STATE OF MICHIGAN

JOHN ENGLER, Governor

DEPARTMENT OF ENVIRONMENTAL QUALITY

"Better Service for a Better Environment"

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

INTERNET: www.deq.state.mi.us

RUSSELL J. HARDING, Director

May 4, 2001

Mr. Robert L. Fish, Chair
Saginaw County Board of Commissioners
Governmental Center
111 South Michigan Avenue
Saginaw, Michigan 48602

Dear Mr. Fish:

The Department of Environmental Quality (DEQ) received the locally approved update to the Saginaw County Solid Waste Management Plan (Plan) on May 9, 2000. Except for the items indicated below, the Plan is approvable. As outlined in the September 21, 2000 letter to Mr. William W. Wright, Saginaw County Metropolitan Planning Commission, from Ms. Lynn Dumroese, DEQ, Waste Management Division, and as confirmed in your letter dated February 28, 2001, to Ms. Dumroese, the DEQ makes the following modifications to the Plan:

On page III-44, the first paragraph states two representatives from the affected municipality will serve on the Site Review Committee (SRC) and will be appointed by the Chairman of the Saginaw County Board of Commissioners (BOC) within 30 days. A default mechanism is not included if the appointments to the SRC are not made within the allotted time frame. The Saginaw County's (County's) intent was to have the Saginaw County Solid Waste Planning Committee continue to be responsible for performing the review without the two representatives from the affected municipality; however, if the appointments are made at a later date, the representatives would join the committee's review process in progress. In order to clarify the County's intent, the following language is added to the first paragraph:

> If the Chairman of the Saginaw County Board of Commissioners does not appoint the two representatives from the affected municipality within 30 days, the Saginaw County Solid Waste Planning Committee will continue to serve as the SRC without the two appointed representatives. If an appointment is made later, these representatives would join the committee's review process in progress.

On page III-44, the Fees section refers to pages III-40 through III-42 for the location of the requirements for a complete application. The pages that should be referenced are pages III-41 through III-43. Therefore, the reference to the pages III-40 through

III-42 in this section is replaced with the correct page numbers, III-41 through III-43. In addition, the page numbers referenced on page III-45 in Step 1 are also replaced with page numbers III-41 through III-43.

On page III-46, the first sentence on this page states, "The zoning administrators of the affected municipalities would also be notified, in order for them to conduct a local zoning review." Section 11538 (3) of Part 115, Solid Waste Management, of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended (Part 115), states siting criteria cannot be subject to interpretation or discretionary acts and if met by an applicant will guarantee a finding of consistency with the Plan. Local zoning reviews involve discretionary acts; therefore, the Siting Process cannot require an applicant be subject to these reviews. The County's intent of this review was to make sure the site where the proposed facility is to be located complies with the municipality's zoning designations, as outlined on pages III-51 through III-54, that are appropriate to the type of disposal facility being proposed. In order to remedy this situation, the Zoning Districts column will be the only criterion from pages III-51 through III-54 considered in the County's determination of consistency, and the following paragraph is added to page III-50:

> A proposed facility must be located on land which has the zoning designation as outlined on pages III-51 through III-54 in order to be consistent with this Plan. The remaining columns on pages III-51 through III-54 are for informational purposes only and are not siting criteria. Compliance with the other siting concerns expressed on these pages will not be evaluated and is not necessary to be consistent with the Plan. City, village, or township zoning approval is not permitted as a requirement for plan consistency under Part 115.

On page III-46, the note after Step 4 states the Technical Review Committee (TRC) shall have ten (10) days to meet after receipt of the application package, but Step 3 gives the TRC thirty (30) days to meet. The County's intent was to allow the TRC ten (10) days to review the applicant's supplementary package which addresses deficient material. In order to alleviate any discrepancy in the time frames required for the TRC to meet, the first sentence after the Note in Step 4 is changed to read:

> If the TRC does not meet within ten (10) days after receipt of the applicant's supplementary package addressing deficient material or fails to make a certification of whether or not the applicant package is complete within the time frame identified in Step 4, the package is automatically complete and will be forwarded to the SRC for review.

On page III-46, Step 5 of the Siting Process states:

> The results of the local zoning review must be available in time for presentation at the public hearing in order to be considered. Local zoning review must address criteria from the local ordinance or this

> plan. The following tables identify key criteria from each local zoning ordinance as they were known to the DPA [Designated Planning Agency] at the time of plan preparation. The DEQ will not accept a local zoning denial by itself as justification for not siting a solid waste disposal facility.

As previously mentioned, the applicant cannot be subject to a local zoning review; therefore, these sentences are deleted from the Plan.

On page III-47, the first paragraph states the notes, materials, and minutes of the SRC shall be forwarded to the BOC if the SRC fails to arrive at a recommendation within the allotted time frame, and the BOC shall have sixty (60) days to find the proposal consistent or inconsistent with the Plan. Step 8 allows the BOC ninety (90) days to take action after the SRC has made a recommendation. In order to alleviate any confusion, the time frame for the BOC to make their determination will be ninety (90) days under both circumstances and the sixty (60) day time frame mentioned in the first paragraph should be changed to ninety (90) days. In addition, a default mechanism has not been established should the SRC not make a determination and the BOC becomes responsible for the determination. Therefore, a sentence is added to the first paragraph that states: "If the BOC is unable to arrive at a determination of consistency within ninety (90) days, the proposal will be considered consistent by the County with the Plan."

On page III-48, the first sentence in the Notification of Site Compliance/Non-Compliance section states:

> If the Site Review Committee determines that a proposed site is in compliance with the Plan they will notify the applicant, the Saginaw County Health Department and the Michigan Department of Environmental Quality that the proposed site is in compliance with the Saginaw County Solid Waste Management Plan.

The Siting Process states the SRC must submit their determination to the BOC and the BOC will concur or not concur with the SRC's determination. The BOC is responsible for the determination of consistency; therefore, the indicated parties will be notified once the BOC determines that a proposed site is in compliance with the Plan. Further, Step 9 of the Siting Process states the Saginaw County DPA will notify the DEQ and the applicant of the determination of consistency. In order to reflect the correct responsible parties, this sentence is replaced with the following sentence:

> If the BOC determines that a proposed site is in compliance with the Plan, the DPA will notify the applicant, the Saginaw County Health Department, and the Michigan Department of Environmental Quality that the proposed site is in compliance with the Saginaw County Solid Waste Management Plan.

In addition, the first sentence in the second paragraph now states, "If the BOC determines that a proposed site is inconsistent with the Plan, the DPA will notify the applicant, the County Health Department and the MDEQ, along with stated reasons for the determination."

On page III-50, the local regulations listed on this page are included in the siting criteria of the Plan. There is no explanation of how the local ordinances will be evaluated as siting criteria, and the ordinances are reiterated under the Local Ordinances section of the Plan. The areas of regulation that are listed are approvable and may be adopted and implemented by the appropriate governmental unit without additional authorization from, or formal amendment to, the Plan; therefore, the local regulations listed as siting criteria on page III-50 are deleted.

On page III-53, the third table refers to the criteria pertaining to Resource Recovery/Recycling facilities. Because not all Resource Recovery/Recycling facilities are solid waste disposal areas and siting criteria are used only to site disposal areas, a sentence is added to the third table that states, "The criteria for siting Resource Recovery/Recycling Facilities will only be used if the facility is categorized as a disposal area."

On page III-54, the last table outlining the criteria for Composting Facilities is deleted from the Plan because, as previously mentioned, siting criteria are used only to site disposal areas, and yard waste composting facilities are not disposal areas.

A clarification is required in regard to the Local Ordinances found on page III-69; however, this clarification does not require a modification to the Plan. The Plan recognizes the Saginaw County Ordinance #108, as amended October 17, 1995. Further, the Plan states this ordinance is the subject of litigation and will be amended to reflect findings when completed. The DEQ assumes this language implies the ordinance will remain unchanged except that the sections the Court ruled were invalid and unenforceable will be deleted. In order to alleviate any discrepancy regarding what is authorized by this ordinance, a copy of the ordinance and the Circuit Court decision from November 6, 1996, will be added in the Attachments section of the Plan.

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

By approving the Plan with modifications, the DEQ has determined that it complies with the provisions of Part 115 and the Part 115 administrative rules concerning the required content of solid waste management plans. Specifically, the DEQ has determined that the Plan identifies the enforceable mechanisms that authorize the state, a county, a municipality, or a person to take legal action to guarantee compliance with the Plan, as required by Part 115. The Plan is enforceable,

however, only to the extent the County properly implements these enforceable mechanisms under applicable enabling legislation. The Plan itself does not serve as such underlying enabling authority, and the DEQ approval of the Plan neither restricts nor expands the County's authority to implement these enforceable mechanisms.

The Plan may also contain other provisions that are neither required nor expressly authorized for inclusion in a solid waste management plan. The DEQ's approval of the Plan does not extend to any such provisions. Under Part 115, the DEQ has no statutory authority to determine whether such provisions have any force or effect.

The DEQ applauds your efforts and commitment in addressing the solid waste management issues in Saginaw County. If you have any questions, please contact Ms. Rhonda Oyer Zimmerman, Chief of the Solid Waste Management Unit, at 517-373-4750.

Sincerely,

Arthur R Nash Jr. ACTING

Russell J. Harding
Director
517-373-7917

cc: Senator Mike Goschka
Representative Jim Howell
Representative Carl M. Williams
Representative A.T. Frank
Mr. William W. Wright, Saginaw County Metropolitan Planning Commission
Mr. Arthur R. Nash Jr., Deputy Director, DEQ
Mr. Timothy R. Sowton, Legislative Liaison, DEQ
Mr. Jim Sygo, DEQ
Ms. Joan Peck, DEQ
Ms. Rhonda Oyer Zimmerman, DEQ
Mr. Edwin Haapala, DEQ– Saginaw Bay
Ms. Lynn Dumroese, DEQ
Saginaw County File

Saginaw County Solid Waste Management Plan

1998/1999 Update

Prepared under the guidance of the Saginaw County Solid Waste Management Planning Committee

by
Christina Pecoraro, Associate Planner

with assistance from William Wright, Planning Director
and mapping by Jay Reithel, Associate Planner

Saginaw County Metropolitan Planning Commission
400 Court St.
Saginaw, MI 48602
June 1, 1999

$25.00

Saginaw County Metropolitan Planning Commission
400 Court Street
Saginaw, Michigan 48602
Phone: (517) 797-6800 • Fax: (517) 797-6809

Lynn Dumroese
Environmental Quality Analyst
Waste Management Division
Department of Environmental Quality
PO Box 30241
Lansing, MI 48909

May 4, 2000

RE: Saginaw County Solid Waste Management Plan Update

Dear Lynn,

The Saginaw County Planning Department, which was appointed by the Saginaw County Board of Commissioners to be the Designated Planning Agency, is requesting that the Michigan Department of Environmental Quality review and approve the Saginaw County Solid Waste Management Plan Update.

The Saginaw County Board of Commissioners appointed a fourteen member Solid Waste Management Planning Committee (SWMPC). This Committee, with the DPA, held public hearings and prepared the draft plan dated June 1, 1999. This plan was approved by the Board of Commissioners on June 22, 1999. On August 2, 1999, the plan was sent to all of the Municipalities for their review and approval. On April 10, 2000 the plan had been approved by 67% of all the municipalities. Since this time, additional municipalites have approved the plan. Currently 71% of the municipalities in Saginaw County have approved the plan. We are expecting more approvals this summer and will be forwarding those to you.

At the April 11, 2000 meeting, the Saginaw County Solid Waste Management Planning Committee made a motion to send this plan to the DEQ for approval. We believe that this plan meets the requirements stated in the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended (NREPA), Part 115.

Thank you for your time and review. I have enclosed two copies, if you need more, please let me know. If you have any questions, please do not hesitate to contact myself or the Planning Director, Bill Wright, at (517)797-6800.

Sincerely,

Suzanne Kelley, Planner

RECEIVED
MAY 08 2000
Waste Management

1997 PLAN UPDATE COVER PAGE

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

DATE SUBMITTED TO THE DEQ:

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

N/A

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

Municipality	Original Planning County	New Planning County
N/A	N/A	N/A

DESIGNATED PLANNING AGENCY PREPARING THIS PLAN UPDATE:

Saginaw County Metropolitan Planning Commission

CONTACT PERSON: William W. Wright

ADDRESS: 400 Court St.
Saginaw, MI 48602

PHONE: (517) 797-6800 FAX: (517) 797-6809

E-MAIL: scmpc@voyager.net (If Applicable)

CENTRAL REPOSITORY LOCATION(S): same as above

TABLE OF CONTENTS

EXECUTIVE SUMMARY I-1
OVERALL VIEW OF THE COUNTY I-1
CONCLUSIONS I-3
SELECTED ALTERNATIVES I-4
INTRODUCTION I-5
GOALS AND OBJECTIVES I-5-7

DATABASE II-1-2
SOLID WASTE DISPOSAL AREAS II-3
SOLID WASTE FACILITY DESCRIPTIONS II-4-11
SOLID WASTE COLLECTION SERVICES AND
TRANSPORTATION INFRASTRUCUTRE II-12-13
EVALUATION OF DEFICIENCIES AND PROBLEMS II-14
DEMOGRAHICS II-15-18
LAND DEVELOPMENT II-19-23
SOLID WASTE MANAGEMENT ALTERNATIVES II-24-35

SELECTED SOLID WASTE MANAGEMENT SYSTEM III-1
IMPORT/EXPORT AUTHORIZATIONS III-2-5
SOLID WASTE DISPOSAL AREAS III-6
FACILITY DESCRIPTIONS III-7-16
SOLID WASTE COLLECTION SERVICES AND
TRANSPORTATION INFRASTRUCUTRE III-17-18
RESOURCE CONSERVATION EFFORTS III-19
WASTE REDUCTION, RECYCLING, AND COMPOSTING PROGRAMS III-20-36
EDUCATIONAL AND INFORMATIONAL PROGRAMS III-37
TIMETABLE III-38
SITING PROCEDURE III-39-57
MANAGEMENT COMPONENT III-58-61
LOCAL ORDINANCES AND REGULATIONS III-62-67

CAPACITY CERTIFICATION PROCESS IV-1

APPENDIX A- ADDITIONAL INFORMATION REGARDING THE SELECTED SYSTEM
EVALUATION OF RECYCLING A-1
DETAILED FEATURES OF RECYCLING AND COMPOSTING PROGRAMS A-5
COORDINATION EFFORTS A-8
COSTS AND FUNDING A-10
EVALUATION SUMMARY A-11
ADVANTAGES AND DISADVANTAGES A-15
APPENDIX B - NON-SELECTED SYSTEMS
NON-SLECTED SYSTEMS B-1
APPENDIX C - PUBLIC PARTICIPATION
PUBLIC PARTICIPATION AND APPROVAL C-1
APPENDIX D - ATTACHMENTS D-1
APPENDIX E - MISCELLANEOUS E-1

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)

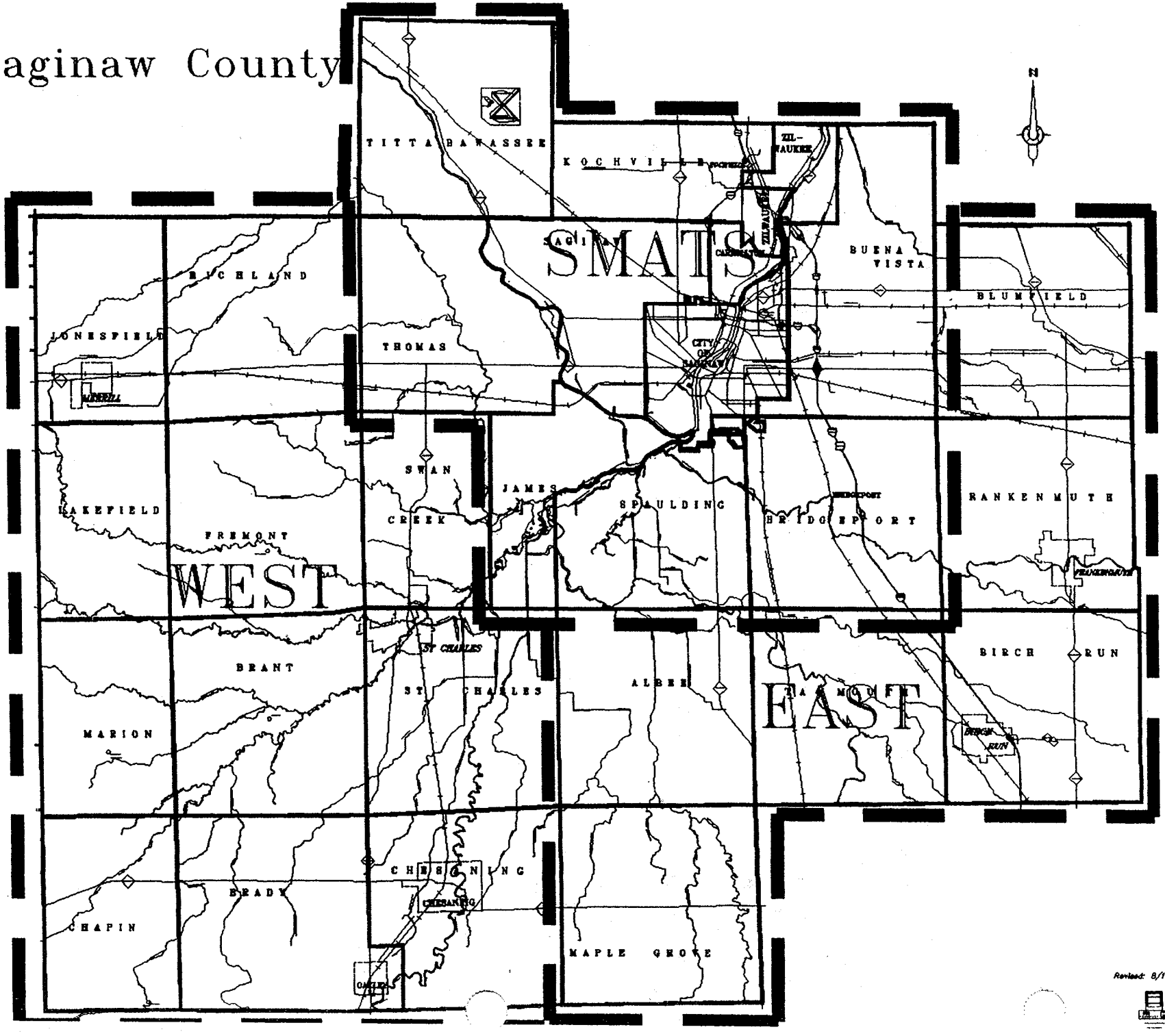
Township or Municipality Name	1995 Population	% Land Use		% of Economic Base*				
		Rural	Urban	Ag	For	Ind	Com	Oth
SMATS	160,815	50	50	10	0	40	20	30
East	24,497	80	20	60	0	10	20	10
West	26,401	90	10	70	0	10	10	10
Total Population	211,713							

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

SMATS stands for the Saginaw Metropolitan Area Transportation Study. SMATS is a cooperative effort by federal, state, and local agencies to plan for transportation improvements in the Saginaw urban area. SMATS staff work is performed by employees of the Saginaw County Metropolitan Planning Commission and the Michigan Department of Transportation.

See map on attached page to show how County is broken down.

Saginaw County



Revised: 8/18/98

EXECUTIVE SUMMARY

CONCLUSIONS

Saginaw County's current solid waste management system is functioning relatively well and provides an effective means for managing the solid waste that is generated in the County. However, there is a need and a desire in this County to achieve better resource recovery rates and lessen dependance on landfills.

Currently, contracts with both landfills located in Saginaw County guarantee disposal capacity until the year 2013 (20 years from the February 23, 1993 signing date).

The Saginaw Area Solid Waste Management Authority (SASWMA), in cooperation with the haulers and the processors, has established a successful residential materials recovery program, which is offered to member community residents. In non-member communities, the haulers are responsible for providing these services. The overall goals for the residential waste program are: Recycle 27%, Compost 20%, Reduce 3%, Landfill 50%.

The commercial and industrial waste streams were handled independently. Goals have been set for these two waste generating sectors, as well.

Individual communities have been experiencing problems with blight as well as truck traffic. These issues have been discussed thoroughly and a schedule for which these issues will be addressed has been drawn up. (Refer to Page III-38)

It is the conclusion of this planning process that the greatest opportunities for improved solid waste programs in Saginaw County are available through expanded and enhanced materials recovery efforts.

EXECUTIVE SUMMARY

SELECTED ALTERNATIVES

The focus of the selected alternative is on enhancing the recovery of materials from the solid waste stream through increased recycling, composting, reduction and reuse efforts.

Major components of the selected system include:

1. Expanding materials list for commerical recycling collections.
2. Expanding educational programs about backyard composting.
3. Expanding educational efforts to encourage commercial and industrial generators to reduce, reuse and recycle.
4. Expanding efforts to promote reduction, reuse and recycling in the workplace and at home.
5. Seeking more markets for recyclable materials.
6. Offering residents more opportunities to dispose of household hazardous waste safely.
7. Educating residents on safer alternative cleaning products.
8. Expanding commercial recycling collection routes.

INTRODUCTION

GOALS AND OBJECTIVES

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

(1) To utilize to the maximum extent possible the resources available in Michigan's solid waste stream through source reduction, source separation, and other means of resource recovery and;

(2) to prevent adverse effects on the public health and the environment resulting from improper solid waste collection, transportation, processing, or disposal, so as to protect the quality of the air, the land, and ground and surface waters.

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

Goal 1: Develop an integrated solid waste management system in which all components work together effectively and efficiently. (Components being defined as generators, haulers, processing facilities, and regulators)

Objective 1a: Ensure that the system maximizes proven waste reduction methods such as recycling and composting and extends the life of existing and planned landfills.

Action Steps:
1. Conduct educational programs that promote recycling, composting and waste reduction.
2. Encourage private and public involvement in existing waste reduction and recycling programs.
3. Encourage recovery of recyclables by industrial, commercial and residential sources.
4. Encourage creation and expansion of markets for recycled materials.
5. Implement the County's existing solid waste management ordinance.
6. Set new goals for landfilling, recycling, composting and waste reduction for the three waste sectors: residential, commercial and industrial.
7. Promote equal engineering, construction and operating standards for County landfills. Maintain competition between landfills.
8. Develop guidelines for sites handling compost and source separated recyclables.

Objective 1b: Set up a cooperative network between the government (local, state and federal) and the waste industry (all generators, haulers, processing facilities, and regulators).

Action Steps:
1. Develop recording requirements consistent with local, state and federal standards to minimize redundant reporting.
2. Encourage consistency of plan goals, administrative support and political will to enforce.
3. Identify all of the parties involved in local solid waste management.
4. Educate people that the waste industry is an essential business required by public habits which requires a profit to be viable.
5. Encourage and support appropriate local, state and federal legislation to provide incentives for waste reduction and recycling.
6. Maintain the County's role as the planning agency to coordinate local and state actions in relation to solid waste management issues.
7. Encourage waste collectors to introduce less cumbersome rules and stronger incentives for participation in curbside recycling programs.

Objective 1c: Address management of various components of the solid waste stream which are not appropriate for landfilling, but cannot be recycled immediately.

Action Steps:
1. Include a mechanism for household hazardous waste collection.
2. Encourage the state to impose regulations, such as deposits, on materials that are difficult to dispose of, such as tires and batteries.
3. Preserve Type II landfill space by separation of Type III waste.

Goal 2: Minimize the impacts and costs of dealing with each component of the solid waste stream.

Objective 2a: Address issues relating to the siting and management of landfills and handling of materials which must be disposed of in this manner.

