to recycle* HOW

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.

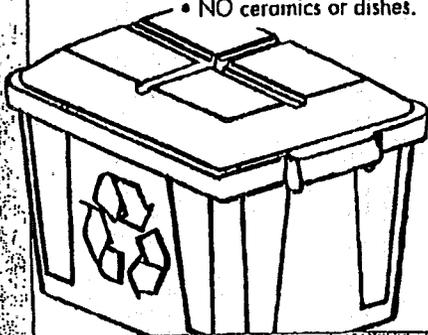


GLASS

- Clean. NO Caps. Labels are OK.
- NO window glass, mirrors, light bulbs or glassware.
- NO broken glass.
- NO ceramics or dishes.

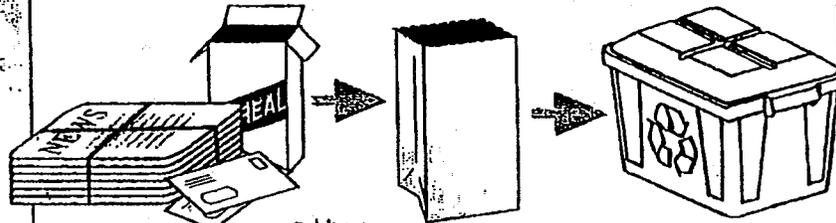
PLASTICS

- 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 tubs 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 board: Cereal boxes, snack boxes, food mixes (remove liners), gift boxes, tissue boxes, shoe boxes, soap 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.



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 "wrung-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

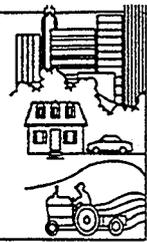
- Grass clippings
- Leaves
- Hedge trimmings
- Pine needles
- Spent flowers
- Straw
- Sawdust
- Young weeds
- Plant waste from garden
- Fruit and vegetable peelings
- Coffee grounds
- Wood ash from fireplace
- Clean, ground egg shells
- Fertilizer (organic or synthetic)
(only needed if no other source
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.



SOLID WASTE ALTERNATIVES

Michigan State University Extension Macomb County Office

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.

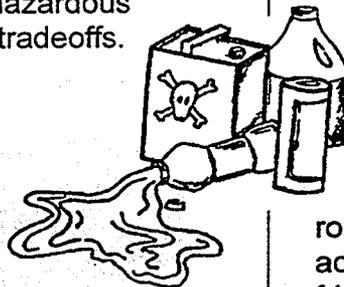
These products can pose a threat to your health since misuse or improper disposal can lead to accidental poisoning in the home. Long term or cumulative problems can also occur, such as contamination of drain fields, septic systems, as well as surface and groundwater.

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:

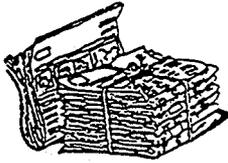
**Michigan State University Extension
Macomb County
(810) 469-5180**

**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.

RECYCLING IN MACOMB COUNTY

WHAT TO RECYCLE



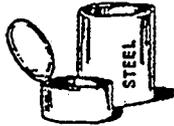
NEWSPAPER

Tie in bundles or bag in paper bags. Newsprint only.



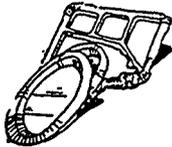
GLASS

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.



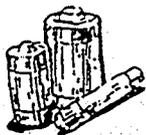
PLASTIC PETE or HDPE

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!



MACOMB COUNTY

operative Extension Service

21885 Dunham Road
Clinton Twp., Michigan
48036

810/469-5180
FAX: 810-469-6948

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Michigan State University,
U.S. Department of Agriculture
and Macomb County Board of
Commissioners cooperating.
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equal opportunity institution.