Action Steps:
1. Identify long term management objectives for all Saginaw County landfills, open or closed, past or present, to ensure the health and the safety of County residents.
2. Ensure that all commercial vehicles traveling to and from landfills use designated truck routes. This would minimize costs for road repairs and allow for improvements to appropriate routes.
3. Grant import/export authorization only to the seven contiguous counties for transport and disposal of solid waste, unless the Plan is amended pursuant to flow control criteria.

4. Assure that siting requirements for landfills will protect local communities and infrastructure, while seeking to minimize solid waste disposal costs to local residents and businesses.

Objective 2b: Prevent adverse effects on public health and on the environment resulting from improper solid waste collection, transportation, processing, and disposal, including protection of surface and groundwater quality, air quality, and the land.

Action Steps:
1. Remain sensitive to the needs of communities which are host sites for landfills by enforcing appropriate use of designated truck routes and litter control standards and by including siting criteria to prevent over-concentration of landfills.
2. Encourage annual community wide clean-up programs to improve community appearance.
3. Inventory and pursue remediation of existing unlicensed solid waste disposal activities.

Goal 3: Maximize the solid waste management system's effectiveness throughout the lifetime of the Plan and allow the system to respond to changes in any of its components (generation, collection, disposal, and regulation).

Objective 3a: Develop the capability to respond to challenges presented by changes in solid waste management technologies, the regulatory environment or the relationships among parties in the local solid waste management practices.

Action Steps:
1. Keep accurate population and waste generation projections for the County and local units to use in estimating and ensuring long term landfill capacity.
2. Include landfill siting requirements which allow for new landfill facilities, if required.
3. Maintain the capability for the sampling of incoming waste at landfill sites.
4. Establish flexibility to enter into agreements with non-contiguous counties, if necessary, to improve efficiency and reduce costs. Agreements with non-contiguous counties must go through a plan amendment process.
5. Encourage new technologies to recover materials and energy from landfills.
6. Create ongoing oversight committee that would meet not less than quarterly, to provide review of implementation efforts and respond to requests for changes in the solid waste management plan.

DATA BASE

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

Saginaw County

Waste Type	1995	2000	2005	2010
Residential Waste	103,163 TPY	103,030TPY	101,651 TPY	101,826 TPY
Commercial Waste	87,110 TPY	91,450 TPY	95,790 TPY	100,490 TPY
Industrial Waste	64, 958 TPY	64,327 TPY	63,227 TPY	62,665 TPY

Based on reports from haulers, the SASWMA, and industrial sampling reports.

Waste Type	1998 (Current)	2003 (5 year)	2008 (10 Year)
Muncipal Sludge*	8,699 TPY	8,957 TPY	16,140 TPY**
Municipal Grit*	2,245 TPY	2,246 TPY	3,216 TPY**

* Based on wastewater treatment plants actual reported data and projections.
** Large increase due to the City of Saginaw's retention basins coming online over the next ten years.

Type III Waste:	1998 (Current)	2003 (5 Year)	2008 (10 Year)
Industrial Sludge	97,968 TPY	88,868 TPY	69,368 TPY
Foundry Sands	170,600 TPY	170,600 TPY	170,600 TPY

(only 600 TPY are landfilled, the rest is reused)

Based on industrial sampling reports.

TOTAL QUANTITY OF SOLID WASTE GENERATED:
534,743 ☒Tons or ☐Cubic Yards in 1 year (identify unit of time)

TOTAL QUANTITY OF SOLID WASTE NEEDING DISPOSAL:
296,091 ☒Tons or ☐Cubic Yards in 1 year (identify unit of time)

Refer to next page and Appendix E for more information on sources and how figures were calculated.

HOW TOTALS WERE DETERMINED

To determine total quantity of solid waste generated (previous page), all 1995/1998 volumes were added up.

To determine total quantity of waste needing disposal, foundry sand and municipal sludge were subtracted from the total waste generated, because they are reused. After those two wastes were removed, the recycling and composting volumes that were received from the haulers, the SASWMA and the industrial sampling were subtracted. The figures that were used in determining the above totals is found below.

Residential Waste

Recycle	11,657 TPY
Compost	17,232 TPY

Based on SASWMA figures and hauler reports.

Commercial Waste

Recycle	11,576 TPY

Based on hauler reports.

Industrial Waste

Recycle	19,488 TPY
Reuse	8,699 TPY (municipal sludge)

Based on reported volumes from sampling of industries and hauler reports.
Industrial waste is the sum of municipal sludge, municipal grit, and industrial waste.
Foundry sands and industrial sludge are disposed of in Type III landfills.

DATA BASE

Inventory and description of all solid waste disposal areas within the County or to be utilized by the County to meet its disposal needs for the planning period.

Within Saginaw County

1. Saginaw Valley Landfill, James Township, Type II Landfill
2. People's Landfill, Taymouth Township, Type II Landfill
3. Taymouth Landfill, Taymouth Township, Type II Landfill
4. Saginaw Metal Castings Operation, Buena Vista Township, Type III Landfill
5. Aleda Lutz (Veteran's) Hospital Incinerator (no facility sheet attached)
6. Michigan Sugar Waste Piles (no facility sheet attached)

Outside Saginaw County

5. Whitefeather Landfill, Bay County, Type II Landfill
6. Brent Run Landfill, Genesee County, Type II Landfill
7. Citizen's Landfill, Genesee County, Type II Landfill
8. Venice Park Development, Shiawassee County, Type II Landfill

DATA BASE
FACILITY DESCRIPTIONS

Facility Type: Type II Landfill

Facility Name: Saginaw Valley Landfill
County: Saginaw Location: Town: 11N Range: 3E Section(s): 1

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: N/A
_ Public X Private Owner: Waste Management

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

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

Site Size:

Total area of facility property:	84.25	acres
Total area sited for use:	51	acres
Total area permitted:	51	acres
Operating:	<5	acres
Not excavated:	—	acres
Current capacity:	—	tons or _yds^3
Estimated lifetime:	<1	years
Estimated days open per year:	260	days
Estimated yearly disposal volume:	240,000	X tons or _yds^3

(if applicable)
Annual energy production: N/A

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

Note: Numbers are listed as they were reported from facility.
This landfill is scheduled to close in mid-1999.

FACILITY DESCRIPTIONS
Facility Type: Type II Landfill
Facility Name: People's Landfill

County: Saginaw Location: Town: 10N Range: 5E Section(s): 15
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: N/A
_Public X Private Owner: Waste Management

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

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

Site Size:

Total area of facility property:	163	acres
Total area sited for use:	110	acres
Total area permitted:	29.1	acres
Operating:	2	acres
Not excavated:	100	acres
Current capacity:	5,301,641	_tons or X yds^3
Estimated lifetime:	20	years
Estimated days open per year:	254	days
Estimated yearly disposal volume:	1000	X tons or _yds^3

(if applicable)
Annual energy production:

Landfill gas recovery projects:	3.2 **	megawatts
Waste-to-energy incinerators:	N/A	megawatts

Note: People's Landfill has been approved by the Site Review Committee in 1993 for a 53 acre expansion. The permit was issued in 1993, but it has lapsed. People's has plans to renew the permit and begin excavation within a year.
Note: Numbers are listed as they were reported from facility.

** This is a combined total for People's Landfill and Taymouth Landfill.

FACILITY DESCRIPTIONS

Facility Type: Type II Landfill

Facility Name: Taymouth Landfill
County: Saginaw Location: Town: 10 N Range: 5 E Section(s): 15

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:N/A
_ Public X Private Owner: Republic Industries

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

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

Site Size:

Total area of facility property:	138.89	acres
Total area sited for use:	43	acres
Total area permitted:	25	acres
Operating:	15	acres
Not excavated:	10	acres
Current capacity:	1,400,000	X tons or yds^3
Estimated lifetime:	14	years at current intake
Estimated days open per year:	260	days
Estimated yearly disposal volume:	216,000	X tons or yds^3

(if applicable)
Annual energy production:

Landfill gas recovery projects:	3.2**	megawatts
Waste-to-energy incinerators:	N/A	megawatts

Note: Numbers are listed as they were reported from facility.

** This is a combined total for People's Landfill and Taymouth Landfill

FACILITY DESCRIPTIONS

Facility Type: Type III Landfill

Facility Name: Saginaw Metal Castings Operations

County: Saginaw Location: Town: 12 N Range: 5 E Section(s): 5

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: N/A

_ Public X Private Owner: General Motors

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

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

Site Size:

Total area of facility property:	700	acres
Total area sited for use:	92	acres
Total area permitted:	60.7	acres
Operating:	60.7	acres
Not excavated:	0	acres
Current capacity:	1,700,000	_tons or X yds^3
Estimated lifetime:	13	years
Estimated days open per year:	240	days
Estimated yearly disposal volume:	127,000	_tons or X yds^3

(if applicable)
Annual energy production:

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

Note: GM plans to apply for a vertical expansion permit as it nears capacity.
Numbers are listed as they were reported from facility.

FACILITY DESCRIPTIONS

Facility Type: Type II Landfill

Facility Name: Whitefeather Landfill

County: Bay Location: Town: 17N Range: 4E Section(s): 2

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: N/A

_ Public X Private Owner: Republic Industries

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

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

Site Size:

Total area of facility property:	106	acres
Total area sited for use:	56.5	acres
Total area permitted:	56.5	acres
Operating:	24.5	acres
Not excavated:	32	acres
Current capacity:	4,175,153	_ tons or X yds^3
Estimated lifetime:	18.8	years
Estimated days open per year:	260	days
Estimated yearly disposal volume:	380,000	_ tons or X yds^3

(if applicable)
Annual energy production:

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

Note: Numbers are listed as they were reported from facility.

FACILITY DESCRIPTIONS

Facility Type: Type II Landfill

Facility Name: Brent Run Landfill

County: Genesee Location: Town: 9 N Range: 5 E Section(s): 23

Map identifying location included in Attachment Section: _ Yes X No

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

_ Public X Private Owner: Republic Industries

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

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

Site Size:

Total area of facility property:	160	acres
Total area sited for use:	90	acres
Total area permitted:	30	acres
Operating:	15	acres
Not excavated:	45	acres
Current capacity:	10,247,000	_ tons or X yds^3
Estimated lifetime:	18	years
Estimated days open per year:	312	days
Estimated yearly disposal volume:	720,000	_tons or X yds^3

(if applicable)
Annual energy production:

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

Note:Numbers are listed as they were reported by facility.

FACILITY DESCRIPTIONS

Facility Type: Type II Landfill

Facility Name: Citizen's Disposal

County: Genesee Location: Town: 6 N Range: 6 E Section(s): 23

Map identifying location included in Attachment Section: _ Yes X No

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

_ Public X Private Owner: Allied Waste Industries, Inc.

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

* Explanation of special wastes, including a specific list and/or conditions:
All special waste requires prior review and approval including analytical data and waste profile - non-hazardous only.

Site Size:

Total area of facility property:	300 +/-	acres
Total area sited for use:	300 +/-	acres
Total area permitted:	52	acres
Operating:	52	acres
Not excavated:	80	acres
Current capacity:	5.3 million	_ tons or X yds^3
Estimated lifetime:	25	years
Estimated days open per year:	300	days
Estimated yearly disposal volume:	.5 million	_ tons or X yds^3

(if applicable) Annual energy production:

Landfill gas recovery projects:	2.4	megawatts
Waste-to-energy incinerators:	N/A	megawatts

Note: Numbers are listed as they were reported from facility.

FACILITY DESCRIPTIONS

Facility Type: Type II Landfill (with a Type III cell)

Facility Name: Venice Park Development

County: Shiawassee Location: Town: 7 N Range: 4 E Section(s): 26/27

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: N/A

_ Public X Private Owner: Waste Management

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

* Explanation of special wastes, including a specific list and/or conditions:
Asbestos, medical wastes, sludge, filter cake, process wastes, coal ash, foundry sands, chemical containing equipment, street sweepings, sediment trap materials

Site Size:

Total area of facility property:	325	acres
Total area sited for use:	80	acres
Total area permitted:	80	acres
Operating:	42	acres
Not excavated:	2.5	acres

Current capacity:	2,000,000	_ tons or X yds^3
Estimated lifetime:	2	years
Estimated days open per year:	281	days
Estimated yearly disposal volume:	1,000,000	_ tons or X yds^3

(if applicable)
Annual energy production:

Landfill gas recovery projects:	11,500	megawatts
Waste-to-energy incinerators:	N/A	megawatts

Note: Numbers are listed as they were reported from facility.

DATA BASE

SOLID WASTE COLLECTION SERVICES AND TRANSPORTATION INFRASTRUCTURE

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

Service Provider	Public/Private	Service Area	Payment	Disposal Facility
City Environmental Ithaca	Private	Marion Twp.	Municipal contracts*	Not reported
City Environmental	Private	Marion Twp., Brady Twp.	Billed individually	Not reported
City Env. - Montrose	Private	Maple Grove Twp., Chesaning Vill. And Twp. Oakley Vill.	Municipality tax or individual residents billed	Brent Run
City Env. - Saginaw	Private	All County	Muncipal contracts and individual businesses	Sag. Valley, Taymouth Landfill
City of Saginaw	Public	City of Saginaw	Millage and flat rate per home	Sag. Valley, Taymouth Landfill
Medi-Haul	Private	All County	Commercial contracts	Venice Park Development
Standard Disposal	Private	JC Pennys stores only	Commercial contracts	Not reported
Sunrise Disposal	Private	Brant Twp, Chapin Twp.	Billed individually	Brent Run
Tri-County	Private	Various commercial and industrial customers	Commercial contracts	Taymouth Landfill
Valley Rubbish	Private	Various commercial and industrial customers	Commercial contracts	Venice Park Development

* City Env. - Ithaca brings a truck to Marion Twp. once a month. Marion Twp. Government offers their residents a chance to dispose of their refuse for free during this monthly collection.
Note: City Environmental is a division of Waste Management

The collection of solid waste that is generated by residential, commercial, or industrial customers is handled almost exclusively by the private solid waste haulers, with the exception of the City of Saginaw, whose Department of Public Works (DPW) handles residential collections. There are other

small hauling firms operating in Saginaw County that collect commercial waste, industrial waste and construction and demolition materials. The amounts of waste collected by these small haulers is negligible when compared to the waste quantities collected by the above firms.

The Saginaw Area Solid Waste Management Authority (SASWMA) is an organization of local governments (26 members, to date) that handles the hauling contracts for 25* of the 35 municipalities in Saginaw County. The SASWMA negotiates contracts with existing haulers in the County for weekly residential trash, recycling, and yard waste collections. The SASWMA handles the processing and disposal contracts with all 26 of its members. The SASWMA negotiates contracts with the haulers, the recycling centers and the landfills which will enable the best deal for a municipality's residents. Currently, City Environmental/Waste Management holds the hauling contract for SASWMA member communities. All county municipalities are given the opportunity to join the SASWMA.

Any community not belonging to the SASWMA either has agreements with a private hauler to collect residential waste or it allows individual residents to contract directly with the collection firm of their choice.

Commercial and industrial waste are primarily serviced by the firms listed in this section.

All of the designated haul routes are along all weather roads. Though the routes were built to accomodate the heavy trucks, some of the trucks do not stay on the proper routes. This causes damage to many roads that were not built to handle the large volumes of traffic and the weights of these vehicles.

*The City of Saginaw is a member of the SASWMA. However, instead of using the SASWMA's hauler, they have opted to have the City DPW continue to collect their trash. The City of Saginaw currently offers weekly trash pick-up and recycling collections. The weekly recycling collections began in October of 1998. The SASWMA does handle the processing and disposal contracts for the City of Saginaw.

DATA BASE

EVALUATION OF DEFICIENCIES AND PROBLEMS

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

1. There is a need to expand recycling opportunities for the following sectors:
   -commercial/business
   -industrial/construction and demolition
   -multi-family housing (apartments)

2. The current system does not provide any real incentive for waste reduction efforts. The County should explore other waste reduction options available.

3. There is not an easy way to track commercial and industrial waste generation. The County needs to develop better communication between generators, haulers and processors.

4. Some residents are not aware of who is running their recycling programs. Some call the Saginaw County recycling hotline, where messages are only retrieved biweekly. They don't appear to know who it is that they need to call for service problems, etc. There is a strong need to educate the County's residents to eliminate much of the frustration that is occurring.

The publication "Curbing Our Waste", distributed by the Saginaw Area Solid Waste Management Authority is helping to minimize much of the confusion that had been occurring. Pick-up schedules as well as phone numbers to call with questions are included in this booklet.

5. Haul routes are not being used by many of the truck drivers going to and from the landfills, causing disruption to many communities, and there is little enforcement of these routes.

6. There is a need for more household hazardous waste collection days. These are only offered twice a year. Residents own much more HHW than two collections a year can handle. The County should look into having special collection days for specific items, such as batteries and paint. The SASWMA held an event like this in the Spring of 1998 and it was extremely successful.

DATA BASE

DEMOGRAPHICS

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

The following table presents the population projections for Saginaw County municipalities. It is important to note that the township totals do not include village populations.

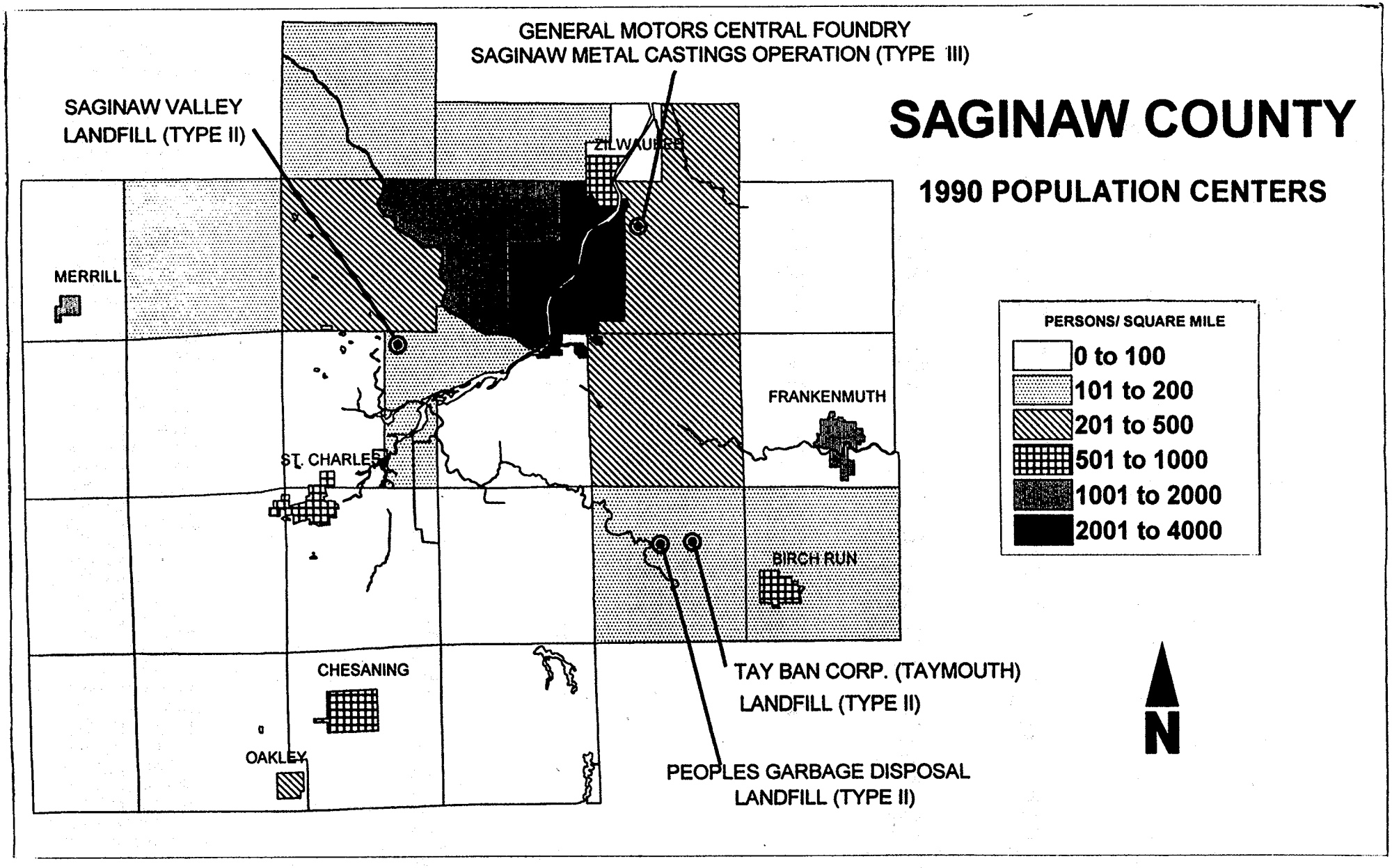
The following maps show how the population of the County is distributed in relation to the four landfills located in the County. With the exception of the Saginaw Metal Castings Operation, the landfills are located in areas of lower population. In 2010, there is not a significant population increase projected for the townships that house the landfills.