HAZARDOUS HOUSEHOLD SUBSTANCES CHART

NON-TOXIC ALTERNATIVE

PRODUCT	TOXIC EFFECT	DISPOSAL	NON-TOXIC ALTERNATIVE
<u>AUTOMOTIVE PRODUCTS</u>			
Antifreeze	POISON	Hazardous Waste Facility or solidify & dispose.	None.
Brake & Transmission Fluids	FLAMMABLE	Recycle w/ waste oil, or solidify & dispose.	None.
Car Batteries	CORROSIVE	Recycle/repair.	None.
Gasoline & Diesel Fuel	FLAMMABLE/ POISON	Reuse after sediment settles/evaporate&dispose	None.
Waste Oil	FLAMMABLE	Recycle.	None.
<u>PAINT PRODUCTS</u>			
Enamel, Oil Based, Latex,	FLAMMABLE	Donate to others. Evaporate/solidify & dispose, or take to hazardous waste facility.	Use latex or water-based paints if possible. Take off can lid and allow to harden in outdoor area before throwing away in trash.
Paint Solvents & Thinners	FLAMMABLE	Recycle, donate, or use hazardous waste facility	Latex and water-based paints don't require thinner.
<u>PESTICIDES/HERBICIDES AND FERTILIZERS</u> (including Garden Insecticides, Ant and Roach Killers, Weedkillers, etc.)			
Chemical Fertilizers	POISON	same as above.	Peat moss or compost. Chemical fertilizers are fast-acting, short-term boosters which may deplete soil's growing capacity with extended use.
Houseplant Insecticide	POISON	Solidify & dispose.	Soapy water on leaves, then rinse.
<u>MISCELLANEOUS PRODUCTS</u>			
Outdated Medicines	Hazardous to others	Dilute small amts. and flush down toilet.	Clean out medicine cabinet once a year and throw away outdated medicines.
Pool Acids & Chlorine	CORROSIVE	Hazardous Waste Facility	None.

Poison Control Center 745-5711 (metro Det.) Toxics Information Line 1-517-353-6469
 1-800-462-6642 (313 area) Toxics Education Citizens
 1-800-572-1655 (outside 313) Action Program 1-517-487-6003
 County Health Dept. Wayne Disposal Co. 697-7830
 DNR Hazardous Waste Division- (takes hazardous substances)



District Office 344-4670

HAZARDOUS HOUSEHOLD SUBSTANCES CHART

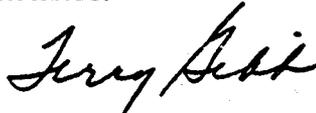
PRODUCT	TOXIC EFFECT	DISPOSAL	NON-TOXIC ALTERNATIVE
HOUSEHOLD CLEANERS Abrasive Scouring Powders	CORROSIVE	Hazardous Waste Facility	Baking soda may work as well and there is no abrasion to surface being cleaned or irritation to skin of person using it.
Aerosols	FLAMMABLE	Turn can upside down. Hold until all pressure is released.	Use non-aerosol products when possible. Mist particles from the aerosol enter the lungs and then the bloodstream. They are also more expensive.
Air Fresheners	None	Wrap in plastic bag before throwing away.	Ventilate! Or set vinegar out in open dish. Air fresheners coat nasal passages with an oil film, diminishing sense of smell.
Ammonia and Ammonia-based Cleaners	CORROSIVE Never mix with a chlorine based product-they produce a deadly gas.	Hazardous Waste Facility, or dilute small amounts.	Vinegar with salt and water is a good general surface cleaner. Well-diluted ammonia is a good general household cleaner.
Chlorine Bleach	CORROSIVE (Never mix with toilet bowl cleaner)	Dilute small amounts	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.
Drain Openers	CORROSIVE	Solidify with clay or kitty litter and dispose	Pour boiling water down drain twice a week. Unclog drains with a metal snake or plunger.
Furniture Polish	FLAMMABLE	Donate to others or solidify, evaporate and dispose.	Melt 1 tbsp. Carnuba Wax into 2 c. mineral oil. For lemon oil polish: dissolve 1 tsp. lemon oil in 1 pint of mineral oil.
Glass Cleaners	IRRITANT	Dilute small amounts	2 tbsps. vinegar diluted with 1 quart warm water. Use newspapers to dry.
Oven Cleaner	CORROSIVE	Solidify with clay or kitty litter & dispose.	Keep oven clean as you use it. For baked on grease, put 1/4c. ammonia in overnight, then scrub with baking soda.
Shoe Polish	FLAMMABLE	Solidify or evaporate and dispose.	Use polishes which do not contain trichloroethylene, methyl chloride, or nitrobenzene.
Silver Polish	FLAMMABLE	Solidify or evaporate and dispose.	Soak silver in 1 quart warm water with 1 tsp. baking soda, 1 tsp. salt, and small piece of alum. foil
Spot Removers	FLAMMABLE	Solidify or evaporate	Use professional dry cleaners if possible.
Toilet Bowl Cleaner	CORROSIVE	Solidify and dispose.	Clean often, use baking soda to scrub.
Upholstery/Carpet Cleaner	FLAMMABLE and/or CORROSIVE	Hazardous Waste Facility.	Club soda, or immediate cold water, or corn meal and water soak, or large quantities of salt.