Saginaw County Population Projections
Based Upon REMI County Level Data and MCD Population Shifts Influenced by Trends Intuited by the MIC

	1990		2000		2005		2010	
Minor Civil Divisions	Population	Persons/sq. mile	Population	Persons/sq. mile	Population	Persons/sq. mile	Population	Persons/sq. mile
Albee Township	2,402	67	2,559	71	2,606	72	2,689	75
Birch Run Township	4,357	129	4,622	137	4,697	139	4,835	143
Blumfield Township	1,999	56	1,985	56	1,952	55	1,944	55
Brady Township	2,034	57	2,159	61	2,195	62	2,260	63
Brant Township	1,923	52	2,041	56	2,075	56	2,136	58
Bridgeport Township	12,747	369	12,294	355	11,914	344	11,693	338
Buena Vista Township	10,900	303	10,298	286	9,878	274	9,595	267
Carrollton Township	6,521	2,039	6,338	1,981	6,166	1,927	6,075	1,898
Chapin Township	969	39	916	37	879	36	854	35
Chesaning Township	2,337	74	2,480	78	2,522	80	2,596	82
Frankenmuth Township	2,122	65	2,172	66	2,168	66	2,192	67
Fremont Township	2,137	58	2,327	63	2,397	65	2,499	68
James Township	2,005	110	2,113	116	2,140	118	2,195	121
Jonesfield Township	985	40	1,046	43	1,063	43	1,095	45
Kochville Township	2,740	146	2,598	138	2,496	133	2,429	129
Lakefield Township	962	40	1,047	43	1,078	45	1,124	47
Maple Grove Township	2,830	80	2,980	84	3,017	85	3,094	87
Marion Township	928	38	989	40	1,007	41	1,039	42
Richland Township	4,177	113	4,468	120	4,560	123	4,713	127
Saginaw Township	37,684	1,533	39,225	1,595	39,489	1,605	40,262	1,637
St. Charles Township	1,534	44	1,628	46	1,656	47	1,705	48
Spaulding Township	2,662	100	2,514	95	2,410	91	2,341	88
Swan Creek Township	2,192	96	2,325	102	2,363	104	2,432	107
Taymouth Township	4,524	127	4,902	138	5,036	142	5,239	147
Thomas Township	10,971	349	12,145	386	12,609	400	13,258	421
Tittabawassee Township	4,627	132	7,248	206	8,076	229	9,113	259
Zilwaukee Township	82	14	79	14	76	13	74	13
Village of Birch Run	997	554	1,601	889	2,003	1,113	2,539	1,411
Village of Chesaning	2,567	856	2,495	832	2,428	809	2,392	797
Village of Merrill	755	1,080	727	1,039	704	1,006	690	986
Village of Oakley	362	362	350	350	340	340	334	334
Village of St. Charles	2,144	858	2,086	834	2,030	812	2,001	800
City of Frankenmuth	4,408	1,764	4,717	1,887	4,816	1,926	4,979	1,992
City of Saginaw	69,512	3,998	62,201	3,575	58,063	3,337	54,893	3,155
City of Zilwaukee	1,850	841	1,766	803	1,702	774	1,662	755
County Total	211,946		211,441		208,611		208,970	

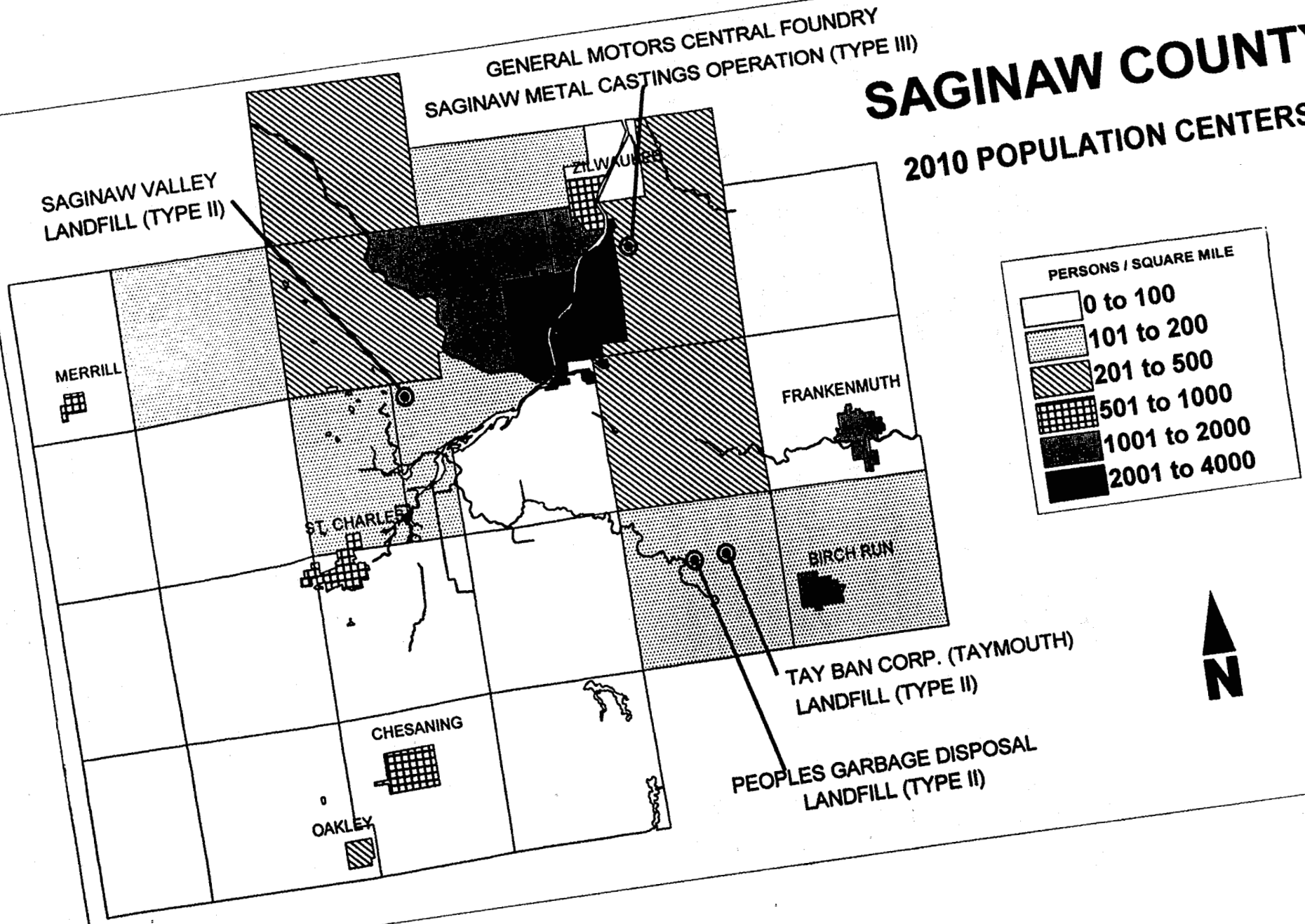
Note: Township totals do not include village populations.

Revised 10/23/98


SAGINAW COUNTY
1990 POPULATION CENTERS
GENERAL MOTORS CENTRAL FOUNDRY
SAGINAW METAL CASTINGS OPERATION (TYPE III)
SAGINAW VALLEY
LANDFILL (TYPE II)
ZILWAUKEE
MERRILL
FRANKENMUTH
ST. CHARLES
BIRCH RUN
CHESANING
OAKLEY
TAY BAN CORP. (TAYMOUTH)
LANDFILL (TYPE II)
PEOPLES GARBAGE DISPOSAL
LANDFILL (TYPE II)
PERSONS/ SQUARE MILE
0 to 100
101 to 200
201 to 500
501 to 1000
1001 to 2000
2001 to 4000
N

SAGINAW COUNTY

2010 POPULATION CENTERS



DATA BASE

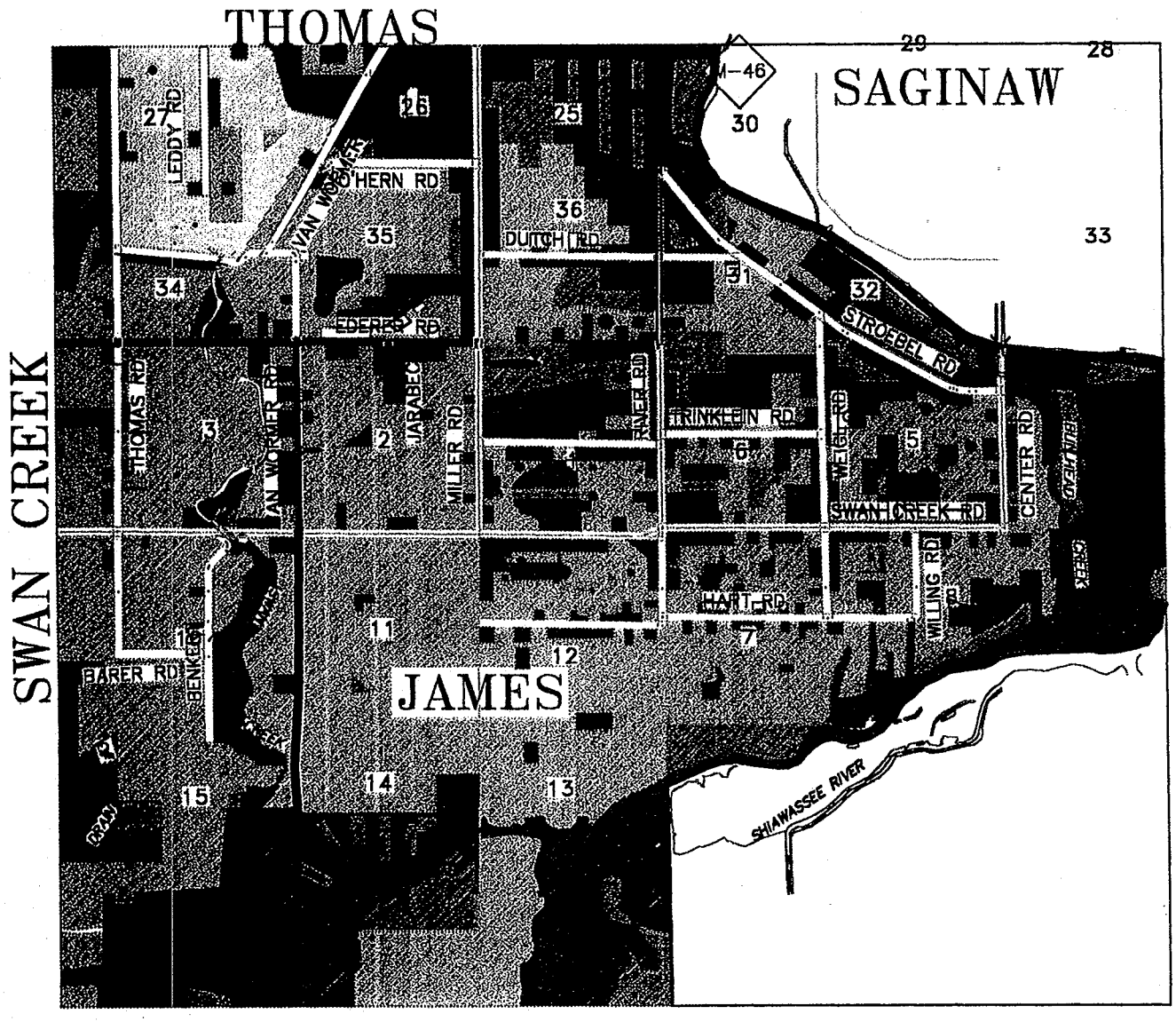
LAND DEVELOPMENT

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

Please see attached maps. These maps show the current (1997) and projected (2010) land development patterns for the land surrounding the landfills.

The current land use was determined by analyzing 1997 aerial photographs of Saginaw County in the communities that host the landfills.

Projected land use shows mostly residential growth along the major roads in James and Taymouth townships. Projected commercial and industrial growth is minimal in these two communities. In James Township, recreation lands increase due to the fact that a rail trail is being built through the township. The trail goes past a closed landfill, which is projected to become part of a larger recreational area. Also, there will be much more open space, due to the fact that the Shiawassee National Wildlife Refuge has plans to epand within the township.



SAGINAW VALLEY LANDFILL & SURROUNDING AREAS

LAND USE

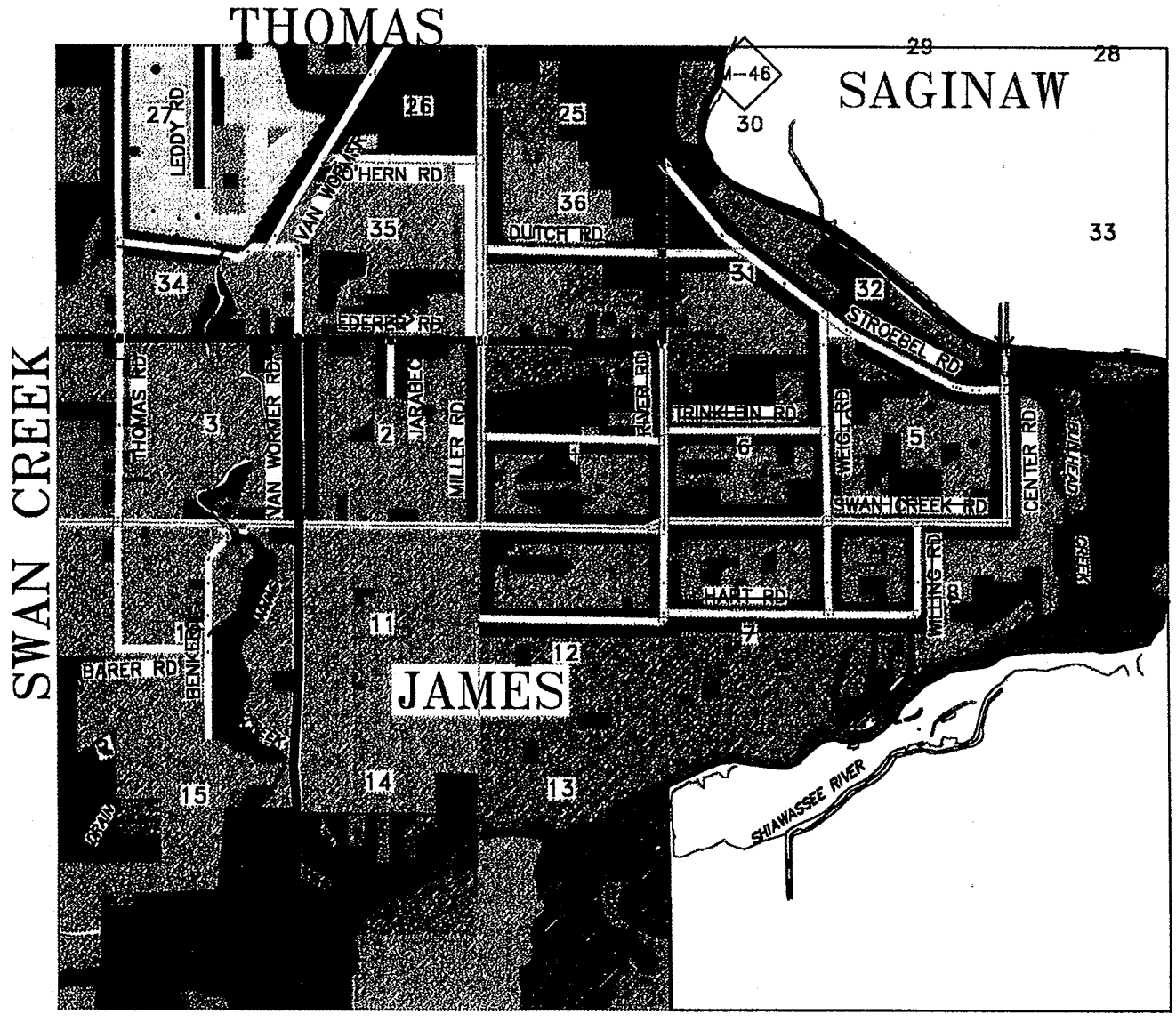
- RESIDENTIAL
- COMMERCIAL
- AGRICULTURE
- WOODLAND
- WETLAND/OPEN WATER
- OUTDOOR/RECREATION
- PASTURE/OPEN SPACE
- SAGINAW VALLEY LANDFILL

N

SAGINAW COUNTY
METROPOLITAN PLANNING COMMISSION

SAGINAW VALLEY LANDFILL
& SURROUNDING AREAS
LAND USE

Drawn by: JR
Designed by:
Approved by:
Date: 10/13/95
Scale:
File No.: TRASH



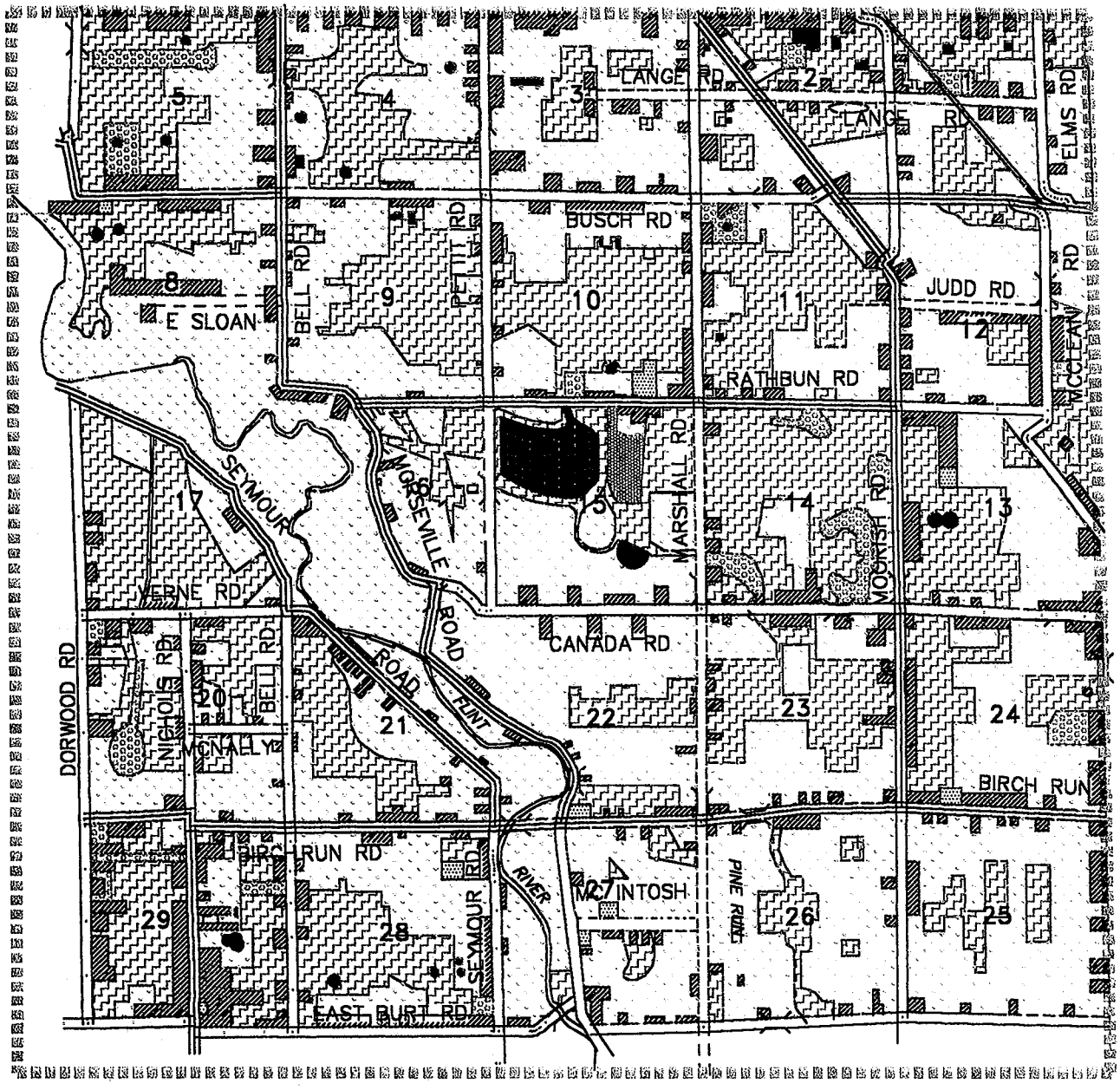
SAGINAW VALLEY LANDFILL & SURROUNDING AREAS

PROJECTED LAND USE

- RESIDENTIAL
- COMMERCIAL
- AGRICULTURE
- WOODLAND
- WETLAND/OPEN WATER
- OUTDOOR/RECREATION
- PASTURE/OPEN SPACE

N

SAGINAW COUNTY METROPOLITAN PLANNING COMMISSION	
SAGINAW VALLEY LANDFILL & SURROUNDING AREAS	
PROJECTED LAND USE	
Drawn by: JR Designed by: Approved by:	Date: 10/12/98 Scale: File No.: TRASH



TAYMOUTH TOWNSHIP

LAND USE

- RESIDENTIAL
- COMMERCIAL/INDUSTRIAL
- OUTDOOR RECREATION
- WOODLAND
- WETLAND, OPEN WATER
- PASTURE, OPEN SPACE
- CROP, ORCHARD
- TAYMOUTH LANDFILL
- PEOPLES GARBAGE DISPOSAL

N

SAGINAW COUNTY
METROPOLITAN PLANNING COMMISSION

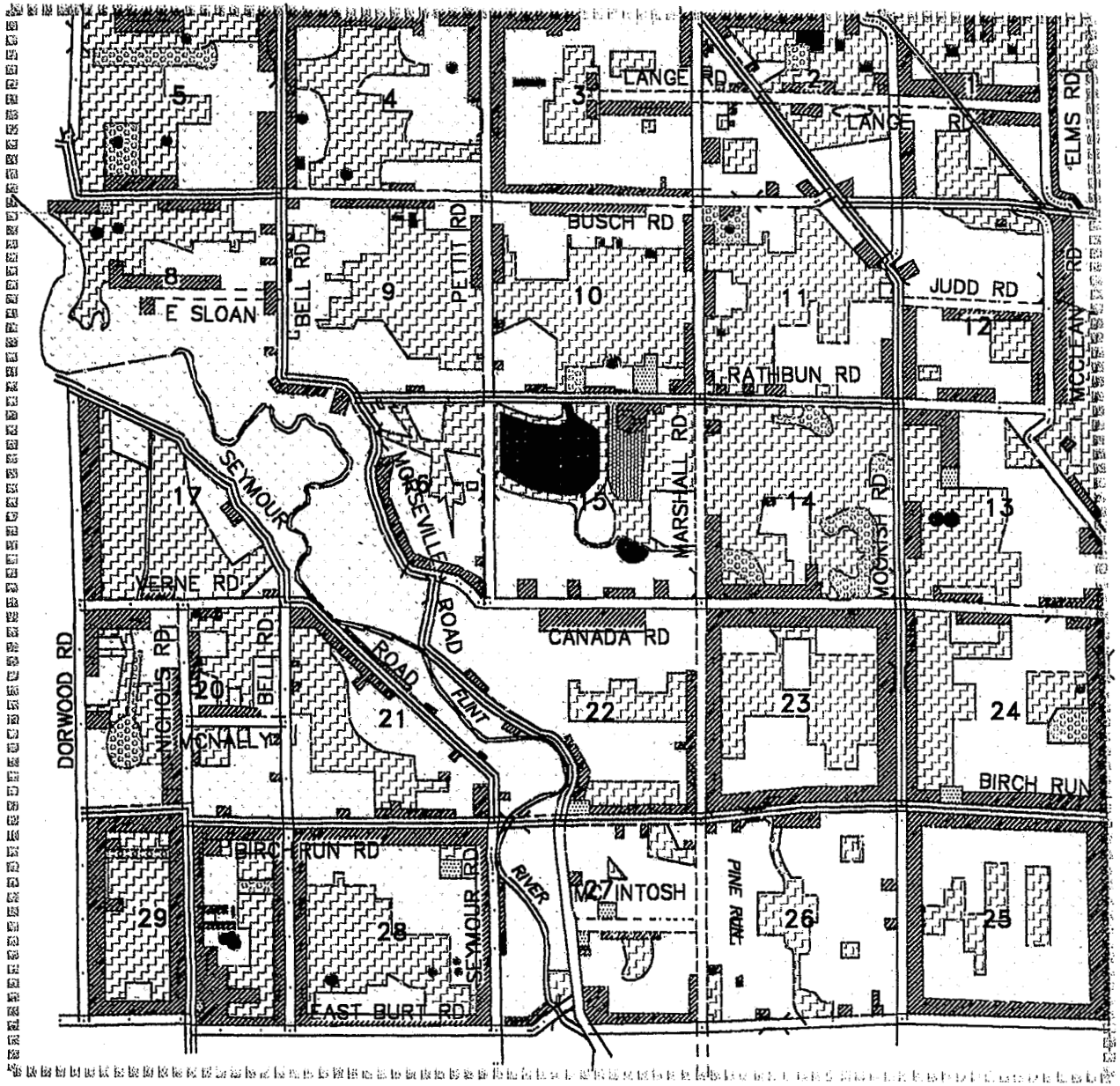
TAYMOUTH TOWNSHIP

LAND USE MAP

Drawn by: Z. [illegible]
Designed by:
Approved by:
Date: 8/31/98
Scale:
File No.:

TAYMOUTH TOWNSHIP

PROJECTED LAND USE



- RESIDENTIAL
- COMMERCIAL/INDUSTRIAL
- OUTDOOR RECREATION
- WOODLAND
- WETLAND, OPEN WATER
- PASTURE, OPEN SPACE
- CROP, ORCHARD
- TAYMOUTH LANDFILL
- PEOPLES GARBAGE DISPOSAL

SAGINAW COUNTY
METROPOLITAN PLANNING COMMISSION

TAYMOUTH TOWNSHIP

LAND USE MAP

Drawn by: J. [illegible]
Designed by:
Approved by:
Date: 8/31/68
Scale:
File No.:

DATA BASE
SOLID WASTE MANAGEMENT ALTERNATIVES (attach additional pages as necessary)

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

The Solid Waste Management Planning Committee has come up with three viable alternatives. The solid waste management systems are affected by a number of factors. All of the alternatives will be evaluated based on these factors. These will be discussed further in later sections.

Alternative #1: Status-Quo

This alternative would keep the present system operating without any major changes.

The Saginaw Area Solid Waste Management Authority (SASWMA), an organization of local governments, provides the majority of residential curbside waste disposal, recycling and yard waste programs in the County. Any communities who are not part of the SASWMA, contract with private haulers on an individual basis for waste disposal, recycling and yard waste collections, as needed. The SASWMA would continue public educational efforts to promote residential recycling. Other small local environmental groups would continue their programs as well. Residential waste is collected curbside and then taken to a landfill in Saginaw County or one of the contiguous counties for disposal. Residential recycling is taken to a recycling center for processing and yard waste is taken to a compost site for composting. Bulky items are picked up curbside. Separate trucks are used for recycling and waste collections. All materials are collected on the same day, so customers are only required to put out their refuse once a week. Currently, the markets make it cost effective to recycle metal, glass, numbers 1,2, & 6 plastics, cardboard and boxboard. The SASWMA offers educational programs and guidelines to its members.

Commercial and industrial customers contract with private haulers on an individual basis for waste and recycling collections. Commercial businesses recycle primarily cardboard. Industries recycle a large variety of materials from wood pallets to cardboard. Collection frequencies are determined by how much waste and recycling is generated. Waste is collected from on-site dumpsters. No significant educational efforts are being geared towards these two waste sectors. Charity organizations promote re-use, through donations.

Many large industrial firms in the County are involved in waste reduction, re-use and pollution

prevention programs. These programs are voluntary actions taken by the individual corporations. Due to increased public awareness of environmental issues and increased solid waste regulations from the State of Michigan, industries have been actively looking for ways to reduce waste and disposal costs. These actions include reducing amounts of materials in manufactured products; developing and using products with longer lifetimes; purchasing materials in bulk to reduce packaging waste; purchasing products in recyclable containers, instead of disposable ones; and utilizing waste from manufacturing processes for other uses. For example, foundry sands are being reused for molds after they are put through a "cleaning process".

To ensure adequate landfill space, Saginaw County has entered into reciprocal agreements with four of the seven contiguous counties allowing a specified volume of waste to cross county borders. Also, Saginaw County has entered into contracts with two of the landfills in the County, which guarantee the County disposal capacity for twenty years. Waste volume is also reduced by using compactors, both in the collection trucks and on-site at the landfills.

Commercial, industrial and residential waste is collected by private haulers, with the exception of the City of Saginaw residents. The City of Saginaw is serviced by the City of Saginaw Department of Public Works.

The transportation network is functioning well, with the designated haul routes being all weather roads.

Alternative #2 - Enhanced Materials Recovery

This alternative calls for a continuation of many components of the existing system. However, the main focus would be on expanding materials recovery efforts.

The Saginaw Area Solid Waste Management Authority (SASWMA) would provide the majority of residential curbside waste disposal, recycling and yard waste programs in the County. Any communities who are not part of the SASWMA would contract with private haulers on an individual basis for waste disposal, recycling and yard waste collections, as needed. The County would disband the existing recycling hotline and SASWMA or another local eligible group would start a new one to help answer the residents' questions.

However, efforts to reduce the County's dependence on landfills would take place, including, but not limited to:

1. Expanding materials list for commercial recycling collections.

2. Expanding educational programs about backyard composting.
3. Expanding educational efforts to encourage commercial and industrial generators to reduce, re-use and recycle.
4. Expanding efforts to promote reduction, re-use and recycling in the workplace and at home.
5. Seeking more markets for recyclable materials.
6. Offering residents more opportunities to dispose of household hazardous waste safely.
7. Educating residents on safer alternative cleaning products.
8. Expand commercial recycling collection routes.

These actions would be initiated by the SASWMA or other eligible local group as they pertain to the residential waste stream and by the County of Saginaw as they pertain to the commerial and industrial waste streams.

There is a chance that the SASWMA will expand their service to include multi-family recycling, if they are given funding via the County of Saginaw to operate a program of this nature.

Residential waste would be collected curbside and then taken to a landfill in Saginaw County or one of the contiguous counties for disposal. Residential recycling would be taken to a recycling center for processing, and yard waste would be taken to a compost site for composting. Bulky items would be picked up curbside. Separate trucks are used for recycling and waste collections. All materials are collected on the same day, so customers are only required to put out their refuse once a week.

If a favorable ruling is handed down in the Saginaw County Solid Waste Ordinance surcharge lawsuit appeal, the County can begin implementing the Saginaw County Solid Waste Ordinance provisions which would enable better monitoring of local collection practices, and require recycling plans for residential (communities), commercial and industrial generators.

The Solid Waste Management Planning Committee would be assigned the role of soliciting and reviewing proposals from SASWMA or other local eligible applicants for educational programs for which they would like to receive County funding via the surcharge. The Planning Committee would then make a recommendation to the County Board of Commissioners advising them on the amount of money that should be put in the solid waste budget and how the money should be allocated (for both education and enforcement programs detailed in the Plan). Ultimately, it is the decision of the Board of Commissioners as to how the money will be budgeted and allocated. The Solid Waste Committee is strictly advisory.

Since the SASWMA was created, they have been monitoring local residential collection practices of member communities, via contracts with the haulers and disposal areas. They have also been educating residents in their member communities on proper disposal and recycling methods, at their own cost.

Educational efforts geared towards the commercial and industrial sectors would also begin with the surcharge monies. Commercial and industrial recycling would be promoted extensively County-wide through the use of educational tools, handbooks, and guides that make it easier to understand the rules of recycling. The SASWMA may be willing to assist with small and medium sized commercial business recycling education, particularly in regards to pre-existing educational information. Ultimately, this responsiblity will fall on the County.

Commercial and industrial customers would contract with private haulers on an individual basis for waste and recycling collections. Commercial firms would recycle cardboard to its fullest. Possibly other items, such as bulk food containers (plastic or metal) that are usually thrown away (i.e restaurants) would be added to the list of recyclable materials in the commercial sector. Other items that could be looked into for recycling are pallets/dunage, odd resins and rubber. Currently, these items do not have a great market, but if and when a good market is established, these items could substantially reduce landfill usage. Educational efforts are absolutely essential to enable a program like this to function effectively. Industrial recycling would increase because more companies would be recycling and possibly more materials would be added to the list of recyclables. Type III waste could be recycled or reused by construction and demolition firms.

Many large industrial firms in the County are involved in waste reduction, re-use and pollution prevention programs. These programs are voluntary actions taken by the individual corporations. Due to increased public awareness of environmental issues and increased solid waste regulations from the State of Michigan, industries have been actively looking for ways to reduce waste and disposal costs. These actions include reducing amounts of materials in manufactured products; developing and using products with longer lifetimes; purchasing materials in bulk to reduce packaging waste; purchasing products in recyclable containers, instead of disposable ones; and utilizing waste from manufacturing processes for other uses.

To ensure adequate landfill space, Saginaw County will only authorize the seven contiguous counties to transfer waste across county borders (see Special Conditions - Appendix D) unless another County has requested to be included in the Plan and has gone through the plan amendment process. The committee proposes to explore additional informational requirements for contiguous counties in the future. Saginaw County has also entered into contracts with two of the landfills in the County, which guarantees Saginaw County disposal capacity for twenty years.

Waste volume can also be reduced by using compactors, both in the collection trucks and on-site at the landfills.

Commercial, industrial and residential waste would be collected by private haulers, with the exception of the City of Saginaw residents. The City of Saginaw is serviced by the City of Saginaw Department of Public Works.

The transportation network would be little changed, with the designated haul routes being all weather roads. Enforcement of these routes would be increased, with haulers receiving tickets for being off of the haul routes or for being over road weight capacity.

Blight is a problem many communities are experiencing. In particular, ditch dumping has increased over the past several years. Working with the communities to develop some regulations could help in decreasing this action.

Alternative 3 - Re-use center

This alternative would enable the continuation of the existing residential services offered by the SASWMA in member communities and existing private contracts for the remaining residential, commercial and industrial services. It would also include the development of a re-use center that would enable various types of products to be removed from the waste stream.

The County of Saginaw would launch an effort to teach the residential, commercial and industrial sectors the values of reducing, recycling and in particular, reusing.

The County of Saginaw would cooperate with thrift shops and other service organizations to build a re-use center/warehouse where residents and commercial firms could drop off items such as paints, art supplies, household cleaners, toys, working appliances, usable building materials, etc., for others to use. These types of products would be taken out of the waste stream. Commercial businesses and residents would be responsible for dropping off items at the warehouse. The center would be open for all residents to utilize. However, first priority for use of material would be given to the schools and non-profit organizations in the County. Many different materials that would be dropped off may be valuable for schools and/or non-profit organizations to have, but too expensive for them to purchase, such as art supplies, office supplies, clothes, etc. As an example of how this preference would work: the first week of each month, only these organizations would be allowed to select materials that they want. The rest of the month, the center would be open to all County residents and businesses. All materials that are dropped off each month will be processed and made available during the following month.

With an active reuse center, a lot of materials that would normally find their way into a landfill, would be kept out for others to use. This includes a lot of household hazardous waste. Since there are only two household hazardous waste collection days a year, this would be available for citizens wanting to get rid of paints, cleaners, etc. which others could use.

Recycling service would not be expanded into the more rural areas of the County except on an individual community basis. An increase in recycling material volumes would be due to more frequent City of Saginaw recycling collections, not additional customers. Yard waste service may expand, but this is all based on an individual municipality's choice.

Commercial and industrial customers would contract with private haulers on an individual basis for recycling collections. Through educational programs, the commercial and industrial sectors will see the value in recycling, re-using and reducing their waste..

Many large industrial firms in the County are involved in waste reduction, re-use and pollution prevention programs. These programs are voluntary actions taken by the individual corporations. Due to increased public awareness of environmental issues and increased solid waste regulations from the State of Michigan, industries have been actively looking for ways to reduce waste and disposal costs. These actions include reducing amounts of materials in manufactured products; developing and using products with longer lifetimes; purchasing materials in bulk to reduce packaging waste; purchasing products in recyclable containers, instead of disposable ones; and utilizing waste from manufacturing processes for other uses.

To ensure adequate landfill space, Saginaw County will only authorize the seven contiguous counties to transfer waste across county borders (see Special Conditions - Appendix D) unless another County has requested to be included in the Plan and has gone through the plan amendment process. The committee proposes to explore additional information requirements for contiguous counties in the future. The SASWMA would maintain contracts with all of its members, as well as with the disposal areas and the haulers to ensure proper waste disposal for its customers. Waste volumes could also be reduced by compactors, both in the collection trucks and on-site at the landfills. Saginaw County has entered into contracts with two of the landfills in Saginaw County, guaranteeing disposal capacity for twenty years.

Commercial, industrial and residential waste would be collected by private haulers, with the exception of the City of Saginaw residents. The City of Saginaw is serviced by the City of Saginaw Department of Public Works.

The transportation network would be unchanged, with the designated haul routes being all weather roads.

Alternatives Evaluation

The alternatives need to be evaluated based on the following factors according to Act 451. Consider these factors as they relate to the alternative for current conditions as well as five and ten years into the future.

Technical Feasibility - Can the alternative be implemented using available technology, or will the needed technology become available in the near future?

Economic Feasibility - How much will it cost to implement the alternative? Is the cost greater than the financial capabilities of public and private entities? How will facility development, operation, and maintenance costs be provided?

Access to Land & Transportation - Does the alternative require the acquisition of land? Would facilities be efficiently located? Will the existing transportation system be adequate, or will road improvements be required?

Energy Consumption/Production - Is the alternative energy-efficient for transportation and operation requirements? Would energy be produced in conjunction with any processing or disposal operations? Would any revenue be generated by energy production?

Environmental Impacts - What environmental impacts would result from implementation of the alternative? Would implementation create long term impacts associated with operation and maintenance of solid waste facilities?

Public Health Effects - Would the alternative create, continue, or mitigate public health hazards associated with improper handling or disposal of solid waste?

Public Acceptability - Is the alternative likely to be accepted by County residents? Will it be politically acceptable to local governments? Will the alternative comply with all applicable laws, especially Act 451?

Ranking:
The three alternatives were evaluated based on the above factors. Within each alternative, each factor was given a numerical score. The ranking system is as follows:
3 Very Good
2 Good
1 Satisfactory
0 Neutral
-1 Unsatisfactory
-2 Bad
-3 Very Bad
Once a score was assigned per factor, the results were added to obtain a score for each alternative. The alternative with the highest total score is the committee's preferred option.

Alternatives Evaluation			
Factor	Status -Quo	**Enhanced Materials Recovery**	Re-Use Center
Technical Feasibility	3	**3**	3
Economic Feasibility	2	**2**	0
Access to Land & Transportation Routes	1	**1**	0
Energy Consumption/Production	0	**0**	0
Environmental Impacts	-1	**1**	1
Public Health Effects	0	**1**	1
Public Acceptability	1	**2**	1
Total	6	**10**	6

Alternative #2, Enhanced Materials Recovery, received the highest score.
All three alternatives are evaluated below to explain their rankings.

Alternative 1- Status Quo

Technical Feasibility- This alternative is technically feasible. There are no technological advances necessary to continue this program. It is currently functioning well.

Economic Feasibility- This alternative is economically feasible. The recycling market is absorbing the recyclables that are presently being collected. Due to fluctuations in the recycling markets, recycling isn't always the most cost-effective method of dealing with waste.

Access to Land and Transportation- This alternative will not require the purchase of additional land, but the landfills do have expansion plans within their boundaries.

The haul routes that currently exist would continue to be utilized by the trucks. The main problem occurring is that many trucks do not stay on the designated haul routes. Most, if not all, of the haul routes are on all-weather roads, which can handle the large volume of heavy trucks. When trucks leave these routes and drive on roads not constructed for them, a lot of damage occurs. These local roads need repairs frequently, and there is little money available.

Energy Consumption- The Peoples and Taymouth landfills in Saginaw County have methane gas recovery systems. The two landfills together produce about 3.2 megawatts a year.

Three separate fleets of trucks are utilized to do weekly residential collections. The first truck is for trash, the second truck is for recyclables and the third truck is for yard waste. A large quantity of gasoline is needed to run these three fleets. It is not the most energy efficient collection system. For commercial and industrial customers, there are separate routes due to the different trucks needed to service each customer type. SASWMA works with member communities to reduce the number of collection trips by offering different collection programs.

Environmental Impacts- The primary means of disposal is landfilling. Recycling and composting programs are being promoted to the residential sector, with less emphasis on the commercial or industrial sectors. Landfills, although operating at high standards, still pose a threat to groundwater and the environment. If the liner leaks, groundwater contamination can occur.

There are only two household hazardous waste (HHW) collection days a year. Although a lot of materials are collected, the majority of county citizens still have HHW in their homes or dispose

of it in their regular trash. Many do not even know what constitutes HHW. These items can be a significant threat to the environment if not properly disposed.

Public Health- This system has some slight risk factors associated with it. Holding few HHW collections and identifying landfills as the primary disposal means are putting the public at risk, due to potential groundwater contamination if the liner leaks.

Public Acceptibility- This system is disliked by those who feel residents and businesses should be doing more to reduce wastes.

For the most part, trash, recyclables and yard waste collections are occurring properly. Most residents are very satisfied with the trash service they receive. However, sometimes a house or two are missed, which upsets affected residents.

Alternative 2- Enhanced Materials Recovery

Technical Feasibility- This alternative is technically feasible. There are no technological advances necessary for this program. Although, this system allows for increased recovery, all of the existing technology is available and is already being used.

Economic Feasibility- This alternative is economically feasible. The recycling market is absorbing the recyclables that are presently being collected. Recycling markets are unstable at times and it may be difficult to find markets for additional new materials. Recycling is not always the most cost-effective method of dealing with waste.

Access to Land and Transportation- The access to land and transportation routes is satisfactory. There will be no need to purchase additional land for landfills, although existing landfills have plans to expand. The key changes that will take place are those of enforcement of the haul routes. Many trucks are not using the designated routes, causing undue strain on local roads. Ticketing drivers who are using the wrong roads could help to cut down on this abuse and help improve road quality in the affected communities.

Energy Consumption/Production- The Peoples and Taymouth landfills have methane gas recovery systems. The two landfills together produce about 3.2 megawatts a year.

Three separate fleets of trucks are utilized for the residential collections - one for trash, one for recyclables, and one for yard waste. A large quantity of gasoline is needed to run these fleets. It is not the most energy efficient collection system. For commercial and industrial customers there

are separate routes due to the different trucks needed to service each customer. SASWMA works with member communities to reduce the number of collection trips by offering different collection programs.

Environmental Impacts- This alternative is good for the environment. By increasing the residential recycling volumes, it would divert additional waste from the landfills, meaning Saginaw County would be less dependant on landfills. Recycling among commercial and industrial firms would increase, too. The more landfill space that is preserved, the less need for siting new facilities, which should lower the potential for future contamination. Also, by offering more opportunities to safely dispose of HHW, the risk of contamination would be reduced.

Public Health Effects- By holding more HHW collection days, additional hazardous waste will be removed from the waste stream. By educating residents on alternative cleaning solutions that are non-toxic, there would be less HHW needing disposal. Landfills will always pose some risk to groundwater, but landfills operate at a much higher standard today than they used to.

Public Acceptibility- This alternative would be acceptable to the public. Public awareness of limited disposal capacity nationwide has put county residents on the defensive to preserve landfill space within the county and the State of Michigan. The public supports recycling programs, and this is proven by the recycling participation rates in Saginaw County. Also, the County of Saginaw operates a recycling hotline which is used frequently by citizens.

Alternative 3 - Re-use Center

Technical Feasibility- This alternative is technically feasible. There are no technological advances necessary to run this program.

Economic Feasibility- This alternative may be economically feasible. There is no group identified to run this center. It is unknown what kinds of resources would be available to build and operate the center. The re-use center has the potential to be very successful if it is utilized and well supported. However, if there is a lack of utilization or support, this program could be a very inefficient way of dealing with waste.

Recycling would continue to take place at current rates. The market is absorbing the recyclables that are presently being collected. Due to fluctuations in the markets, recycling is not always the most cost-effective method of dealing with waste.

Access to Land and Transportation- This alternative would require the acquisition of land for the

re-use center. It would also require finding an organization that would have the resources to build and maintain a re-use center.

The problem of truck drivers not staying on the designated haul routes would remain. This would cause undue wear and tear on the local roads.

Energy Consumption/Production- The Peoples and Taymouth landfills have methane gas recovery systems. The two landfills together produce about 3.2 megawatts a year.

Three separate fleets of trucks are utilized for the residential collections - one for trash, one for recyclables, and one for yard waste. A large quantity of gasoline is needed to run these fleets. It is not the most energy efficient collection system. For commercial and industrial customers there are separate routes due to the different trucks needed to service each customer. SASWMA works with member communities to reduce the number of collection trips required be offering different collection programs.

Environmental Impacts- This alternative would be good for the environment. By establishing a re-use center, many items, both hazardous and non-hazardous, would be kept out of the landfill. Hazardous items, such as paints and cleaners, would be given the chance to be used up by someone other than the original owner prior to disposal. Recycling and composting programs would take place primarily in the residential sector, with less emphasis placed on the commercial and industrial sector recycling.

Public Health Effects- This system would not cause a threat to public health unless the re-use center is improperly managed. The re-use center would accept HHW items, such as cleaners and paints meaning these items could be used up prior to their disposal. The diversion of hazardous waste from landfills would make the landfills safer. These impacts, however, would be likely to be relatively minor.

Public Acceptability- This center should be acceptable to the public. This would give residents a place to drop off those unwanted, but reusable materials. It would also be enthusiastically received by those organizations and schools that can benefit from the use of these materials.

THE SELECTED SOLID WASTE MANAGEMENT SYSTEM

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

The Selected System is an enhanced version of the existing system. Saginaw County will continue to transport and dispose of waste within its borders and in the seven contiguous counties. The SASWMA will be in charge of residential waste, recycling and yard waste collections in 26 local units representing 95% of the County's population, via contracts with the municipalities, haulers, and disposal areas. The remaining 9 municipalities contract either as a municipality with the hauler, or residents contract individually for solid waste collection services. Commercial and industrial customers contract individually with private haulers to dispose of their waste and recycling.
Various organizations will be asked to submit proposals and budgets for educational programs and new program ideas to the Solid Waste Planning Committee to compete for funding. The Solid Waste Planning Committee will review proposals and make a recommendation to the BOC for the Solid Waste programs annual budget.

In addition to current methods of collection and disposal, the main focus of the selected alternative is to enhance the recovery of materials from the solid waste stream through increased recycling, composting and reduction in all waste generation sectors. The main components of the Plan are:

- increasing educational programs to encourage citizens to participate in recycling and yard waste programs to the maximum extent
- expanding commerical materials list for recycling programs
- promoting industrial and commercial recycling and reduction
- expanding efforts to promote recycling, reuse, and reduction in the home and the workplace
- seeking more markets for recyclable materials
- offering residents more opportunities to dispose of their household hazardous waste safely

- educating residents on safer alternative cleaning products
- expanding commercial recycling routes

IMPORT AUTHORIZATION

If a Licensed solid waste disposal area is currently operating within the County, disposal of solid waste generated by the EXPORTING COUNTY is authorized by the IMPORTING COUNTY up to the AUTHORIZED QUANTITY according to the CONDITIONS AUTHORIZED in Table 1-A.

Table 1-A

CURRENT IMPORT VOLUME AUTHORIZATION OF SOLID WASTE

IMPORTING COUNTY	EXPORTING COUNTY	FACILITY NAME[1]	AUTHORIZED QUANTITY/ DAILY	AUTHORIZED QUANTITY/ ANNUAL	AUTHORIZED CONDITIONS[2]
Saginaw	Bay	____	343 TPD	____	*
Saginaw	Clinton	____	84 TPD	____	*
Saginaw	Genesee	____	1000 TPD	____	*
Saginaw	Gratiot	____	50 TPD	____	*
Saginaw	Midland	____	622 TPD	____	*
Saginaw	Shiawassee	____	130 TPD	____	*
Saginaw	Tuscola	____	160 TPD	____	*

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

[1] Facilities are only listed if the exporting county is restricted to using specific facilities within the importing county.

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

If a new solid waste disposal area is constructed and operating in the future in the County, then disposal of solid waste generated by the EXPORTING COUNTY is authorized by the IMPORTING COUNTY up to the AUTHORIZED QUANTITY according to the AUTHORIZED CONDITIONS in Table 1-B.

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

IMPORTING COUNTY	EXPORTING COUNTY	FACILITY NAME[1]	AUTHORIZED QUANTITY/ DAILY	AUTHORIZED QUANTITY/ ANNUAL	AUTHORIZED CONDITIONS[2]
____	____	____	____	____	____
____	____	____	____	____	____
____	____	____	____	____	____
____	____	____	____	____	____
____	____	____	____	____	____
____	____	____	____	____	____

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

---

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

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

EXPORT AUTHORIZATION

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

Table 2-A

CURRENT EXPORT VOLUME AUTHORIZATION OF SOLID WASTE

EXPORTING COUNTY	IMPORTING COUNTY	FACILITY NAME[1]	AUTHORIZED QUANTITY/ DAILY	AUTHORIZED QUANTITY/ ANNUAL	AUTHORIZED CONDITIONS[2]
Saginaw	Bay	____	343 TPD	____	*
Saginaw	Clinton	____	84 TPD	____	*
Saginaw	Genesee	____	1000 TPD	____	*
Saginaw	Gratiot	____	50 TPD	____	*
Saginaw	Midland	____	622 TPD	____	*
Saginaw	Shiawassee	____	130 TPD	____	*
Saginaw	Tuscola	____	160 TPD	____	*

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

---

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

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

If a new solid waste disposal area is constructed and operates in the future in another County, then disposal of solid waste generated by the EXPORTING COUNTY is authorized up to the AUTHORIZED QUANTITY according to the AUTHORIZED CONDITIONS in Table 2-B if authorized for import in the approved Solid Waste Management Plan of the receiving County.