MICHIGAN STATE
UNIVERSITY
EXTENSION
MACOMB COUNTY
BOARD OF COMMISSIONERS

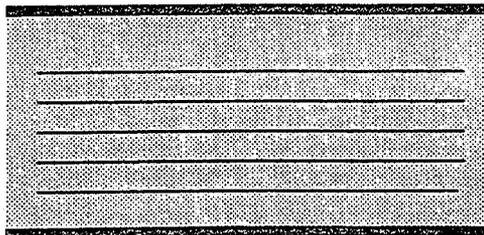
VERKUILEN BUILDING
21885 DUNHAM
CLINTON TWP., MI 48036
TEL (810) 469-5180
FAX (810) 469-6948

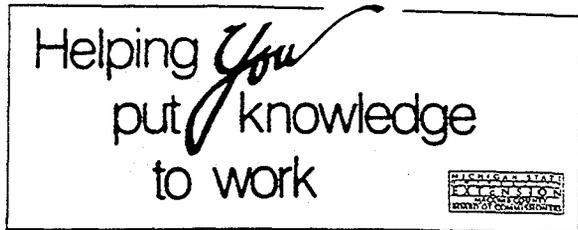
As Natural Resources Public Policy Agent, I am pleased to provide you with the enclosed information. I invite you to make use of the many educational programs available through Michigan State University Extension.

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/Horticulture469-6440
- 4-H/Youth Development.....469-6431
- Natural Resources469-5180
Public Policy
- Sea Grant469-6085
- Home Economics469-6430
- 4C Child Care469-6993
- Food & Nutrition Education.....469-6432

HOTLINES

- Master Gardener469-5063
- Gypsy Moth469-6661
- Food Hotline469-5060

**Hotline Hours
Monday, Wednesday, Friday
9:00 A.M.-4:00 P.M.**

Toll Free Calling from the following communities:

- Center Line, Warren979-7020
- Armada, Romeo752-4506
- Memphis, Richmond727-3175



We Recycle

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**

Armada Township

23121 East Main Street, P.O. Box 578 • Armada, Michigan 48005
Telephone (810) 784-5200 • Facsimile (810) 784-5211

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
- ▶ Rinsed 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
- ▶ Rinsed with labels removed
- ▶ Flatten all containers to conserve space

Aluminum

- ▶ Rinsed 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

57760 MAIN BOULEVARD - NEW HAVEN, MI 48048
PHONE (810) 749-9540 FAX (810) 749-9570
(800) 495-6054





Larry M. Snelling
DIRECTOR



DEPARTMENT OF PUBLIC WORKS

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-

29411 Calahan • (810) 445-5470 • Fax: (810) 445-5472
Mailing Address: 29777 Gratiot • P.O. Box 290 • Roseville, Michigan 48066



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
car polishes, solvents & degreasers, engine cleaners
and gasoline

GARDEN: Pesticides, fertilizers, pool chemicals, weed killers, pet care products

WORKSHOP/BASEMENT: Oil base paints, paint brush
cleaners/solvents, glue(solvent based), paint
thinners/strippers, turpentine, varnish and
wood preservatives

MISCELLANEOUS: Artist paints, dry cleaning
solvents, hobby supplies, photographic
chemicals, household batteries, aerosol cans

HOUSEHOLD WASTES WE CANNOT ACCEPT:

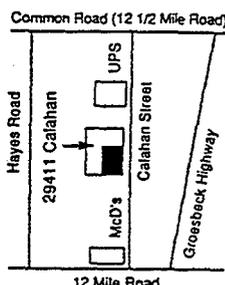
Injection needles/syringes
Commercial/industrial wastes
Compressed gas cylinders/tanks
Radioactive materials

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.

<u>COUNT</u>	<u>COUNT</u>	<u>COUNT</u>
1.	21.	41.
2.	22.	42.
3.	23.	43.
4.	24.	44.
5.	25.	45.
6.	26.	46.
7.	27.	47.
8.	28.	48.
9.	29.	49.
10.	30.	50.
11.	31.	51.
12.	32.	52.
13.	33.	53.
14.	34.	54.
15.	35.	55.
16.	36.	56.
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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 it's 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
and gasoline

GARDEN: Pesticides, fertilizers, pool chemicals, weed killers, pet care products

WORKSHOP/BASEMENT: Oil base paints, paint brush
cleaners/solvents, glue(solvent based), paint
thinners/strippers, 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
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.