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

EXPORTING COUNTY	IMPORTING COUNTY	FACILITY NAME[1]	AUTHORIZED QUANTITY/ DAILY	AUTHORIZED QUANTITY/ ANNUAL	AUTHORIZED CONDITIONS[2]
____	____	____	____	____	____
____	____	____	____	____	____
____	____	____	____	____	____
____	____	____	____	____	____
____	____	____	____	____	____
____	____	____	____	____	____

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

---

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

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

SOLID WASTE DISPOSAL AREAS

The following identifies the names of existing disposal areas which will be utilized to provide the required capacity and management needs for the solid waste generated within the County for the next five years and, if possible, the next ten years. Pages III-7-1 through III-7-5 contain descriptions of the solid waste disposal facilities which are located within the County and the disposal facilities located outside of the County which will be utilized by the County for the planning period. Additional facilities within the County with applicable permits and licenses may be utilized as they are sited by this Plan, or amended into this Plan, and become available for disposal. If this Plan update is amended to identify additional facilities in other counties outside the County, those facilities may only be used if such import is authorized in the receiving County's Plan. Facilities outside of Michigan may also be used if legally available for such use.

Type II Landfill:
Brent Run Landfill, Genesee Co.
Citizen's Disposal, Genesee Co.
City of Midland Sanitary Landfill, Midland Co.
(No facility description)*
Granger Grand River Landfill, Clinton Co.
Granger Wood Street Landfill, Clinton Co.
People's Landfill. Saginaw Co.
Saginaw Valley Landfill, Saginaw Co.
Taymouth Landfill, Saginaw Co.
Venice Park Development, Shiaw. Co.
Whitefeather Landfill, Bay Co.

Type A Transfer Facility:
N/A

Type B Transfer Facility:
N/A

Type III Landfill:
Saginaw Metal Castings Operations

Processing Plant:
N/A

Incinerator:
Aleda Lutz (Veterans) Hospital (no facility sheet)

Waste Piles:
Michigan Sugar (no facility sheet)

Waste-to-Energy Incinerator:
N/A

Other:
N/A

*Saginaw County does not anticipate using this landfill. If conditions change that enable Saginaw County to use this landfill, it will not require a plan amendment.

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

FACILITY DESCRIPTIONS
Facility Type: Type II Landfill
Facility Name: Saginaw Valley Landfill
County: Saginaw Location: Town: 11N Range: 3E Section(s): 1

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: N/A
_ Public X Private Owner: Waste Management

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

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

Site Size:

Total area of facility property:	84.25	acres
Total area sited for use:	51	acres
Total area permitted:	51	acres
Operating:	<5	acres
Not excavated:	___	acres
Current capacity:	___	tons or _yds^3
Estimated lifetime:	<1	years
Estimated days open per year:	260	days
Estimated yearly disposal volume:	240,000	X tons or _yds^3

(if applicable)
Annual energy production: N/A

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

Note: Numbers are listed as they were reported from facility.
This landfill is scheduled to close in mid-1999.

FACILITY DESCRIPTIONS

Facility Type: Type II Landfill

Facility Name: People's Landfill

County: Saginaw Location: Town: 10N Range: 5E Section(s): 15

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; N/A
_Public X Private Owner: Waste Management

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

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

Site Size:

Total area of facility property:	163	acres
Total area sited for use:	110	acres
Total area permitted:	29.1	acres
Operating:	2	acres
Not excavated:	100	acres
Current capacity:	5,301,641	_tons or X yds^3
Estimated lifetime:	20	years
Estimated days open per year:	254	days
Estimated yearly disposal volume:	1000	X tons or _yds^3

(if applicable)
Annual energy production:

Landfill gas recovery projects:	3.2	megawatts**
Waste-to-energy incinerators:	N/A	megawatts

Note: People's Landfill has been approved by the Site Review Committee in 1993 for a 53 acre expansion. The permit was issued in 1993, but it has lapsed. People's has plans to renew the permit and begin excavation within a year.

Note: Numbers are listed as they were reported from facility.
** This is a combined total for People's Landfill and Taymouth Landfill

FACILITY DESCRIPTIONS

Facility Type: Type II Landfill
Facility Name: Taymouth Landfill
County: Saginaw Location: Town: 10 N Range: 5 E Section(s): 15

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: N/A
_ Public X Private Owner: Republic Industries

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

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

Site Size:

Total area of facility property:	138.89	acres
Total area sited for use:	43	acres
Total area permitted:	25	acres
Operating:	15	acres
Not excavated:	10	acres
Current capacity:	1,400,000	X tons or yds^3
Estimated lifetime:	14	years
Estimated days open per year:	260	days
Estimated yearly disposal volume:	216,000	X tons or yds^3

(if applicable)
Annual energy production:

Landfill gas recovery projects:	3.2	megawatts**
Waste-to-energy incinerators:	N/A	megawatts

Note: Numbers are listed as they were reported from facility.
** This is a combined total for People's Landfill and Taymouth Landfill.

FACILITY DESCRIPTIONS

Facility Type: Type III Landfill

Facility Name: Saginaw Metal Castings Operations

County: Saginaw Location: Town: 12 N Range: 5 E Section(s): 5

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: N/A

_ Public X Private Owner: General Motors

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

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

Site Size:

Total area of facility property:	700	acres
Total area sited for use:	92	acres
Total area permitted:	60.7	acres
Operating:	60.7	acres
Not excavated:	0	acres
Current capacity:	1,700,000	_tons or X yds^3
Estimated lifetime:	13	years
Estimated days open per year:	240	days
Estimated yearly disposal volume:	127,000	_tons or X yds^3

(if applicable)
Annual energy production:

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

Note: GM plans to apply for a vertical expansion permit as it nears capacity.
Numbers are listed as they were reported from facility.

FACILITY DESCRIPTIONS

Facility Type: Type II Landfill

Facility Name: Whitefeather Landfill

County: Bay Location: Town: 17N Range: 4E Section(s): 2

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: N/A

_ Public X Private Owner: Republic Industries

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

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

Site Size:

Total area of facility property:	106	acres
Total area sited for use:	56.5	acres
Total area permitted:	56.5	acres
Operating:	24.5	acres
Not excavated:	32	acres
Current capacity:	4,175,153	_ tons or X yds^3
Estimated lifetime:	18.8	years
Estimated days open per year:	260	days
Estimated yearly disposal volume:	380,000	_ tons or X yds^3

(if applicable)
Annual energy production:

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

Note: Numbers are listed as they were reported from facility.

FACILITY DESCRIPTIONS

Facility Type: Type II Landfill

Facility Name: Granger Grand River Avenue Landfill

County: Clinton Location: Town: 5N Range: 3W Section(s): 29

Map identifying location included in Attachment Section: _ Yes X No

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

_ Public X Private Owner: Granger Land Development Company

Operating Status (check)		Waste Types Received (check all that apply)	
X	open	X	residential
_	closed *1	X	commercial
X	licensed	X	industrial
_	unlicensed	X	construction & demolition
_	construction permit	X	contaminated soils
X	open, but closure	X	special wastes *
	pending	X	other: Type III waste

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

Site Size:

Total area of facility property:*1	180.9	acres
Total area sited for use: (Plan)	120.9	acres
Total area permitted: (For disposal, i.e. SWB)	85.7	acres
Operating:(Licensed and Certified)	54.1	acres
Not ~~excavated~~: (Developed)	31.6	acres
Current capacity:	7,617,000	_ tons or X yds^3 (air yards)
Estimated lifetime:	32	years
Estimated days open per year:	300	days
Estimated yearly disposal volume:	600,000	_ tons or X yds^3 (gate yards)

(if applicable)
Annual energy production:

Landfill gas recovery projects:	4.0	megawatts
Waste-to-energy incinerators:	N/A	megawatts

*1: Includes acres of (separate) closed facility to be consistent with DEQ numbers on permits and licenses.
Note: Numbers are listed as they were reported from facility.

FACILITY DESCRIPTIONS

Facility Type: Type II Landfill

Facility Name: Granger Wood Street Landfill

County: Clinton, Ingham

Location: Town: 4N 5N Range: 2W Section(s): 34 3

Map identifying location included in Attachment Section: _ Yes X No

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

_ Public X Private Owner: Granger Waste Management Company

Operating Status (check)		Waste Types Received (check all that apply)	
X	open	X	residential
_	closed *1	X	commercial
X	licensed	X	industrial
_	unlicensed	X	construction & demolition
X	construction permit	X	contaminated soils
_	open, but closure pending	X	special wastes *
		X	other: Type III waste

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

Site Size:

Total area of facility property:*1	302.8	acres
Total area sited for use: (Plan)	194.8	acres +67 (future permitting in Ingham County)
Total area permitted: (For disposal, i.e. SWB)	104.3	acres
Operating:(Licensed and Certified)	49.5	acres
Not ~~excavated~~: (Developed)	54.8	acres
Current capacity:	10,981,000	tons or X yds^3 (air yards)
Estimated lifetime:	34	years
Estimated days open per year:	260	days
Estimated yearly disposal volume:	600,000	_ tons or X yds^3 (gate yards)

(if applicable)
Annual energy production:

Landfill gas recovery projects:	3.2	megawatts
Waste-to-energy incinerators:	N/A	megawatts

*1: Includes acres of (seperate) closed facility to be consistent with DEQ numbers on permits and licenses.
Also includes spoil/borrow areas to be consistent with DEQ numbers on permits and licenses.
Note: Numbers are listed as they were reported from facility.

FACILITY DESCRIPTIONS

Facility Type: Type II Landfill

Facility Name: Brent Run Landfill

County: Genesee Location: Town: 9 N Range: 5 E Section(s): 23

Map identifying location included in Attachment Section: _ Yes X No

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

_ Public X Private Owner: Republic Industries

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

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

Site Size:

Total area of facility property:	160	acres
Total area sited for use:	90	acres
Total area permitted:	30	acres
Operating:	15	acres
Not excavated:	45	acres
Current capacity:	10,247,000	_ tons or X yds^3
Estimated lifetime:	18	years
Estimated days open per year:	312	days
Estimated yearly disposal volume:	720,000	_tons or X yds^3

(if applicable)
Annual energy production:

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

Note: Numbers are listed as they were reported from facility.

FACILITY DESCRIPTIONS

Facility Type: Type II Landfill

Facility Name: Citizen's Disposal

County: Genesee Location: Town: 6 N Range: 6 E Section(s): 23_

Map identifying location included in Attachment Section: _ Yes X No

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

_ Public X Private Owner: Allied Waste Industries, Inc.

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

* Explanation of special wastes, including a specific list and/or conditions:
All special waste requires prior review and approval including analytical data and waste profile - non-hazardous only.

Site Size:

Total area of facility property:	300 +/-	acres
Total area sited for use:	300 +/-	acres
Total area permitted:	52	acres
Operating:	52	acres
Not excavated:	80	acres
Current capacity:	5.3 million	_ tons or X yds^3
Estimated lifetime:	25	years
Estimated days open per year:	300	days
Estimated yearly disposal volume:	.5 million	_ tons or X yds^3

(if applicable) Annual energy production:

Landfill gas recovery projects:	2.4	megawatts
Waste-to-energy incinerators:	N/A	megawatts

Note: Numbers are listed as they were reported from facility.

FACILITY DESCRIPTIONS

Facility Type: Type II Landfill (with a Type III cell)

Facility Name: Venice Park Development

County: Shiawassee Location: Town: 7 N Range: 4 E Section(s): 26/27

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: N/A

_ Public X Private Owner: Waste Management

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

* Explanation of special wastes, including a specific list and/or conditions:
Asbestos, medical wastes, sludge, filter cake, process wastes, coal ash, foundry sands, chemical containing equipment, street sweepings, sediment trap materials

Site Size:

Total area of facility property:	325	acres
Total area sited for use:	80	acres
Total area permitted:	80	acres
Operating:	42	acres
Not excavated:	2.5	acres
Current capacity:	2,000,000	_ tons or X yds^3
Estimated lifetime:	2	years
Estimated days open per year:	281	days
Estimated yearly disposal volume:	1,000,000	_ tons or X yds^3

(if applicable)
Annual energy production:

Landfill gas recovery projects:	11,500	megawatts
Waste-to-energy incinerators:	N/A	megawatts

Note: Numbers are listed as they were reported from facility.

SOLID WASTE COLLECTION SERVICES AND TRANSPORTATION:

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

Service Provider	Public/Private	Service Area	Payment	Disposal Facility
City Environmental Ithaca	Private	Marion Twp.	Municipal contracts*	Not reported
City Environmental	Private	Marion Twp., Brady Twp.	Billed individually	Not reported
City Env. - Montrose	Private	Maple Grove Twp., Chesaning Vill. And Twp. Oakley Vill.	Municipality tax or individual residents billed	Brent Run
City Env - Saginaw	Private	All County	Muncipal contracts and individual businesses	Sag. Valley, Taymouth Landfill
City of Saginaw	Public	City of Saginaw	Millage and flat rate per home	Sag. Valley, Taymouth Landfill
Medi-Haul	Private	All County	Commercial contracts	Venice Park Development
Standard Disposal	Private	JC Pennys stores only	Commercial contracts	Not reported
Sunrise Disposal	Private	Brant Twp, Chapin Twp.	Billed individually	Brent Run
Tri-County	Private	Various commercial and industrial customers	Commercial contracts	Taymouth Landfill
Valley Rubbish	Private	Various commercial and industrial customers	Commercial contracts	Venice Park Development

* City Env. - Ithaca brings a truck to Marion Twp. once a month. Marion Twp. Government offers their residents a chance to dispose of their refuse for free during this monthly collection.
Note: City Environmental is a division of Waste Management.

The collection of solid waste that is generated by residential, commercial, or industrial customers is handled almost exclusively by the private solid waste haulers, with the exception of the City of Saginaw, whose Department of Public Works (DPW) handles residential collections. There are other small hauling firms operating in Saginaw County that collect commercial waste, industrial waste and construction and demolition materials. The amounts of waste collected by these small haulers is negligible when compared to the waste quantities collected by the above firms.

The Saginaw Area Solid Waste Management Authority (SASWMA) is an organization of local governments (26 members, to date) that handles the hauling contracts for 25* of the 35 municipalities in Saginaw County. The SASWMA negotiates contracts with existing haulers in the County for weekly residential trash, recycling, and yard waste collections. The SASWMA handles the processing and disposal contracts with all 26 of its members. The SASWMA negotiates contracts with the haulers, the recycling centers and the landfills which will enable the best deal for a municipality's residents. Currently, City Environmental/Waste Management holds the hauling contract for SASWMA member communities. All county municipalities are given the opportunity to join the SASWMA.

Any community not belonging to the SASWMA either has agreements with a private hauler to collect residential waste or it allows individual residents to contract directly with the collection firm of their choice.

Commercial and industrial wastes are primarily serviced by the firms listed in this section. Based on the recycling promotions that are going to be aimed at the commercial and industrial sectors, there should be an additional need for recycling collections along commercial routes. It will be left up to the private hauler as to how the routes will be divided up and scheduled.

Also, with the promotions of Construction and Demolition recycling and re-use, there will probably be a need for additional vehicles to service these sites. It will be left up to the private hauler as to how these routes will be divided up and scheduled.

*The City of Saginaw is a member of the SASWMA. However, instead of using the SASWMA's hauler, they have opted to have the City DPW continue to collect their trash. The City of Saginaw currently offers weekly trash pick-up and recycling collections. The weekly recycling collections began in October of 1998. The SASWMA does handle the processing and disposal contracts for the City of Saginaw.

RESOURCE CONSERVATION EFFORTS:

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

Effort Description	Est. Diversion Tons/Yr		
	Current	5th yr	10th yr
Promote Grasscycling			
Compile guidebook for county citizen's that contains a list of materials that can be reused or recycled by local businesses and organizations.			
Compost bin sales.			
GM foundry sand re-use	654 TPD		
Encourage source reduction in local schools, businesses, and homes through educational efforts aimed at these public sectors			
Encourage advanced recyclers to take advantage of Midland Volunteers for Recycling opportunities			
Encourage collaboration and/or duplication of Midland Volunteers for Recycling type services in Saginaw			

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

WASTE REDUCTION, RECYCLING, & COMPOSTING PROGRAMS:

Volume Reduction Techniques

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

Technique Description	***Est. Air Space Conserved*** Yds^3/Y^r		
	Current	**5th yr**	**10th yr**
Efforts limited to techniques practiced by the private solid waste industry and recycling program operators: compaction			
Investigate feasibility of contracting with Mid-Michigan Recycling - Flint (and Genesee Power) for C&D materials recovery/reduction.			
Backyard composting educational efforts			
White Good Curbside Recycling Collection - City of Saginaw/SASWMA			

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

Overview of Resource Recovery Programs:

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

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

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

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

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

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

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

Recycling is available County-wide and is practiced almost everywhere. There are only a handful of communities with no residential recycling program in place. These are the low population areas. The haulers also offer recycling to all municipalities, businesses and industries. Only those that find it cost-effective, or want to help preserve landfill space and protect the environment, participate, since it is not a mandatory program.

Saginaw County has a strong residential recycling program. This is largely due to the founding of the Saginaw Area Solid Waste Management Authority (SASWMA) in 1991. The SASWMA contracts with the municipalities, the private haulers, and the private processing facilities for collection and processing services. The more recyclables collected, the better the price that the SASWMA is able to negotiate. It is in the economic interest of the member municipalities to recycle as much as possible. To date, twenty six of the thirty five communities belong to the SASWMA. This represents ninety-five percent of the County's total population.

The City of Saginaw belongs to the SASWMA, but does its own solid waste collection, instead of using the private hauler that services the other SASWMA communities. Prior to October 1998, the City of Saginaw only did recycling collections once a month. Since then, the City has changed to a weekly recycling schedule. Based on the fact that the City has the highest population of any of the municipalities, there should be a significant increase in recycling numbers based on this change alone.

Households in SASWMA communities may put their recycling out in recycling bins which are available at their local government office, in clear or blue plastic bags in the City of Saginaw, or a rigid open container with a sticker saying "Recyclables" on it. Items that are accepted for recycling are: newspapers, phone books, magazines, junk mail, mixed office paper, box board, corrugated cardboard, aluminum and tin, #1, #2, and #6 plastics, and brown, green and clear glass. Other materials collected are ceramic and plate glass, aseptic packaging, and wax cartons. Additionally, used motor oil and fiber rags are accepted at Resource Recovery Systems (recycling center).

Commercial and industrial customers contract individually with private haulers to collect recyclables. The larger commercial and industrial businesses in the County recycle many items, particularly cardboard and paper, and metal (iron and steel). Recycling costs money and most items are not cost-effective from a business perspective. In short, if an item is cost-effective to recycle, it is probably being done by the larger manufacturers already. However, the small and medium sized businesses do not usually participate because they are not as familiar with recycling opportunities or do not have sufficient volume of recyclables to qualify for attractive rates.

Residential yard waste collection service is offered to most County residents. Twelve of the twenty-six SASWMA members contract for this service. Those who do not participate promote backyard composting and grasscycling. Items that are accepted for yard waste collections are: grass, thatch, leaves, plants and flowers. Yard waste must be put in containers clearly marked with a "Yard Waste" sticker or in wet strength paper bags which are available at most of the local hardware stores. The collections take place weekly or biweekly depending on the municipality. A number of local municipalities have brush/leaf collections throughout the year or operate a brush or leaf pile for residents to drop yard waste off. Operating hours and days vary by municipality.

Yard waste collection service is not offered to local businesses and industry. Many of these firms hire landscaping companies to maintain the lawns. In many cases, grasscycling takes place and/or landscaping companies take leaves and brush to their own compost sites.

In 1997, Saginaw County residents recycled 11,657 tons and composted 17,232 tons. Residents are recycling about thirteen percent (13%) of their waste. Commercial businesses are recycled 11,576 tons, about thirteen (13%) of their waste. Industries are recycling about twenty-six percent (26%) of their waste (19,488 tons per year).

Each year, the Saginaw County Public Health Department holds two household hazardous waste collection days. These are sponsored by the Dow Chemical Company. There is also a contract between the County of Saginaw and City Environmental (a division of Waste Management) to offer curbside HHW collection. However, it is a very expensive service and no municipalities have requested it.

RECYCLING AND COMPOSTING

The following is a brief analysis of the recycling and composting programs selected for the County in this Plan. Additional information on operation of recycling and composting programs is included in Appendix A. The analysis covers various factors within the County and the impacts of these factors on recycling and composting. Following the written analysis the tables on pages III-26,27,28 and 29 list the existing recycling, composting, and source separation of hazardous materials programs that are currently active in the County and which will be continued as part of this Plan. The second group of three tables on pages III-30,31 and 32 list the recycling, composting, and source separation of hazardous materials programs that are proposed in the future for the County. It is not this Plan update's intent to prohibit additional programs or expansions of current programs to be implemented beyond those listed.

Many residents in Saginaw County have taken a strong position advocating recycling and composting. Public awareness of limited disposal capacity throughout the United States has put the County residents on the defensive to preserve landfill space within the County and the State of Michigan. As mentioned in the previous section, over ninety-five percent of the County's population have access to recycling and yard waste collections. The current recycling rate for the residential waste stream is thirteen percent (13%). This Plan sets the recycling goal at twenty-seven percent (27%) in the next ten years. The current composting rate for the residential waste stream is eighteen percent (18 %). This Plan sets the composting goal at twenty percent (20%) in the next ten years.

The Solid Waste Management Planning Committee believes this is achievable. With the City of Saginaw changing their monthly recycling collection to a weekly collection, there will be a much higher recycling rate in the County. Also, while the population of the County may not be growing, awareness of recycling and yard waste campaigns is increasing, and residents are really interested in following the guidelines. If the commerical recycling volumes are increased due to expanded commercial routes offered, as well as accepting additional materials, commercial recycling volumes in the County would increase significantly.

The existing transportation networks will continue to function well under the enhanced materials recovery system. Road/transportation improvements will not be necessary in most cases, because the trucks will be following the same collection routes they use currently. The difference will be in the volume of material collected that is going to recycling facilities rather than landfills. The existing collection methods will be sufficient for the selected system.

Local support is increasing for the recycling and yard waste programs as residents learn more about them. The County recycling hotline receives at least five calls a week from residents wanting information on the recycling and yard waste programs or guidelines. The SASWMA also receives five to ten calls a day regarding recycling. These numbers increase significantly when print or radio ads are aired and written. The haulers receive a number of calls as well, regarding recycling questions.

Saginaw County is home to a number of large industries that generate a large volume of waste. However, the industrial waste sector has a strong recycling rate. Currently, manufacturing industries recycle about twenty-six percent (26%) of their generated waste. This Plan sets the recycling goal at thirty percent (30%) for industries. This Plan also targets the construction and demolition waste generators. (C&D was included in the industrial waste projections and recycling percentages.) There are a lot of C& D materials that are reusable or recyclable. Workers are not always aware of the other uses of these materials. Offering educational programs and collection services should improve the rate of C&D recycling. Developing educational programs geared towards manufacturing industries to show them alternatives to landfilling would be an effective tool. Reduction, reuse, and recycling would all be major components of this effort.

The current recycling rate for the commercial waste stream is thirteen percent (13%). This Plan sets the recycling goal at twenty percent (20%) over the next ten years. Saginaw County plans to begin an educational campaign geared towards the business owners to teach them the importance of recycling. These recommended programs will be developed in cooperation with a private marketing firm.

In 1998, the SASWMA has kicked off a public education campaign for residents, beginning with the booklet "Curbing Our Waste" describing the recycling and yard waste guidelines. The SASWMA also held an Environmental Day where compost bins were sold and batteries and paint were collected for free from residents of member communities. They plan to have another compost bin sale this year, as well. Other educational events that SASWMA has sponsored have been professional magic and theater presentations to all of the schools (public, parochial, and private) throughout the 1998-1999 school year. Along with on-going newspaper and radio advertisements, the SASWMA will extensively promote special events such as America Recycles Day this year and in upcoming years.

The County will address the commercial and industrial sectors with a variety of programs geared towards their waste generation and ways to reduce the amount being sent to the landfill.

Household hazardous waste is currently collected only twice a year through the County Public Health Department. The selected solid waste management system includes the addition of materials to these collections and also the possibility of additional collection days. Educating residents on alternative cleaning products and alternative pesticides/fertilizers that are less toxic would be very helpful in the reduction of household hazardous waste.

RECYCLING:

TABLE III-1

Program Name	Service Area[1]	Public or Private	Collection Point[3]	Collection Frequency[4]	Materials Collected[5]	Program Management Responsibilities[2] Development	Operation	Evaluation
Industrial	County-wide, participating	Private	C,O	d,w,b,m	c,e,d,f, p	5	5	5
Commercial	County-wide, participating	Private	C	d,w,b,m	c	5	5	5
SASWMA*	see service schedule	Private	C	w,b	a,b,c,d,e,f	6	6	6
Recycling	Brant Twp	Private	C	m	a,b,e,f	5	5	5
Recycling	City of Saginaw**	Public	C	w	a,b,c,d,e,f	3	3	3
Recycling	Taymouth Twp	Private	C	b	a,b,e,f	5	5	5
Recycling	Vill. Merrill	Private	C	b	a,b,c,d,e,f	5	5	5
Recycling	Zilwaukee Twp	Private	C		a,b,c,d,e,f	5	5	5

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

*Please see SASWMA service schedule (III-34) for more detail on these programs

**SASWMA member- do their own hauling

---

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

[2] Identified by 1 = Designated Planning Agency; 2 = County Board of Commissioners; 3 = Department of Public Works; 4 = Environmental Group (Identified on page III-35); 5 = Private Owner/Operator; 6 = Other (Identified on page III-35).

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

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

[5] Identified by the materials collected by listing of the letter located by that material type. A = Plastics; B = Newspaper; C = Corrugated Containers; D = Other Paper; E = Glass; F = Metals; P = Pallets; J = Construction/Demolition; K = Tires; L1, L2 etc. = as identified on page III-37.

TABLE III-2

COMPOSTING:

Program Name	Service Area[1]	Public or Private	Collection Point[3]	Collection Frequency[4]	Materials Collected[5]	Program Management Responsibilities[2] Development	Operation	Evaluation
SASWMA*	See list	Private	C	w.Sp.Su.Fa	g.l.w	6	6	6
Humpert Landscaping	Vill Merill	Private	C	w. Sp Su	g. w	5	5	5
Leaf Collection	Vill Merill	Public	C	w.Fa	l	3	3	3
Leaf/Brush Drop-off	Richland Twp	Public	D	d.Sp.Su.Fa	g.l.w	3	3	3
Yard Waste Collection	Zilwaukee Twp.	Private	C	b. Sp.Su.Fa	g.l.w.p	5	5	5
Leaf/Brush Drop Off	Vill.St. Charles	Public	D	d	l.w	3	3	3
Grass/Leaf/Brush Collection	City Frankenmuth	Public	C	m	g.l.w	3	3	3
Brush Drop Off	Thomas Twp.	Public	D	m.SpSuFa	w	3	3	3
Brush Pick Up	Vill. St. Charles	Public	C	m	w	3	3	3

*Please see SASWMA service schedule (III-34) for more detail on these programs.

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

---

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

2 Identified by 1 = Designated Planning Agency; 2 = County Board of Commissioners; 3 = Department of Public Works; 4 = Environmental Group (Identified on page III-35); 5 = Private Owner/Operator; 6 = Other (Identified on page III-35).

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

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

5 Identified by the materials collected by listing of the letter located by that material type. G = Grass Clippings; L = Leaves; F = Food; W = Wood; P = Paper; S = Municipal Sewage Sludge; A = Animal Waste/Bedding; M = Municipal Solid Waste; L1, L2 etc. = as identified on page III-37.

COMPOSTING: CONTINUED

Program Name	Service Area[1]	Public or Private	Collection Point[3]	Collection Frequency[4]	Materials Collected[5]	Program Management Responsibilities[2] Development	Operation	Evaluation
Yard Waste Collection	City Saginaw**	Public	C	w	g,l,w	3	3	3
Spring Clean-up	City Zilwaukee	Public	C	Sp	w	3	3	3
Brush Drop-off	Saginaw Twp.	Public	D	d,SpSuFa	w	3	3	3
Brush Pickup	Bridgeport Twp.	Public	C	b,SpSuFa	w	3	3	3
Brush Pickup	Buena Vista Twp.	Public	C	w	w	3	3	3
Brush Pickup	Carrollton Twp.	Public	C	m,SpSuFa	w	3	3	3
Brush Pick-up	City of Saginaw**	Public	C	m	w	3	3	3
Brush Pick-Up	Chesaning Village	Public	C	3x/year	w	3	5	3
Yard Waste Collection	Chesaning Village	Public	C	w,SpFa m,Su	g,l,w	3	5	3

**SASWMA member- do their own hauling

---

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

2 Identified by 1 = Designated Planning Agency; 2 = County Board of Commissioners; 3 = Department of Public Works; 4 = Environmental Group (Identified on page III-35); 5 = Private Owner/Operator; 6 = Other (Identified on page III-35).

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

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

5 Identified by the materials collected by listing of the letter located by that material type. G = Grass Clippings; L = Leaves; F = Food; W = Wood; P = Paper; S = Municipal Sewage Sludge; A = Animal Waste/Bedding; M = Municipal Solid Waste; L1, L2 etc. = as identified on page III-37.

TABLE III-3 SOURCE SEPARATION OF POTENTIALLY HAZARDOUS MATERIALS:

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

Program Name	Service Area[1]	Public or Private	Collection Point[3]	Collection Frequency[4]	Materials Collected[5]	Program Management Responsibilities[2] Development	Operation	Evaluation
HHW Collection Days*	County	Public	D	2x a year	AR,AN,C,U PH,OF,PS,P OT	5,6	5,6	5,6
Operation Clean Sweep	Regional	Public	D	D	PS	O	O	O

*see appendix for flyer from collection day

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

---

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

2 Identified by 1 = Designated Planning Agency; 2 = County Board of Commissioners; 3 = Department of Public Works; 4 = Environmental Group (Identified on page III-35); 5 = Private Owner/Operator; 6 = Other (Identified on page III-35).

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

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

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

TABLE III-4

PROPOSED RECYCLING:

Program Name (if known)	Service Area[1]	Public or Private	Collection Point[3]	Collection Frequency[4]	Materials Collected[5]	Program Management Responsibilities[2] Development	Operation	Evaluation
Expand Materials Residential	County	Private	C	w,b	A*	6	6	6
Commercial Recycling	County	Private	O	d,w,b	a,d,e,f,p**	1,5	1,5	1,5
Const. & Demo. Recycling	County	Private	O	d,w,b	J	1,5	1,5	1,5

* = plastic bags, all numbered plastics
**= plus L1,L2
☐ Additional programs and the above information for those programs are listed on an attached page.

---

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

2 Identified by 1 = Designated Planning Agency; 2 = County Board of Commissioners; 3 = Department of Public Works; 4 = Environmental Group (Identified on page III-35); 5 = Private Owner/Operator; 6 = Other (Identified on page III-35).

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

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

5 Identified by the materials collected by listing of the letter located by that material type. A = Plastics; B = Newspaper; C = Corrugated Containers; D = Other Paper; E = Glass; F = Metals; P = Pallets; J = Construction/Demolition; K = Tires; L1, L2 etc. = as identified on page III-37.

TABLE III-5

PROPOSED COMPOSTING:

Program Name. (if known)	Service Area[1]	Public or Private	Collection Point[3]	Collection Frequency[4]	Materials Collected[5]	Program Management Responsibilities[2] Development	Operation	Evaluation
Backyard Composting	County	Priv/Publ	N/A	N/A	g.l.f	6	6	6

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

---

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

2 Identified by 1 = Designated Planning Agency; 2 = County Board of Commissioners; 3 = Department of Public Works; 4 = Environmental Group (Identified on page III-35); 5 = Private Owner/Operator; 6 = Other (Identified on page III-35).

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

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

5 Identified by the materials collected by listing of the letter located by that material type. G = Grass Clippings; L = Leaves; F = Food; W = Wood; P = Paper; S = Municipal Sewage Sludge; A = Animal Waste/Bedding; M = Municipal Solid Waste; L1, L2 etc. = as identified on page III-37.

TABLE III-6

PROPOSED SOURCE SEPARATION OF POTENTIALLY HAZARDOUS MATERIALS:

Program Name, (if known) HHW Collection Days	Service Area[1] County	Public or Private Public	Collection Point[3] D	Collection Frequency[4] monthly	Materials Collected[5] all	Program Management Responsibilities[2] Development 5,6	Operation 5,6	Evaluation 5,6
____	____	____	____	____	____	____	____	____
____	____	____	____	____	____	____	____	____

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

---

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

2 Identified by 1 = Designated Planning Agency; 2 = County Board of Commissioners; 3 = Department of Public Works; 4 = Environmental Group (Identified on page III-35); 5 = Private Owner/Operator; 6 = Other (Identified on page III-36).

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

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

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

Saginaw Area Solid Waste Management Authority Service Schedule

Service Area	Refuse	Recycling	Yard Waste*
Albee Twp.	Weekly	Biweekly	None
Birch Run Vill.	Weekly	Biweekly	Weekly
Birch Run Twp.	Weekly	Biweekly	None
Blumfield Twp.	Weekly	Biweekly	None
Bridgeport Twp.	Weekly	Weekly	Weekly (no grass clippings)
Buena Vista Twp.	Weekly	Weekly	Weekly
Carrollton Twp.	Weekly	Weekly	Weekly
Chesaning Twp.	Weekly	Biweekly	None
Frankenmuth City	Weekly (2 Bag Limit)	Biweekly	None
Frankenmuth Twp.	Weekly (2 Bag Limit)	Biweekly	None
Fremont Twp.	Weekly	Biweekly	None
James Twp.	Weekly	Weekly	Weekly
Jonesfield Twp.	Weekly	Biweekly	None
Kochville Twp.	Weekly	Biweekly	Weekly
Lakefield Twp.	Weekly	Biweekly	None
Maple Grove Twp.	Weekly	Biweekly	None
Richland Twp.	Weekly	Biweekly	None
Saginaw Twp.	Weekly	Weekly	Weekly
Spaulding Twp.	Weekly	None	Weekly
St. Charles Twp.	Weekly	Weekly	None
St. Charles Vill.	Weekly	Weekly	None
Swan Creek Twp.	Weekly	Weekly	None
Thomas Twp.	Weekly	Weekly	Weekly
Tittabawassee Twp.	Weekly	Weekly	Weekly
Zilwaukee City	Weekly	Biweekly	Weekly
Saginaw City	Weekly	Weekly	Weekly

(Saginaw City DPW does collections, Works with SASWMA to process recyclables)

*Yard waste is collected April through November. Christmas trees are collected the first 3 weeks of January. Yard waste includes grass, leaves, brush.

IDENTIFICATION OF RESOURCE RECOVERY MANAGEMENT ENTITIES:

The following identifies those public and private parties, and the resource recovery or recycling programs which they have management responsibilities.

Environmental Groups:
There are no Environmental groups with program management responsibilities

Other:

Saginaw County Board of Commissioners
Responsible for final decisions on all aspects of solid waste management planning, including but not limited to, budgeting, siting, and flow control
Responsible for plan adoption
Responsible for annually reviewing Solid Waste Committee recommendation of solid waste budget

Saginaw County Planning Department (DPA)
Responsible for notifying proper officials for siting applications, flow control applications, etc.
Responsible for administrative duties that plan and ordinance entails
Responsible for promoting commercial recycling and educational programs geared towards small and medium commercial sector via private marketing firm
Responsible for monitoring performance of new or expanded resource recovery efforts to determine success of Plan implementation
Responsible for assisting and facilitating solid waste management planning committee

Saginaw County Solid Waste Management Planning Committee
Responsible for reviewing the Plan annually and updating it, as necessary
Responsible for meeting quarterly
Review any import/export applications from non-contiguous counties
Act as the Site Review Committee, if new construction or expansion applications are submitted
Responsible for working with the Designated Planning Agency on compost site guidelines for existing and future sites
Responsible for monitoring performance of planning activities
Responsible for soliciting and reviewing proposals from SASWMA and other eligible applicants for educational activities funding
Recommend solid waste annual budget to the Board of Commissioners for adoption

Saginaw Area Solid Waste Management Authority (SASWMA) (Number 6 on pgs. III-27,28,32)
Responsible for residential trash, recyclables and yard waste collections, processing and disposal for member communities

Saginaw County Department of Public Health (Number 6 on page III-30,33)
Responsible for holding Household Hazardous Waste Collection Days, monthly, or as funding available
Responsible for inspections of operating landfills and processing facilties and citing any legal or illegal facility for violations

Saginaw County Cooperative Extension (Number 6 on page III-32)
Responsible for backyard composting programs via Master Gardeners
Works in cooperation with the SASWMA on Environmental Days where compost bins are sold

Collection Firms
Cooperate with the County of Saginaw in the enforcement of the Solid Waste Management ordinance
Cooperate with County on building permit stickers
Cooperate with County on HHW collection days
Educate their customers as to proper recycling and disposal methods
Responsible for Construction and Demolition collection and processing

Local Organizations (this includes the SASWMA and other local groups working towards environmental/solid waste education) (Number 6 on page III-31, 32)
Responsible for submitting educational program ideas and budget to the Solid Waste Planning Committee for consideration for funding
Responsible for submitting new program ideas and budget to the Solid Waste Planning Committee for consideration for funding (i.e. if an organization would like to implement a curbside household hazardous waste program)

PROJECTED DIVERSION RATES:

The following estimates the annual amount of solid waste which is expected to be diverted from landfills and incinerators as a result of the current resource recovery programs and in five and ten years.

Collected Material:	Projected Annual Tons Diverted:			Collected Material	Projected Annual Tons Diverted:		
	Current	5th Yr	10th Yr		Current	5th Yr	10th Yr
A. TOTAL PLASTICS:	13,315	14,122	14,930	G. GRASS AND LEAVES:	17,232	17,404	17,576
B. NEWSPAPER:	17,156	19,884	22,612	H. TOTAL WOOD WASTE:*	4,125	6,650	8,180
C. CORRUGATED CONTAINERS:	19,656	21,294	22,932	I. CONSTRUCTION AND DEMOLITION:	N/A	N/A	N/A
D. TOTAL OTHER PAPER:	3,030	3,376	3,721	J. FOOD AND FOOD PROCESSING:	Not Avail**		
E. TOTAL GLASS:	2,117	2,590	3,064	K. TIRES:	N/A	N/A	N/A
F. OTHER MATERIALS:				L. TOTAL METALS:	12,770	12,770	17,770
F1. Waxed cartons	14	21	27	F3. Odd resins			
F2. Dunage				F4.			

* Municipalities do not keep track of brush volumes. Data was unavailable for this portion. This number is strictly pallets and brush volumes from a private company.

**Darling International is a company that recycles restaurant grease, fat, and bones. There are no numbers available for Saginaw County.

Note: The numbers above are based on reports from processors. They are high because it is difficult to identify what proportion of each processors' business comes from each County.

MARKET AVAILABILITY FOR COLLECTED MATERIALS:

The following identifies how much volume that existing markets are able to utilize of the recovered materials which were diverted from the County's solid waste stream.

Collected Material:	In-State Markets	Out-of-State Markets	Collected Material	In-State Markets	Out-of-State Markets
A. TOTAL PLASTICS:	13,315	0	G. GRASS AND LEAVES:	all	0
B. NEWSPAPER:	16,948	208	H. TOTAL WOOD WASTE:	all	0
C. CORRUGATED CONTAINERS:	19,583	73	I. CONSTRUCTION AND DEMOLITION:	N/A	N/A
D. TOTAL OTHER PAPER:	3,009	22	J. FOOD AND FOOD PROCESSING	N/A	N/A
E. TOTAL GLASS:	1,872	245	K. TIRES:	N/A	N/A
F. OTHER MATERIALS:			L. TOTAL METALS:	4,370	8,400
F1. Waxed cartons	Not reported	Not reported	F3.		
F2.			F4.		

EDUCATIONAL AND INFORMATIONAL PROGRAMS:

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

Program Topic[1]	Delivery Medium[2]	Targeted Audience[3]	Program Provider[4]
1,2	ot - guidebook	p	o
1	ot - video	p	o
1,4	ot - curriculum	s (k-12)	o
1	r,t,n	p	o
2	w	p	EX
1	e (Hartley Ed. Center)	s (6,7,8)	ISD
1,4,5	ot - guidebook	b	DPA via consultant
2,4	ot-bldg permit stickrs	i	DPA/Haulers
1,4,5	w	b,i	DPA

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

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

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

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

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

TIMETABLE FOR SELECTED SYSTEM IMPLEMENTATION

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

TABLE III-7

Management Components	Timeline
Expand commerical recycling program to collect additional materials, as feasible	On-going
Promote home and municipal composting	On-going
Promote commercial and industrial recycling capabilities	On-going
Promote resource conservation and waste reduction efforts	On-going
Review implementation process and make adjustments as necessary	Annually
Work more closely with Midland Volunteers for Recycling	On-going
Develop compost site and recycling center guidelines	2000-2001
Create a model blight control ordinance (refer to Appendix E)	2000-2001
Monitor revenue, expenses and funding mechanisms for the Solid Waste program	On-going
Develop 5 Year budget projections	Annually
Work with identified agencies to develop enforcement program for haulers (refer to Appendix E)	2000-2001
Work with haulers to develop "curbside education" program consisting of stickers and pamphlets explaining why some items are not collected	2001-2002
Study the need for hazardous waste educational programs for commercial generators	2001-2002
Solicit and review proposals from private and public entities for educational activities and new programs	Annually
Recommend solid waste annual budget to the Board of Commissioners for adoption	Annually
Refer to Appendix E for more detail on education and enforcement components	

SITING REVIEW PROCEDURES

AUTHORIZED DISPOSAL AREA TYPES

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

None are prohibited

SITING CRITERIA AND PROCESS

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

The County of Saginaw has set up a site review system to ensure the health and safety of its citizen's, as well as to preserve the quality of life that currently exists in proposed host communities.

Definitions:
Solid Waste Disposal Area - A solid waste transfer facility, incinerator, sanitary landfill, processing plant, and resource recovery facility or other solid waste handling and disposal facility utilized in the disposal of solid waste (in other words, any facilities regulated under Act 451, Part 115).

There are many steps in the site review process. Here is a brief summary of the site review procedure. The process will be explained in greater detail further in the chapter.

The owner, or owner's agent, of a proposed new or expanded solid waste disposal area must submit an application for site plan review to the Saginaw County Planning Department (DPA) at 400 Court Street, Saginaw, MI 48602. The application criteria is available at the above listed address or can be found in the following pages. The County Planning Department is responsible for distributing the application submittal packages to the Technical Review Committee (TRC). (The TRC reviews the applications to ensure that they are administratively complete and also designates the haul routes). The DPA must also notify the Saginaw County Board of Commissioners (BOC) and the municipality in which the proposed site is located.

The TRC will send a complete application, with selected haul routes to the Site Review Committee (the Solid Waste Management Planning Committee plus two representatives from the affected local government). The Site Review Committee (SRC) will review the proposal and make a determination of consistency which is submitted to the BOC for their concurrence or non-concurrence. Final determination of consistency will be issued by the Director of the MDEQ.

APPLICATION

To insure that the SRC has sufficient information to adequately complete the disposal area site evaluation process, and to prevent a specific site from being found inconsistent for lack of data, minimum data submission requirements are established. This application will be the same for all Part 115 facilities. However, landfills are required to submit additional or different information in some cases. An administratively complete application must include, at a minimum, the following information:

1. Name, address, and telephone number for the:
   A. Applicant
   B. Property Owner of the Site (if different)
   C. Designated Project Contact

2. A detailed site plan or plans (scale of 1:2,400 or larger) indicating the size and orientation of the site including:
   - On-site roads;
   - On-site structures;
   - Parking areas for employees;
   - Staging areas for trucks waiting to use the facility;
   - Means of limiting access, including fences, gates, natural barriers or other methods;
   - *(for landfills only)* Proposed individual disposal cells with an estimate of volumetric air space capacities and when individual cells would be developed during a 20 year planning period.

3. Site plan should also include information regarding proposed berm location, fences, and/or dikes and all landscaping to be constructed or placed on-site.

4. Topographical data (based on USGS data) with contour intervals which clearly delineate surface conditions as existing and as proposed, both for the site and the surrounding areas.

5. General site location map(s) identifying:
   - Access roads;
   - Proposed access point(s) to the facility;
   - One-hundred (100) year floodplain within the boundaries of the proposed solid waste processing facility;
   - Lands regulated under the Farmland and Open Space Preservation Act, Public Act 116 of 1974, as amended, that are within the boundaries of the proposed properties;
   - Location of surface water on and within 1/2 mile of the sites property lines;
   - Regulated wetlands within the boundaries of the proposed site;
   - Location of any public use airports licensed by the Bureau of Aeronautics, MDOT that

are within ten-thousand feet (10,000) of the proposed active fill areas;
- Locations of drains on-site;
- Locations of public and private water wells within one (1) mile of the proposed active fill areas;
- Number of residences, commercial establishments, industries, institutions, including schools, churches, hospitals, and historic or archeological sites within one (1) mile of the proposed active fill areas listed separately.
- *(for landfills only)* Number of residences within 1/2 mile perimeter of the total footprint of the active fill area.
- *(for all other disposal areas)* Number of residences within 1/2 mile perimeter of property lines.

6. Description of preferred haul routes over which solid waste transport vehicles will travel from a state highway (I, M, or US route) to the proposed facility, and an estimate of the number and type of vehicles per day.

7. Proposed operating schedules (days and hours)

8. *(For landfills only)* Estimated operating life and annual fill rate of the proposed facility for the disposal of solid waste.

9. Potential for future site expansion and identification of any additional operations to be conducted on the site. These potential expansions and/or additional operations are not to be evaluated as part of this proposal.

10. A written description of the type and quantity of waste by source (business or municipality) anticipated to be managed.

11. Provide a general description of the soil characteristics and the hydrogeological conditions at the proposed site. *For landfills*, also include information about major topographical features such as drainage divides, lakes or streams. Descriptive information may be supplemented through the use of drawings or maps. Site hydrogeologic characteristics must be addressed; including soil boring data from the four corners and center of the site. Provide information on the groundwater depth and, if available, existing water quality. Discuss potential impacts of the proposal on these features.

12. Identify general direction of groundwater flow and identify the uppermost aquifer. Maps may be used to identify various directional flows. *For all facilities*, discuss potential impacts on public and private water supplies within one (1) mile down gradient of the active fill area. How will these impacts be mitigated (e.g. design of the facility)? *For landfills*, identify all aquifers between the surface and within one-hundred (100)

ECTED SYSTEM

vertical feet of the deepest excavation of the proposed active fill area.

13. *(For landfills only)* Provide a preliminary description of the plan for post closure re-use of the site.