TRASH, REFUSE, COMPOST & SPECIAL COLLECTIONS
QUESTIONS with ANSWERS

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 out 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
car polishes, solvents & degreasers, engine cleaners
asoline

GARDEN: Pesticides, fertilizers, pool chemicals, weed killers, pet care products

WORKSHOP/BASEMENT: Oil base paints, paint brush cleaners/solvents, glue(solvent based), paint thinners/strippers, 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.

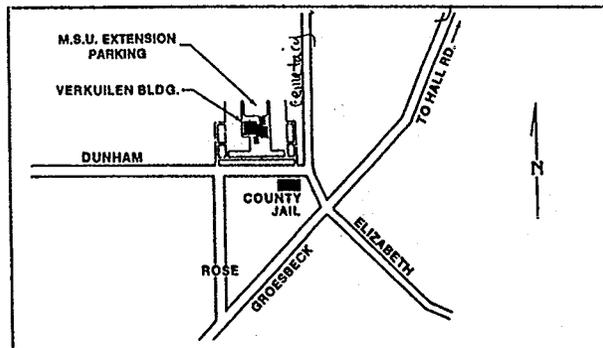
The Extension Service also provides information based on Michigan State University research through printed bulletins that are available through the Extension office.

Michigan State University
Extension

Robert A. VerKuijen Building
21885 Dunham
Clinton Twp., MI 48036

(810) 469-5180

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.



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



**Homeowners
Guide
to
Yard Waste
Reduction**

OR

*How to Save Money, Time and
Energy and Still Have an
Attractive, Healthy
Yard!*

**MICHIGAN STATE
UNIVERSITY
EXTENSION
MACOMB COUNTY
BOARD OF COMMISSIONERS**

Yard Waste makes up 20% of the waste stream annually . . . and can top 50% of waste collected during summer and fall!



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 . . .

. . . 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.



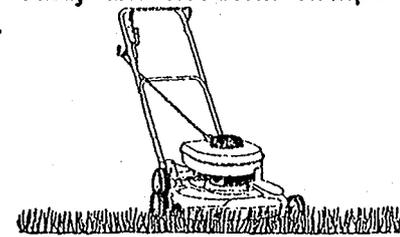
- ◆ Time is saved through grasscycling in actual mowing time (you no longer stop to empty the catcher) and carting bags of grass to the curb.
- ◆ Grasscycling keeps yard waste out of landfills where it doesn't decompose easily and does produce ozone-depleting methane gas as it decomposes.

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.

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 2 1/2 - 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.

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.



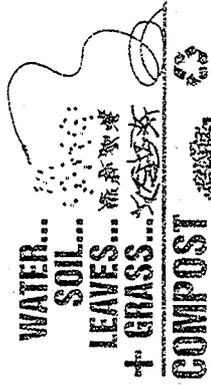
Wood Chips

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.



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.

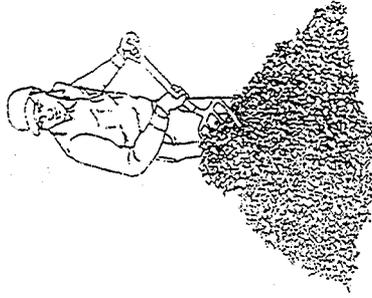
Microorganisms:

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

Com

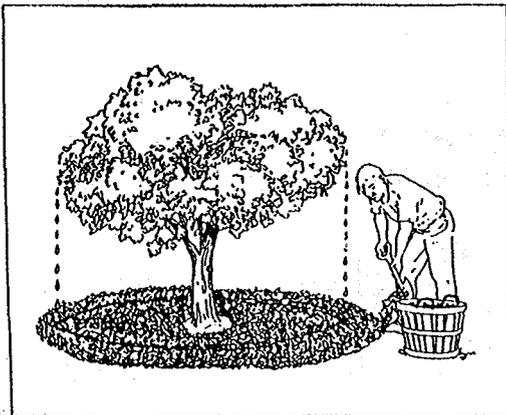
Screened (fine) compost can be used around annual and perennial plants to a depth of 1-1½".

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 outer most 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.

<u>Material</u>	<u>C:N Ratio</u>
grass	20:1
leaves	60:1
wood	700:1
sawdust	500:1
fruit/veg. wste.	35:1
straw	80:1

Materials that should not be put in a compost pile:

Dog/cat feces	bones
meat	dairy products
grease	

The size of materials affects the length of the process. Chopping or shredding your materials provide more surface area for the microorganisms to work on. This will produce faster decomposition.

pile from heating up properly. Slow or stop the decaying process. Too little water can cause the pile to heat up too quickly and not allow each group of microorganisms to do their job.