14. Indicate current zoning at the site and adjacent land uses.

15. If the owner of the property is different than the proposed developer, the developer must provide documentation in the form of a land contract, purchase agreement, or other contract which substantiates th developer's ability to proceed with development and operation of the site.

16. A description of the historic uses of the property within the last fifty (50) years, identification of any previous commercial disposal sites within the property boundaries and/or known contaminated sites within the boundaries of the property.

17. The number of employees and general job description for all facility staff during hours of operation.

18. *(for landfills only)* Amount of daily cover material required within each cell and source of material. Is cover coming from on-site or being imported? If on-site, how far away from the property line is cover bein taken? Is an alternative cover being used, such as a mechanical tarp or reused materials? Please describe.

For all non-landfill solid waste disposal areas:

19. Total volume of solid waste to be processed daily and total volume of storage capacity.

20. Alternate plan for disposal of waste or treatment in case of plant or facility malfunction or shut down.

21. Landfill or other waste disposal area to which solid waste and/or ash will be transported.

Note: Additional information may be provided at the discretion of the developer to assist in identification o any unique features of the site or proposal.

DESIGNATION OF THE TECHNICAL REVIEW COMMITTEE

A Technical Review Committee (TRC) consisting of the department head or their designee from the Count Department of Planning, the County Department of Public Health, the County Department of Public Work and the County Road Commission and the chief elected official or their designee from the affected municipality is established and will be responsible for reviewing the application submittal package to ensure that adequate information is submitted to enable the Site Review Committee to evaluate the proposed site expeditiously. This committee will also be responsible for reviewing the application's proposed haul route and deciding which routes will be designated. All meetings of the TRC are public. Notice of meetings will

be posted in accordance with the Open Meetings Act.

DESIGNATION OF THE SITE REVIEW COMMITTEE

The Saginaw County Solid Waste Planning Committee will serve as the Site Review Committee (SRC). However, for a site review committee, two representatives from the affected municipality will also serve on this committee. These two members shall be appointed by the Chairman of the Saginaw County Board of Commissioners within thirty days of notification that an application has been received.

The two local representatives from the affected municipality shall serve for a period of time as required to complete the evaluation of a single application, and any subsequent reapplication, or for a specific period of time as determined by the Board of Commissioners. The Site Review Committee shall be responsible for completing the solid waste disposal area application evaluations, receiving public comments, and making a recommendation of consistency with the Plan, utilizing the siting criteria in the Saginaw County Solid Waste Management Plan. All meetings of the SRC are public. Notice of meetings will be posted in accordance with the Open Meetings Act.

FEES

Saginaw County officials have determined that all applications for site evaluation of proposed solid waste disposal areas shall consist of the items enumerated in this section on page III-40-III-42, and must be accompanied by a $10,000 partially refundable application fee (covering staff time, mailings, printing, per diems and other direct costs associated with processing the application. Costs in excess of $10,000 will be billed to the applicant at the conclusion of the review process.

Incomplete applications will be returned to the applicant by the TRC with notification of deficiencies and the listing of the additional information which must be submitted. The application may then be resubmitted with the additional information required without an additional application fee.

Proposed sites that are rejected by the SRC as inconsistent with the County Solid Waste Management Plan may be resubmitted (with deficiencies corrected) as a new application with an additional $10,000 partially refundable fee.

Determination of Consistency

The TRC will review the application and then submit the application, with their certification as to the completeness of data, to the Site Review Committee (SRC) for site review. The SRC will evaluate the proposed site to determine consistency or inconsistency with the Plan, using the methodology set forth in this

Plan. The SRC's determination of consistency or inconsistency is then submitted to the Saginaw County Board of Commissioners through the County Services Committee for concurrence or non-concurrence. A final determination of consistency is to be made by the Director of the DEQ.

Once the application makes it through the entire review process, the County Planning Department will noti the applicant of the reviewers findings in writing.

Proposed Site Evaluation

Solid waste disposal areas are included in or determined to be consistent with this Plan only if they satisfy (of the following conditions:

- They are included and referenced in this Plan as a licensed solid waste disposal area at the time of Plan approval. At the time of writing, People's Landfill, Saginaw Metal Castings Operations, Saginaw Valley Landfill, and Taymouth Landfill are licensed solid waste disposal areas operating within Saginaw County.

- They have been reviewed by a properly appointed SRC using the procedures and criteria listed in the Plan and found to be consistent with the Plan, with concurrence by the Board of Commissioners. This includes new proposed solid waste disposal areas and proposed expansions of existing solid waste disposal areas.

All Saginaw County solid waste disposal areas not listed above are considered to be not consistent with the Plan.

APPLICATION REVIEW PROCESS

STEP 1 - The owner, or owner's agent, of a proposed new or expanded solid waste disposal area must submit an application for site plan review to the County Planning Department (the DPA), or if another agency is appointed to administer the Solid Waste Management Plan, they shall be the designated agency t which all applications should be submitted. The application criteria is available at the Saginaw County Planning Department at 400 Court St., Saginaw, MI 48602 and is also set forth in this Plan on page III-40-III-42. The minimum amount of information that is required for the solid waste disposal area applications also listed in the beginning of this chapter. Once the application is complete, it must be returned to the County Planning Department.

STEP 2 - The County Planning Department shall forward the application package to the TRC, notify the clerk(s) of the municipalities in which the proposed processing site is located and notify the Saginaw Coun Board of Commissioners that an application has been received and that the appointment of the two local representatives from the affected municipality is required (within 30 days for the Site Review Committee).

The zoning administrators of the affected municipalitites would also be notified, in order for them to conduct a local zoning review. The County Planning Department shall notify these entities within ten (10) days after receipt of the application.

STEP 3 - The TRC shall meet within thirty (30) days after receipt of the application package from the County Planning Department.

STEP 4 - The TRC shall notify the applicant of submittal material deficiencies within ten (10) days after its first meeting. The applicant has ten (10) days to submit all deficient materials. *Failure to submit requested materials within ten (10) days will terminate the application process.* The TRC shall submit the complete application package, along with its certification of completeness and comments, to the Site Review Committee (SRC) within ten (10) days after its first meeting, if the original submittal is complete or ten (10) days after receiving all required and requested materials from the applicant.

Note: If the TRC does not meet within ten (10) days after receipt of the applicants package or fails to make a certification of whether or not the applicant package is complete within the time frame identified in step 4, the package is automatically complete and will be forwarded to the SRC for review.

STEP 5 - The SRC shall hold a public hearing on the application for a proposed solid waste disposal area evaluation within sixty (60) days of the date the site application has been certified complete by the TRC. The public hearing shall be held in the municipality in which the proposed site is located. The purpose of the public hearing is to provide information on the proposal to the public and officials in Saginaw County. The results of the local zoning review must be available in time for presentation at the public hearing in order to be considered. Local zoning review must address criteria from the local ordinance or this plan. The following tables identify key criteria from each local zoning ordinance as they were known to the DPA at the time of plan preparation. The DEQ will not accept a local zoning denial by itself as justification for not siting a solid waste disposal facility. The DPA will schedule the public hearing within ten (10) days of SRC receipt of application. The notice of a public hearing must be published not more than fifteen (15) or less than five (5) days before the SRC meeting.

STEP 6 - The SRC shall make a determination as to a site's consistency or inconsistency with the Saginaw County Solid Waste Plan within thirty (30) days of the date of the public hearing. This determination is based on the Site Review Evaluation Criteria and how well the proposal fit it.

STEP 7 - The SRC will forward their statement of site consistency or inconsistency to the Saginaw County Board of Commissioners within thirty (30) days of rendering their determination. A SRC's statement of consistency or inconsistency shall be accompanied by a detailed summary of point values assigned to each

criterion and a listing of the reasons for each point assignment.

Note: Should the SRC fail to arrive at a recommendation within ninety (90) days of SRC receipt of application, as detailed in Steps 5 & 6, due to inaction or an inability to reach a final decision, the notes, materials, and minutes of the SRC shall be forwarded to the Board of Commissioners by the County Planni Department for a determination of consistency or inconsistency. The Board of Commissioners must find th proposal consistent or inconsistent with the Plan, in accordance with the siting procedures in the plan withi sixty (60) days of receiving the notes, materials and minutes of the SRC.

STEP 8 - The Board of Commissioners shall take action to concur or not concur with the SRC's determination within ninety (90) days from the date the SRC notice of determination is received.
If the BOC fails to take action to concur or not concur with the SRC's determination within ninety (90) da of the date the SRC's determination is received, the proposed site shall be considered to be consistent with the SRC's recommendation and subject to final determination of consistency by the Directc of the MDEQ.
The Board of Commissioners (BOC) can only reverse the SRC's determination for the following reasons:

1. The BOC determines that the developer provided erroneous information and data to the SRC that was used in their deliberations.
2. The BOC determines that the SRC disregarded the criteria narratives outlined in the plan in their deliberations.
3. The BOC determines that there was an error made by the staff or agency.

The Board of Commissioners must notify the SRC, in writing, of the specific reasons for their reversal of a determination.

If the Board of Commissioners does not concur with the SRC's determination, the SRC must respond to th Board of Commissioners within forty-five (45) days addressing any criteria decisions in question. Should t SRC fail to act within forty-five (45) days, the County Board determination shall be final.

Following the forty-five (45) day SRC response period or upon submission of the SRC comments, the County Board (through the County Services Committee, as required by County Board rules) must act with forty-five (45) days and find the application consistent or inconsistent with the plan based solely on the siti criteria contained within the Plan.

A. If the County Board fails to take action within the forty-five (45) day period, the findings of the SRC shall represent the County's final determination.
B. If the County Board takes action within forty-five (45) days, the determination of the BOC stands as the County's final determination of consistency.

STEP 9 - Notification will be sent by the DPA to the applicant and MDEQ, including copies of the SRC report and the stated reasons for the determination, within ten (10) days of the final Board action or expiration of the period of time allotted for Board action.

If the site is determined to be in non-compliance with the Plan, the applicant may then submit a new application, with stated deficiencies addressed, for re-evaluation by the SRC, adhering to all the requirements for applications submittal, including the application fee.

MDEQ PERMITTING PROCESS

In accordance with P.A. 451, if after completion of the aforementioned process, the applicant believes that the SRC and/or BOC have ruled against the proposal in error, the applicant may submit as part of a construction permit application to the MDEQ, an explanation of how the proposal is consistent with the approved Solid Waste Management Plan.

The County will have the opportunity to comment on the proposal and to raise objections, if any, during the thirty (30) day public comment period of the permit application process. The public comment period is prior to the final determination of consistency by the Director of the MDEQ.

NOTIFICATION OF SITE COMPLIANCE/NON-COMPLIANCE

If the Site Review Committee determines that a proposed site is in compliance with the Plan they will notify the applicant, the Saginaw County Health Department and the Michigan Department of Environmental Quality that the proposed site is in compliance with the Saginaw County Solid Waste Management Plan.

If the SRC determines that a proposed site is inconsistent with the Plan they will notify the applicant, the County Health Department and the MDEQ, along with stated reasons for the determination. The applicant may then submit a new application, with stated deficiencies addressed, for re-evaluation by the SRC, adhering to all of the requirements for application submittal, including the application fee.

APPLICATION REVIEW ESTIMATED TIMELINE

STEP 1 Application submitted to County Planning Department	CUMUL-ATIVE TIME
STEP 2 County Planning Department notifies: a) Technical Review Committee (TRC); b) Board of Commissioners (BOC) - appoints Site Review Committee (SRC); c) Municipality(ies) where site is located - clerk and zoning administrator	10 days
STEP 3 TRC meets within thirty (30) days after receipt of application from County Planning Department.	40 days
STEP 4 TRC notifies applicant of submittal material deficiencies within ten (10) days of first meeting Applicant has ten (10) days to submit all deficient materials. TRC submits application to SRC within ten (10) days after receiving complete application.	50 - 80 days
STEP 5 SRC holds public hearing within sixty (60) days of site application's certification of completion by TRC. DPA schedules public hearing within ten (10) days of SRC receipt of application. Published notice of hearing must be given not more than fifteen (15) or less than five (5) days before the SRC meeting.	65 - 130 days
STEP 6 SRC determines proposed site's consistency or inconsistency within thirty (30) days of the public hearing.	95 - 160 days
STEP 7 SRC forwards statement of site consistency/inconsistency to BOC within thirty (30) days of their determination. SRC failure to make determination results in forwarding of notes, materials, and minutes of SRC to the BOC for determination (refer to Application Review Process for more details).	125 - 190 days
STEP 8 BOC takes action to concur or not concur with SRC determination within ninety (90) days of receipt of SRC decision. Failure of BOC to take action within ninety (90) days of the SRC's determination means the proposed site is considered to be consistent with the plan and the Director of MDEQ makes final determination. SRC has a forty-five (45) day period to respond to the BOC determination at which time failure to respond will render the BOC's decision final. Following the SRC response period, submissions must be acted upon by the Board within forty-five (45) days, finding the application consistent/inconsistent.	260 - 370 days
STEP 9 Notice given to applicant regarding SRC's and BOC's determinations within ten (10) days.	270 - 380 days

Regulations meeting these qualifications may be adopted and implemented by the appropriate governmental unit without additional authorization from, or formal amendment to, the Solid Waste Management Plan, within the rules of Act 451. Allowable areas of local regulation include:

1. Certain ancillary construction details, such as landscaping and screening
2. Hours of operation
3. Noise, litter, odor, and dust control
4. Operating records and reports
5. Facility security
6. Monitoring of wastes accepted and prohibited
7. Composting and recycling

Local ordinance deleted from Section b.k already in [illegible] Ord. [illegible]

The following tables show the existing restrictions on solid waste disposal areas, by municipality. The last column in the table shows which one of the above seven restrictions apply to each municipality.

LANDFILLS

Minor Civil Divisions	Site Size	Access	Setbacks	Zoning District	Setback from Res. Sub.	Other per guidance
Albee Township	-	Arterial	-	A-1 Pri Ag/A-2 Gen Ag	1 mile	1,3,5,6
Birch Run Township	-	Arterial	-	A-1 Pri Ag/A-2 Gen Ag/ M-1 Ind.	1 mile	1,3,5,6
Blumfield Township	-	-	-	M-1 Ind./M-2 Intense Ind.	-	3,5,6
Brady Township	20 acres	Co. Pri/St. Hwy	200'	A-1 Gen Ag/M-1 Limit. Manu.	1 mile	1,3,5,6
Brant Township	-	Arterial	-	A-1 Pri Ag/A-2 Gen Ag	1 mile	1,3,5,6
Bridgeport Township	-	-	40'	M-1 Ind.	-	1,3,5
Buena Vista Township	20 acres	Co. Pri/St. Hwy	200'	M-1 Limit. Ind./M-2 Intense Ind.	2000'	1,2,3,5,6
Carrollton Township	40 acres	-	50'	M-1 Ind./ A-1 Ag	500'	1,3
Chapin Township	No ordinance	-	-	-	-	-
Chesaning Township	20 acres	Co. Pri/St. Hwy.	200'	M-1 Ind.	1/2 mile	1,3,5,6
Frankenmuth Township	-	-	-	A-2 Gen Ag	-	3,5
Fremont Township	20 acres	Co. Pri/St. Hwy.	200'	A-1 Gen Ag	1/2 mile	1,3,5,6
James Township	-	Arterial	-	A-1 Ag/M Industrial	1 mile	3,5,6
Jonesfield Township	20 acres	Co.Pri/St. Hwy.	200'	M-1 Ind.	1/2 mile	1,3,5,6
Kochville Township	-	-	-	A-1 Ag/M-1 Ind.	-	3,5
Lakefield Township	-	Arterial	-	A Ag and Woodlot	1 mile	1,3,5,6
Maple Grove Township	20 acres	Co.Pri/St. Hwy.	200'	M-1 Ind.	1/2 mile	1,3,5,6
Marion Township	-	Arterial	-	A Ag	1 mile	1,3,5,6
Richland Township	20 acres	Co. Pri/St. Hwy.	200'	M-1 Ind.	1/2 mile	1,3,5,6
Saginaw Township	-	-	-	A-2 Ag	-	1,5
St. Charles Township	20 acres	Co.Pri/St. Hwy.	200'	A-1 Gen Ag/M-1 Ind.	1/2 mile	1,3,5,6
Spaulding Township	-	-	-	Not specified	-	5
Swan Creek Township	20 acres	Co. Pri/St. Hwy.	200'	M Industrial	1/2 mile	1,3,5,6
Taymouth Township	40 acres	Paved arterial	300'	LI Light Industrial	1 mile	1,2,3,5,6,7
Thomas Township	300 acres	Co. Primary	200'	M-1 Limit Manu.	2000'	1,3,5
Tittabawassee Township	20 acres	Co. Pri/St. Hwy.	200'	I-2 Intensive Ind.	1/2 mile	1,3,5,6
Zilwaukee Township	25,000 sq. ft.	-	75'	A Ag	-	-
Village of Birch Run	20 acres	Co. Pri/St. Hwy.	200'	M-2 Intensive Ind.	1/2 mile	1,3,5,6
Village of Chesaning	40 acres	-	200' - 500'	M Manufacturing	500'	1,3,5
Village of Merrill	20 acres	Co. Pri/St. Hwy	200'	M-1 Light Manufacturing	1/2 mile	1,3,5,6
Village of Oakley	20 acres	Co. Pri/St. Hwy.	200'	M-1 Light Manufacturing	1/2 mile	1,3,5,6
Village of St. Charles	20 acres	Co. Pri/St. Hwy.	200'	Not Specified	1/2 mile	1,3,5,6
City of Frankenmuth	No mention	-	-	-	-	-
City of Saginaw	2 acres (min.)	Arterial	-	M-2 Gen. Ind.	200'	3,5
City of Zilwaukee	No mention	-	-	-	-	-

INCINERATORS

Minor Civil Divisions	Site Size	Access	Setbacks	Zoning District	Setback from Res. Sub.	Other guidance
Albee Township	-	Arterial	-	A-1 Pri Ag/A-2 Gen Ag	1 mile	1,3,5,6
Birch Run Township	-	Arterial	-	A-1 Pri Ag/A-2 Gen Ag/ M-1 Ind.	1 mile	1,3,5,6
Blumfield Township	-	-	-	M-1 Ind./M-2 Intense Ind.	-	3,5,6
Brady Township	20 acres	Co. Pri/St. Hwy	200'	A-1 Gen Ag/M-1 Limit. Manu.	1 mile	1,3,5,6
Brant Township	-	Arterial	-	A-1 Pri Ag/A-2 Gen Ag	1 mile	1,3,5,6
Bridgeport Township	-	-	40'	M-1 Ind.	100'	1,3,5
Buena Vista Township	20 acres	Co. Pri/St. Hwy	200'	M-2 Intensive Ind.	2000'	1,2,3,5,6
Carrollton Township	-	-	-	A-1 Agriculture	-	-
Chapin Township	No ordinance	-	-	-	-	-
Chesaning Township	20 acres	Co. Pri/St. Hwy.	200'	M-1 Ind.	1/2 mile	1,3,5,6
Frankenmuth Township	-	-	-	A-2 Gen Ag	-	3,5
Fremont Township	20 acres	Co. Pri/St. Hwy.	200'	A-1 Gen Ag	1/2 mile	1,3,5,6
James Township	-	Arterial	-	A-1 Ag/M Industrial	1 mile	3,5,6
Jonesfield Township	20 acres	Co.Pri/St. Hwy.	200'	M-1 Ind.	1/2 mile	1,3,5,6
Kochville Township	-	-	-	A-1 Ag/M-1 Ind.	-	3,5
Lakefield Township	-	Arterial	-	A Ag and Woodlot	1 mile	1,3,5,6
Maple Grove Township	20 acres	Co.Pri/St. Hwy.	200'	M-1 Ind.	1/2 mile	1,3,5,6
Marion Township	-	Arterial	-	A Ag	1 mile	1,3,5,6
Richland Township	20 acres	Co. Pri/St. Hwy.	200'	M-1 Ind.	1/2 mile	1,3,5,6
Saginaw Township	-	-	-	A-2 Ag	-	1,5
St. Charles Township	20 acres	Co.Pri/St. Hwy.	200'	A-1 Gen Ag/M-1 Ind.	1/2 mile	1,3,5,6
Spaulding Township	-	-	-	Not specified	-	5
Swan Creek Township	20 acres	Co. Pri/St. Hwy.	200'	M Industrial	1/2 mile	1,3,5,6
Taymouth Township	40 acres	Paved arterial	300'	LI Light Industrial	1 mile	1,2,3,5,6,7
Thomas Township	No mention	-	-	-	-	-
Tittabawassee Township	20 acres	Co. Pri/St. Hwy.	200'	I-2 Intensive Ind.	1/2 mile	1,3,5,6
Zilwaukee Township	No mention	-	-	-	-	-
Village of Birch Run	20 acres	Co. Pri/St. Hwy.	200'	M-2 Intensive Ind.	1/2 mile	1,3,5,6
Village of Chesaning	-	-	-	M Manufacturing	-	-
Village of Merrill	20 acres	Co. Pri/St. Hwy	200'	M-1 Light Manufacturing	1/2 mile	1,3,5,6
Village of Oakley	20 acres	Co. Pri/St. Hwy.	200'	M-1 Light Manufacturing	1/2 mile	1,3,5,6
Village of St. Charles	20 acres	Co. Pri/St. Hwy.	200'	Not Specified	1/2 mile	1,3,5,6
City of Frankenmuth	No mention	-	-	-	-	-
City of Saginaw	2 acres (min.)	Arterial	-	M-2 Gen. Ind.	200'	3,5
City of Zilwaukee	15000 sq. ft.	-	-	M-2 Intensive Manu.	-	-

RESOURCE RECOVERY/ RECYCLING FACILITIES

Minor Civil Divisions	Site Size	Access	Setbacks	Zoning District	Setback from Res. Sub.	Other per guidance
Albee Township	No mention	-	-	-	-	-
Birch Run Township	No mention	-	-	-	-	-
Blumfield Township	No mention	-	-	-	-	-
Brady Township	20 acres	Co. Pri/St. Hwy	200'	Not specified	1 mile	1,3,5,6
Brant Township	No mention	-	-	-	-	-
Bridgeport Township	No mention	-	-	-	-	-
Buena Vista Township	20 acres	Co. Pri/St. Hwy	200'	M-2 Intensive Ind.	2000'	1,2,3,5,6
Carrollton Township	No mention	-	-	-	-	-
Chapin Township	No ordinance	-	-	-	-	-
Chesaning Township	20 acres	Co. Pri/St. Hwy.	200'	M-1 Ind.	1/2 mile	1,3,5,6
Frankenmuth Township	No mention	-	-	-	-	-
Fremont Township	20 acres	Co. Pri/St. Hwy.	200'	Not specified	1/2 mile	1,3,5,6
James Township	No mention	-	-	-	-	-
Jonesfield Township	20 acres	Co.Pri/St. Hwy.	200'	Not specified	1/2 mile	1,3,5,6
Kochville Township	No mention	-	-	-	-	-
Lakefield Township	No mention	-	-	-	-	-
Maple Grove Township	20 acres	Co.Pri/St. Hwy.	200'	Not specified	1/2 mile	1,3,5,6
Marion Township	No mention	-	-	-	-	-
Richland Township	20 acres	Co. Pri/St. Hwy.	200'	M-1 Ind.	1/2 mile	1,3,5,6
Saginaw Township	No mention	-	-	-	-	-
St. Charles Township	20 acres	Co.Pri/St. Hwy.	200'	Not specified	1/2 mile	1,3,5,6
Spaulding Township	No mention	-	-	-	-	-
Swan Creek Township	20 acres	Co. Pri/St. Hwy.	200'	M Industrial	1/2 mile	1,3,5,6
Taymouth Township	No mention	-	-	-	-	-
Thomas Township	No mention	-	-	-	-	-
Tittabawassee Township	No mention	-	-	-	-	-
Zilwaukee Township	No mention	-	-	-	-	-
Village of Birch Run	20 acres	Co. Pri/St. Hwy.	200'	Not specified	1/2 mile	1,3,5,6
Village of Chesaning	-	-	-	M Manufacturing	-	-
Village of Merrill	20 acres	Co. Pri/St. Hwy	200'	Not specified	1/2 mile	1,3,5,6
Village of Oakley	No mention	-	-	-	-	-
Village of St. Charles	No mention	-	-	-	-	-
City of Frankenmuth	No mention	-	-	-	-	-
City of Saginaw	2 acres (min.)	Arterial	-	M-2 Gen. Ind.	200'	3,5
City of Zilwaukee	15000 sq. ft.	-	-	M-2 Intensive Manu.	-	-

COMPOSTING FACILITIES

Minor Civil Divisions	Site Size	Access	Setbacks	Zoning District	Setback from Res. Sub.	Other Guidance
Albee Township	No mention	-	-	-	-	-
Birch Run Township	No mention	-	-	-	-	-
Blumfield Township	No mention	-	-	-	-	-
Brady Township	No mention	-	-	-	-	-
Brant Township	No mention	-	-	-	-	-
Bridgeport Township	No mention	-	-	-	-	-
Buena Vista Township	No mention	-	-	-	-	-
Carrollton Township	No mention	-	-	-	-	-
Chapin Township	No ordinance	-	-	-	-	-
Chesaning Township	No mention	-	-	-	-	-
Frankenmuth Township	No mention	-	-	-	-	-
Fremont Township	No mention	-	-	-	-	-
James Township	No mention	-	-	-	-	-
Jonesfield Township	No mention	-	-	-	-	-
Kochville Township	No mention	-	-	-	-	-
Lakefield Township	No mention	-	-	-	-	-
Maple Grove Township	No mention	-	-	-	-	-
Marion Township	No mention	-	-	-	-	-
Richland Township	No mention	-	-	-	-	-
Saginaw Township	No mention	-	-	-	-	-
St. Charles Township	No mention	-	-	-	-	-
Spaulding Township	No mention	-	-	-	-	-
Swan Creek Township	No mention	-	-	-	-	-
Taymouth Township	No mention	-	-	-	-	-
Thomas Township	No mention	-	-	-	-	-
Tittabawassee Township	No mention	-	-	-	-	-
Zilwaukee Township	25,000 sq. ft.	-	-	A Agricultural	-	-
Village of Birch Run	No mention	-	-	-	-	-
Village of Chesaning	No mention	-	-	-	-	-
Village of Merrill	No mention	-	-	-	-	-
Village of Oakley	No mention	-	-	-	-	-
Village of St. Charles	No mention	-	-	-	-	-
City of Frankenmuth	No mention	-	-	-	-	-
City of Saginaw	No mention	-	-	-	-	-
City of Zilwaukee	No mention	-	-	-	-	-

PROPOSED DISPOSAL SITE REVIEW EVALUATION CRITERIA

PROPOSED SANITARY LANDFILL
Table 1

Criteria	Total Points
Residential Density	210 pts.
Haul Routes	190 pts.
Area Saturation	150 pts.
Agricultural Land	130 pts.
Environmentally Sensitive Lands	120 pts.
Community Master Plan	110 pts.
Daily Cover	90 pts.
	1000 pts. Max.