Materials in the compost pile should have a 40-60% moisture level or be as wet as a wrung out sponge. To test for correct moisture, squeeze a handful of compost material. It should produce 1 - 2 drops of water.



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" cubed (3x3x3) will have trouble holding the heat.

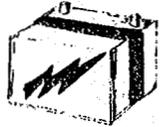
The decomposition of materials into usable compost is complete if -

- ◆ 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 coarse 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.

© 3/97 City of Sterling Heights



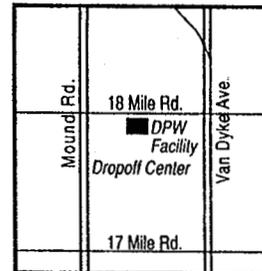
**Sterling Heights
RECYCLING CENTERS**

Open Dawn to Dusk • 7 Days-a-Week • 365 Days-a-Year

**THREE
CONVENIENT
LOCATIONS!**

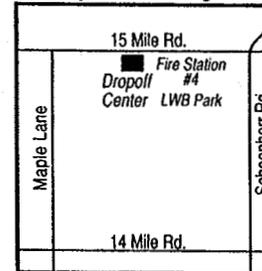
DPW Site

Located at 7200 18 Mile Road



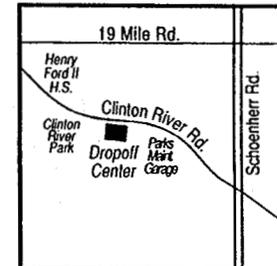
15 Mile Road Site

Located adjacent to Baumgartner 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

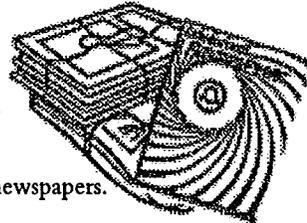


Newspapers, Inserts and Junk Mail

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
- Cracker and cake boxes, etc.
- Detergent boxes
- Frozen food boxes
- Paper towel roll (inside core)
- Pizza boxes (outside box only)
- Pop/beer cartons

Remove all food, plastic, cellophane, foil and liners.

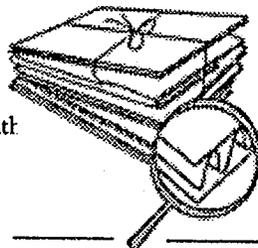
NO milk or juice cartons. **NO** drink boxes.

Flatten and put in paper bag with newspapers or tie with string.

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.



Plastic Jugs & Bottles

- Clean. Discard caps.

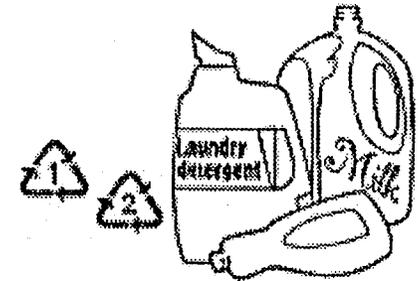
Only narrow-neck bottles marked 1 (PETE) or 2 (HDPE) on bottom such as:

- 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.

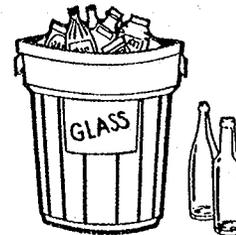


Glass Bottles & Jars

Clean. Discard Lids.

Clear, Brown and Green Glass.

NO broken glass, mirrors, window glass, light bulbs, or ceramic mugs.

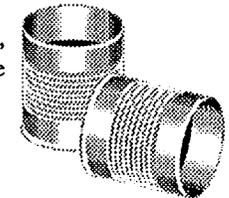


Tin Cans, Small Metal Items & Empty Aerosol Cans

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.

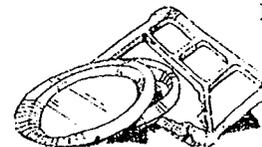


Aluminum

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)**

May 1996

S	M	T	W	T	F	S
			1	2	3	4
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November 1996

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24	25	26	27	28	29	30

December 1996

S	M	T	W	T	F	S
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8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30	31				

January 1997

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17	18	19	20	21	22	23
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31						

February 1997

S	M	T	W	T	F	S
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23	24	25	26	27	28	

March 1997

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2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29
30	31					

April 1997

S	M	T	W	T	F	S
					1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30
31						

- = Refuse collection
- = Holiday, no refuse collection

City Refuse Collection will be delayed following these six recognized holidays. Friday's collection will be picked-up on Saturday.

New Year's Day
Independence Day
Thanksgiving Day

Memorial Day
Labor Day
Christmas Day



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City of Sterling Heights

**REFUSE COLLECTION INFORMATION
AND
YARD WASTE
COLLECTION
REGULATIONS**



Refuse must be at 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.)

PUBLISHED 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

In compliance with the Americans with Disabilities Act, a copy of this brochure will be made in an alternate format upon request.

NO 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 7A.M.
3. Yard waste should be set several feet away or 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



	Regular Refuse	Yard Waste
Trash Cans	32 gal. capacity, 60 lb. limit when full.	Mark can with Yard Waste decal, 32 gal. capacity, 60 lb. limit when full.
Plastic Bags	30 gal. capacity, 40 lb. weight limit when full.	Use only clear bags, 30 gal. capacity, 40 lb. weight limit when full.
Other	See section F for disposal of bulky items, paint, carpet, building debris, etc.	Branches and brush cut less than 4 ft. in length and securely tied and bundled less than 3 ft. around, weighing less than 50 lb.

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.



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.

F. DISPOSAL OF BULKY/OT 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.

THE THREE LOCATIONS ARE:

Department of Public Works Site
located at 7200 18 Mile Road
(west side of the D.P.W. building)

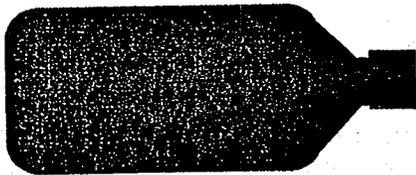
15 Mile Road Site
located adjacent to Baumgartner Park
(between Schoenherr Rd. and Maple Lane)

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



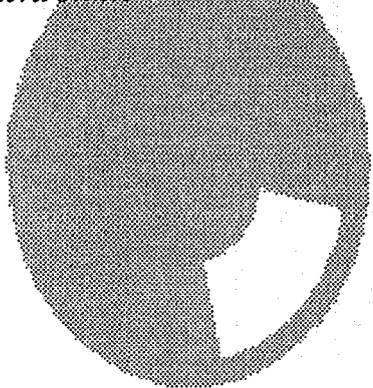
Don't Dump It!



Waste Oil Statistics

- 60% of consumers change their own oil.
- EPA estimates 210 million gallons of waste oil is generated by “do it yourselfers” 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	42955 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 Van Dyke	(754-4500)
Warren Recycle	25801 Flanders	(775-1400)

Waste Oil Filter Disposal

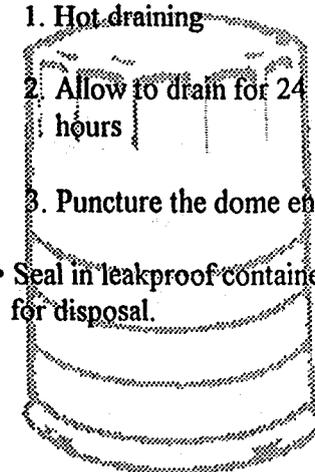
- The EPA estimates 180 million used oil filters are generated each year by “do it yourselfers”.
- Oil filters contain a pint to a quart of used oil.
- Oil filters, after draining, retain two to eight ounces of oil.
- Minimize the amount of oil remaining in oil filters by:

1. Hot draining

2. Allow to drain for 24 hours

3. Puncture the dome end

- Seal in leakproof container for disposal.



MACOMB COUNTY
HOUSEHOLD
HAZARDOUS WASTE
COLLECTION

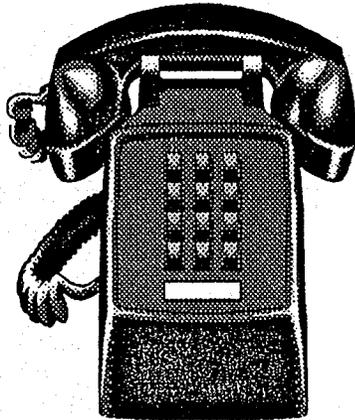
FREE

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



Revised 3/1/97

**Hazardous
Waste
In
My
Home?**



Macomb County Health Department
Environmental Health Services Division

*Sponsored by the Macomb County
Board of Commissioners*

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

1/98

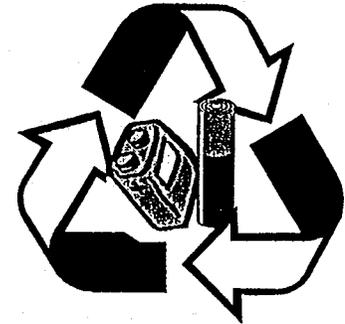
First-Class Mail
Postage & Fees Paid
USPS
Permit No. G-10



ADMINISTRATIVE SERVICES
2360 BELLINGHAM
TROY MI 48063-2038

POSTAL CUSTOMER

HOUSEHOLD BATTERY RECYCLING PROGRAM



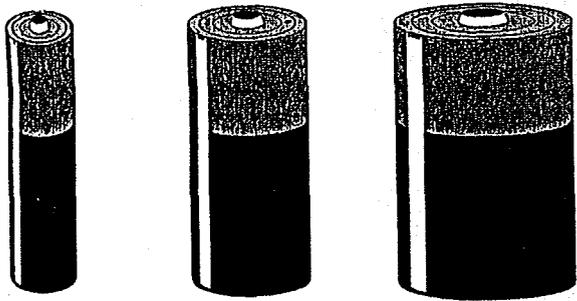
***PARTNERS FOR A BETTER
ENVIRONMENT***

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.



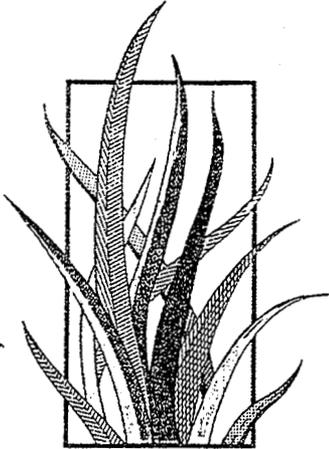
FOR ADDITIONAL INFORMATION CALL (810) 469-5467

City of Sterling Heights
40555 Utica Road
Sterling Heights, MI 48078

U.S. Postage
PAID
Permit No. 50
Sterling Heights
Michigan

BULK RATE

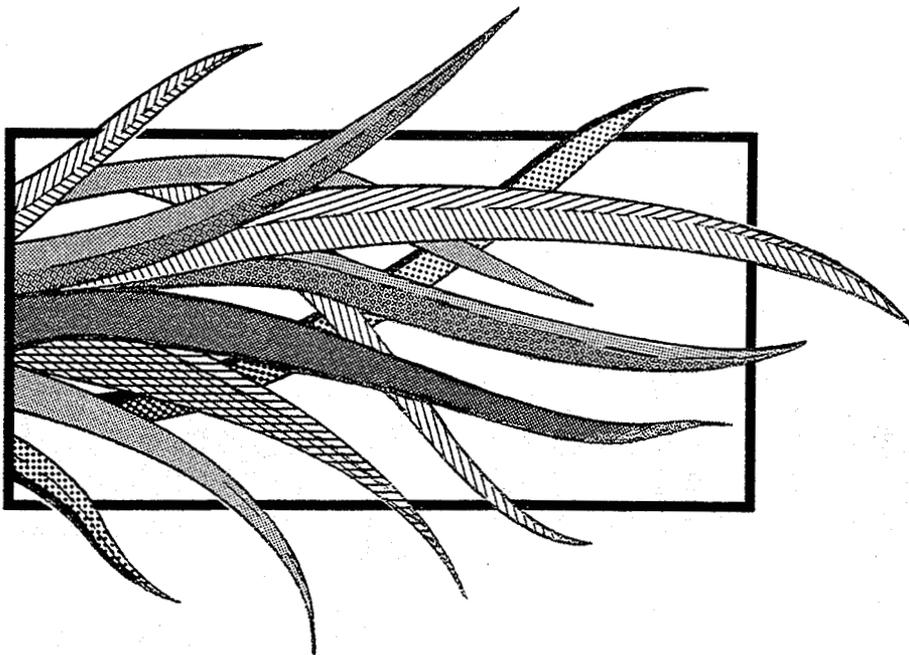
D on't Bag It !



POSTAL PATRON

CITY OF STERLING HEIGHTS

Sterling Heights
Lawn Care
Plan



D on't Bag It !

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 text book 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.



For more information on this program contact the Department of Public Works (268-3110) or the Community Relations Department (977-6123, ext. 102).

Published by the Sterling Heights Community Relations Department on recycled paper- 1990

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**

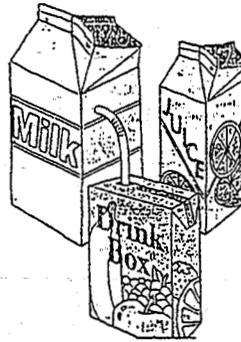
THE INFORMATION CONTAINED IN THIS BOOKLET EXPLAINS THE PROPER PROCEDURES FOR PLACING YOUR RECYCLABLE MATERIALS IN YOUR RECYCLING BIN FOR PICKUP BY EFFICIENT SANITATION. IF YOU HAVE ANY QUESTIONS CONCERNING ANY OF THIS INFORMATION, PLEASE CALL THE CITY OF FRASER, DEPARTMENT OF PUBLIC WORKS AT 293-1977.

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.



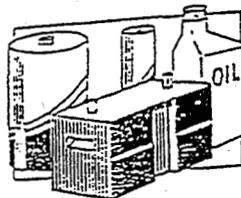
MILK, JUICE CARTONS, & DRINK BOXES

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.

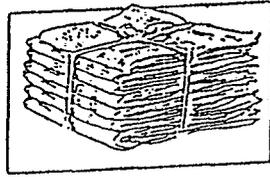
PAINTS
(TURPENTINE & CHEMICALS)

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.**

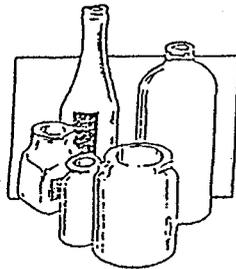
NEWSPAPERS

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.



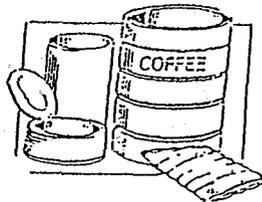
GLASS BOTTLES & JARS

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

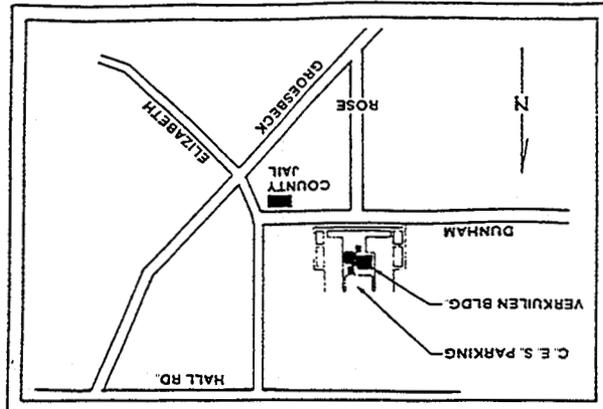
The department of Public Works will pick up brush on Thursday and Friday of each week weather permitting. Any brush to be picked up must be called into the D.P.W. office before 3:30 p.m. on Thursday of each week. Any calls after 3:30 p.m. on Thursday will be held for pickup on the Thursday and Friday 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.



Macomb County MSU Extension
Verkullen Building — Suite 12
21885 Dunham
Clinton Twp., MI 48036
(810) 469 - 5180
Fax: (810) 469 - 6948

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.

WHERE TO RECYCLE IN MACOMB COUNTY

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 – 445-5040

DPW, 17800 Ten Mile Rd., M-F, 8:30am-3pm Used motor oil, car and household batteries only. **Residents only.** Curbside collection for homeowners.

FRASER – 293-3102

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.

LENOX 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

43525 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 white 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

D.P.W. – 378 Sisson. Dawn to dusk, 7 days a week. Glass, paper, tin, aluminum. Curbside recycling available.

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, 1 & 2 plastic, used motor oil, antifreeze, car batteries. **Residents only.**

ST. CLAIR SHORES – 445-5363

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 – 268-3110

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. Sites accept newspaper, glass, metal, aluminum, 1 & 2 plastics, household batteries, car 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.**

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

4-98



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.

Course Topics

History of composting
Michigan Legislation & local ordinances
Composting composition & chemistry
Bin & site selection

Basic composting techniques
Composting systems & equipment
Yard waste reduction
Application to garden soils
Uses of finished compost
Worm composting & bin building

Option: Field trip to model compost facility

Project Staff

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A STATE OF MICHIGAN COMMUNITY
OF ECONOMIC EXCELLENCE

DEPARTMENT OF
PLANNING AND ECONOMIC DEVELOPMENT
MACOMB COUNTY

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AN AGENCY OF THE MACOMB COUNTY BOARD OF COMMISSIONERS