ALL OTHER PROCESSING FACILITIES
Table 2

Criteria	Total Points
Residential Density	230 pts.
Haul Routes	210 pts.
Area Saturation	170 pts.
Agricultural Land	140 pts.
Community Master Plan	130 pts.
Environmentally Sensitive Lands	120 pts.
	1000 pts. Max.

Evaluation Criteria

Based on the ruling in the lawsuit regarding Saginaw County's solid waste ordinance and also Michigan Public Act 451, Saginaw County can not regulate a number of important things related to the siting of solid waste disposal areas. Act 451 and the lawsuit helped to determine the siting criteria used in this section.

Saginaw County requires that all applicants abide by the standards incorporated in Public Act 451, as amended, Part 115 and its administrative rules. A facility may not receive a construction permit or license unless it is consistent with the Saginaw County Solid Waste Management Plan. Final determination of consistency is made by the Director of the MDEQ.

Each proposal must be evaluated ONLY against the criteria that Saginaw County identifies in the Plan. A

site which satisfies a particular criterion to the maximum extent will receive the maximum point value available for that criterion. This process will continue until a proposed site has been evaluated for all listed criteria in the applicable section. The values for all criteria will be added to obtain a total score for the proposed site being evaluated. Any solid waste disposal area will be judged as satisfying the objectives of, and being consistent with, the Saginaw County Solid Waste Management Plan if its combined criteria numerical score is seventy-five percent (75% or 750 points) or more of the maximum value possible (1000 pts).

The plan contains a description of each criterion that the SRC must evaluate and a point designation structure. The SRC is to utilize these and assign the appropriate point values. Point determinations should be based on the information submitted with the Proposed Site Review Application package as reviewed by DPA staff.

Any proposed site receiving a final point value of zero (0) for any of the listed criteria will be considered inconsistent with the Plan. The assignment of a final point value of zero (0) to any one or more criteria will not relieve the SRC from evaluating the proposed site against all other applicable criteria. This is done so that the applicant is aware of the strengths and weaknesses of the application.

HOW POINTS WERE ASSIGNED PER CRITERIA

The Solid Waste Management Planning Committee did an exercise where they individually ranked the criteria (1000 points max.) in order of greatest importance. DPA staff compiled the results and assigned points to each of the criteria based on the responses. DPA staff determined the percentage of the total points awarded by the committee to each criterion. This same percentage was then applied to the total points available in the siting process (1000 points) and rounded to the nearest ten points.

Residential Density

The number of residential homes in the area surrounding a proposed site is an important issue which must be considered during the site evaluation process. Solid waste disposal areas in Saginaw County should be located in areas which minimize the negative impact on residential development. Residences owned by the developer will not be counted in the determination of points. If the proposed development is a sanitary landfill, please refer to Chart 1. If the proposed development is any other type of disposal area, please refer to Chart 2.

Chart 1 (for landfills)

Number of Residences Within 1/2 Mile Perimeter of Total Footprint of Active Fill Area					
<=50	51-100	101-150	151-200	201-300	301+
210	170	130	90	50	10

Chart 2 (for all other disposal areas)

Number of Residences Within 1/2 Mile Perimeter of Property Lines					
<=50	51-100	101-150	151-200	201-300	301+
230	185	140	95	50	10

Haul Routes

Development of proposed solid waste disposal areas could have a considerable impact upon the host community, particularly when consideration is given to the volumes of truck traffic associated with transporting solid waste to the facility. Proposed solid waste disposal areas will require the use of specified haul routes, which, in many instances may pass through highly developed areas. The methods below will be used to evaluate haul routes.

Designation of haul routes is intended to accomplish two objectives:

1. Minimize disruption to surrounding community
2. Match roadway and bridge loadbearing capacity to anticipated truck traffic

Developers of solid waste disposal areas need to balance their need for greater access with the community's need for minimal disturbance. Developers should note that trucks hauling materials to and from a disposal area on any road not listed as a haul route may be ticketed.

Haul routes are defined in this plan as those roadways which will connect the facility site to any State highway (I, M, or U.S. routes). The entire length of all haul routes must be evaluated*.

Haul Routes: Roadway and Bridge Capacity

Each proposed landfill will start with a total point value of 190. All other proposed disposal areas will start with a total point value of 210. Each proposal must be evaluated using each of the following tables with points deducted as listed per mile or occurrence.

For example, if a proposed landfill will use only one haul route which is four miles long, with two

miles of it being located on a non-weather road with a bond-upgrade, two miles of it being located on an all weather road, and the route crosses over one bridge that is not capable of handling forty tons, the proposal would receive 140 points. (Starting with 190 points and losing 10 points per mile for the two miles of bond-upgrade road, losing zero points per mile for the two miles of all weather road, and losing 30 points for the one bridge that was utilized.)

Table 1

All Weather Road	+0 points/mile
Non-Weather Road - Bond Upgrade **	-10 points/mile
Non-All Weather Road	-40 points/mile
Bridges with less than forty (40) ton capacity	-30 points/occurrence

Haul Routes: Development Impacts

Once the proposal goes through Table 1, it must be evaluated under Table 2 also, enabling the proposal to lose more points if they do not meet the additional criteria. Each proposal must take each of the three building types into consideration separately. Each proposal must take the total number of residences and commercial structures along the haul route and divide it by the number of miles on the haul route to give you an average number of buildings per mile.*** For example, if there are two haul routes and one is four miles from a State Highway and one is six miles from a State Highway, then there will be ten miles of road to evaluate. The applicant would count up the number of residences along the ten mile route. Assuming there are 100 homes along the ten mile route, it is determined that there is an average of 10 homes per mile. Looking at the chart below the application would lose no points for this portion. The same process would be used for commercial structures. There is a separate scoring system for public buildings, with them losing points per each occurrence as shown in Table 2, part 3.

Table 2

1. Average residences per mile of haul route****	
0-11 residences/mile	No point loss
12-24 residences/mile	-20 points
25-49 residences/mile	-40 points
50+ residences/mile	-60 points

ECTED SYSTEM

2. Average commercial structures per mile of haul route****	
<1 commerical strucutres/mile	No point loss
1-5 commercial structures/mile	-20 points
6-10 commerical structures/mile	-40 points
>10 commerical structures/mile	-60 points

3. Number of Public/Quasi-Public Structures along Haul Route	
Schools (public and parochial) or Human Care Institutions*****	-20 points each occurrence

Notes:
* Round haul route lengths to the nearest mile.
** The developer has provided a signed statement agreeing to provide a bond or to upgrade the non-all weather road to all weather conditions, according to Saginaw County Road Commission specifications.
*** If a driveway, mobile home park or multifamily entrance fronts on the haul route then you must count all dwelling units affected.
****Residences and commercial structures owned by the developer will not be counted in the determination of points.
*****A human care institution is one that has beds for more than six (6) patients.

Area Saturation

The citizen's of Saginaw County desire that no single geographic area shall be the host of numerous solid waste disposal areas. This ensures that one specific geographic area does not bear the burden of solid waste disposal for the entire County. Saturation will be defined by the distance between the proposed new disposal area or expansion and an existing disposal area with point value assignments determined based on the following*:

- Proposed disposal areas that are located more than five (5) miles from any waste disposal areas under construction, presently operating or in the process of closure will receive a point value of *one-hundred fifty (150) for landfills or one-hundred seventy (170) for all other disposal areas.*

- Proposed disposal areas that are located more than three (3) miles, but less than five (5) miles from one waste disposal area under construction, presently operating or in the process of closure will receive a point value of *one-hundred (100) for landfills or one-hundred thirty (130) for all other disposal areas.*

- Proposed disposal areas that are located more than three (3) miles, but less than five (5) miles from two (2) or more waste disposal areas under construction, presently operating or in the process of closure will receive a point value of *seventy-five (75) for landfills* ***or*** *one-hundred (100) for all other disposal areas.*

- Proposed disposal areas that are located within three (3) miles of any waste disposal area under construction, presently operating or in the process of closure will receive a point value *of fifty (50) for landfills* ***or*** *seventy (70) for all other disposal areas.*

Note: * For the expansion of an existing facility, the facility itself is not counted.

Agricultural Land

Considerable attention has recently been directed toward the increasingly large amount of farmland that is being diverted to other uses which restrict or eliminate its future utilization as active farmland. The methodology utilized here places a high priority upon not utilizing active, productive farmland as sanitary landfills.

Farmland areas have been given the following definitions:

Active - Those agricultural lands that are not producing at present, but are capable of active production with minor preparation or those lands that have been in production within the last five years.

Actively Producing - Those agricultural lands that are actively producing crops. For the purposes of this planning document, this includes land under agreement pursuant to P.A. 116 of 1974, the Farmland and Open Space Preservation Act, regardless of whether the land is actively producing.

Forested Lands - Those lands which are forested, but not managed in the production of wood products will not be considered as active or actively producing. Managed wood product operations are considered actively producing.

- Proposed facilities which are not located on active or actively producing farmlands will receive a point value of *one-hundred thirty (130) for landfills* ***or*** *one-hundred forty (140) for all other disposal areas.*

- Proposed facilities which are located on active, but not on actively producing farmland will

receive a point value of *one-hundred twenty (120) for landfills* ***or*** *one-hundred thirty (130) for all other disposal areas.*

- Proposed facilities which are located on actively producing farmland which is not designated as prime agricultural land by the 1994 Saginaw County Soil Survey will receive a point value of *seventy (70) for landfills* ***or*** *eighty (80) for all other disposal areas.*

- Proposed facilities located on actively producing farmland which is designated as prime agricultural lands by the 1994 Saginaw County Soil Survey will receive a point value of *forty (40) for landfills* ***or*** *fifty (50) for all other disposal areas.*

Environmentally Sensitive Lands

Environmentally Sensitive Lands - Lands that are located on an one-hundred year floodplain, regulated wetland, river/stream or those that require a soil erosion and sedimentation permit.

An application must be evaluated regarding each of the following four types of environmentally sensitive areas. Thirty points are available per category for a total availability of 120 points in this section.

100 Year Floodplains

If the proposed facility is not located in a one-hundred year floodplain, thus not requiring a permit from the MDEQ for such a development, or if the facility is to be located in a one-hundred year floodplain and has obtained a permit from the MDEQ for development in a one-hundred year floodplain, it will receive thirty (30) points.

If the proposed facility is to be located in a one-hundred year floodplain and has not been issued a permit from the MDEQ, the proposed facility will receive five (5) points.

Regulated Wetlands

If the proposed facility is not located in a regulated wetland, thus not requiring a permit from the MDEQ for such a development, or if the facility is to be located in a regulated wetland and has obtained a permit from the MDEQ for development in a regulated wetland, it will receive thirty (30) points.

If the proposed facility is to be located in a regulated wetland and has not been issued a permit from the MDEQ, the proposed facility will receive five (5) points.

Rivers/Streams
If the proposed facility is not located adjacent to a river or stream, thus not requiring a permit from the MDEQ for such a development, or if the facility is to be located adjacent to a river or stream and has obtained a permit from the MDEQ for development adjacent to a river or stream, it will receive thirty (30) points.

If the proposed facility is to be located adjacent to a river or stream and has not been issued a permit from the MDEQ, the proposed facility will receive five (5) points.

Soil Erosion and Sedimentation Permit
A soil erosion and sedimentation control permit is required under two conditions: the facility will disturb more than one acre of land or it is within five-hundred (500) feet of a river or stream. Permits are issued by the Saginaw County Public Works Commissioners office.

If the proposed facility will disturb more than one acre of land or it is within five-hundred (500) feet of a river or stream, and the applicant has the proper permits from the County, the proposed facility will receive thirty (30) points. If the facility will not disturb more than one acre of land or it is not located within five-hundred (500) feet of a river or stream, it will receive thirty (30) points.

If the proposed facility will disturb more than one acre of land or will be located within five-hundred feet (500) of a river or stream and has not received a Soil Erosion and Sedimentation Control permit, it will receive five (5) points.

Community Master Plan
A lot of time, thought and financial resources go into the writing of a community master plan. To ensure that a community's master plan is not ignored during the siting process, a proposed facility or expansion of a facility must take the Plan into consideration. The reviewing committee will need to obtain copies of the community master plan that was in effect at the time of DEQ final plan approval. Please review the application with the following table. If the proposed facility is a landfill, please score it using the landfill values. For all other facilties, use the second set of values.

Community Master Plan	Proposed facility to be located in areas that are planned for non-intensive development (agricutural and open space).	Proposed facility to be located in areas that are planned for industrial use.	Proposed facility to be located in areas that are planned for commercial use.	Proposed facility to be located in areas planned for residential use.
Landfills	100	90	50	10
All other disposal areas	130	120	60	10

Daily Cover (for landfills only)

This plan seeks to minimize disruption to properties adjacent to landfills and other sources of cover materials.

If the cover is taken from on-site greater than 300' from the property line or if an alternative cover mechanism is used (tarps, etc.) the proposed facility *will receive a point value of ninety (90).*

If the cover is taken from on-site between 100' and 300' of the property line, the proposed facility *will receive a point value of eighty (80).*

If the cover is taken from on-site from within 100' of the property line, the proposed facility *will receive a point value of seventy (70) points.*

If the cover consists of re-used or recycled soil materials that are imported to the site, the proposed facility *will receive a point value of forty (40).*

If the cover consists of non-recycled soil materials that are imported to the site, the proposed facility *will receive a point value of ten (10).*

SOLID WASTE MANAGEMENT COMPONENTS

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

ENFORCEMENT*

Saginaw County Designated Planning Agency
Responsible for enforcing the remaining components of solid waste ordinance.

Saginaw County Public Health Department
Responsible for inspections of operating landfills and disposal areas and citing any legal or illegal facility for violations.

Saginaw County Road Commission
Responsible for citing haulers that are over the road weight capacity.

Saginaw County Sheriff Department
Responsible for citing haulers that are not on designated truck routes and trucks that are over the road weight capacity.

Saginaw County Prosecutors Office
Responsible for legal action related to ordinance enforcement.

* refer to Appendix E for additional enforcement information

---

s Components or subcomponents may be added to this table.

IMPLEMENTATION

Saginaw Area Solid Waste Management Authority
Responsible for residential and multi-family trash, recyclables and yard waste collections for member communities.

Saginaw County Designated Planning Agency
Responsible for business re-use, source separation, and recycling educational programs via consultant.
Disband the Saginaw County Recycling Hotline due the County's lack of involvement in residential recyclir

Private Solid Waste Industry
Responsible for building and operating disposal areas.
Responsible for the collection and transport of waste under contract.

City of Saginaw Department of Public Works
Responsible for collection and transport of waste.
Responsible for operating a compost site.

Other local organizations selected by the Solid Waste Committee and BOC (this includes SASWMA and local organizations working towards environmental and solid waste education)
Responsible for residential and multi-family re-use, source separation, recycling and yard waste educational programs.
Responsible for operating a "Recycling Hotline" with funding from the County.
Responsible for starting a curbside Household Hazardous waste collection for the residential sector, if County funding is available.

PLANNING

Saginaw County Board of Commissioners
Responsible for final decisions on all aspects of solid waste management planning, including but not limited to, budgeting, siting, and flow control.
Responsible for plan adoption and amendments.
Responsible for directing enforcement activities.
Responsible for entering into any reciprocal agreements or contracts related to solid waste.
Responsible for annually reviewing Solid Waste Committee recommendations for solid waste budget

Saginaw County Solid Waste Planning Committee
Responsible for reviewing the Plan annually and updating it, as necessary.
Responsible for meeting quarterly
Review any import/export applications from non-contiguous counties.

Act as the Site Review Committee, if new construction or expansion applications are submitted.
Responsible for working with the Designated Planning Agency on compost and recycling site guidelines for existing and future sites.
Responsible for monitoring performance of planning activities.
Responsible for making recommendations to the Board of Commissioners regarding annual expenditures of surcharge funds.
Responsible for projecting surcharge revenue

Saginaw County Planning Department (DPA)
Responsible for notifying proper officials for siting applications, flow control applications, etc.
Responsible for administrative duties that plan and ordinance entails.
Responsible for promoting commercial recycling and educational programs geared towards small and medium commercial sector via private marketing firm.
Responsible for monitoring performance of new or expanded resource recovery efforts to determine success of Plan implementation.

IDENTIFICATION OF RESPONSIBLE PARTIES

Document which entities within the County will have management responsibilities over the following areas of the Plan. (*Private sector means Business or Industry)

Resource Conservation:

Source or Waste Reduction - Designated Planning Agency and SASWMA or other local applicant - education
*Private Sector - implementation

Product Reuse - Designated Planning Agency and SASWMA or other local applicant - education
*Private Sector - implementation

Reduced Material Volume - Designated Planning Agency and SASWMA or other local applicant- education
*Private Sector - implementation and monitoring

Increased Product Lifetime - *Private Sector

Decreased Consumption - Designated Planning Agency and SASWMA or other local applicant- education
Households - implementation

Resource Recovery Programs:

Composting - SASWMA or other local applicant and Coop Extension- education
SASWMA, City of Saginaw, private citizens and Haulers - implementation

Recycling - Designated Planning Agency and SASWMA or other local applicant - education
SASWMA and haulers - implementation

Energy Production - Landfills

Volume Reduction Techniques: Private sector, Landfills, Haulers

Collection Processes: Haulers

SELECTED SYSTEM

Transportation: Haulers - implementation
Road Commission, Sheriff and local police force - enforcement

Disposal Areas:

Processing Plants - Private solid waste industry - build and operate
County Department of Public Health - enforcement

Incineration - N/A

Transfer Stations - N/A

Sanitary Landfills - Private Solid Waste Industry - build and operate
County Department of Public Health and MDEQ - enforcement

Ultimate Disposal Area Uses: For current sites - Private landfill operators and townships via host agreements
For former sites - Current landowners or responsible parties (Saginaw City, Buena Vista Twp., Saginaw Twp., General Motors, others)
MDEQ- enforcement agency

Local Responsibility for Plan Update Monitoring & Enforcement: Saginaw County Board of Commissioners, Designated Planning Agency, Solid Waste Solid Waste Planning Committee, County Department of Public Health, Mi. Department of Environmental Quality
County Sheriff Department, County Road Commission - Haul routes

Educational and Informational Programs: Designated Planning Agency and SASWMA or other local applicant

Documentation of acceptance of responsibilities is contained in Appendix D.

SELECTED SYSTEM

LOCAL ORDINANCES AND REGULATIONS AFFECTING SOLID WASTE DISPOSAL

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

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

N/A

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

A. Geographic area/Unit of government: Saginaw County Government

Type of disposal area affected: All

Ordinance or other legal basis: Solid Waste Management Ordinance (Saginaw County Ordinance #108, as amended 10/17/95)*

Requirement/restriction: Must be in compliance with all applicable provisions within the rules of Act 451 or court decision on pending lawsuit (*a copy of ordinance is not attached because it is the subject of litigation and will be amended to reflect findings when completed).

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

Regulations meeting these qualifications may be adopted and implemented by the appropriate governmental unit without additional authorization from, or formal amendment to, the Solid Waste Management Plan, within the rules of Act 451. Allowable areas of local regulation include:

1. Certain ancillary construction details, such as landscaping and screening
2. Hours of operation
3. Noise, litter, odor, and dust control
4. Operating records and reports
5. Facility security
6. Monitoring of wastes accepted and prohibited
7. Composting and recycling

☐ Additional listings are on attached pages.

SELECTED SYSTEM

CAPACITY CERTIFICATIONS

Every County with less than ten years of capacity identified in their Plan is required to annually prepare and submit to the DEQ an analysis and certification of solid waste disposal capacity validly available to the County. This certification is required to be prepared and approved by the County Board of Commissioners.

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

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

Saginaw County generates 296,091 TPY of solid waste needing landfill disposal. This results in a ten year disposal requirement of 2,960,910 Tons.

Saginaw County has contracts with the owners of the following landfills: Saginaw Valley, Taymouth, Peoples Garbage Disposal, Whitefeather, Venice Park and Brent Run. The following list identifies current available capacity in these landfills as identified in the facility descriptions provided by each one.

Available capacity per facility descriptions

Landfill	Available capacity (tons)
Saginaw Valley	0
Brent Run	10,247,000
Peoples	2,305,062
Whitefeather	1,816,310
Taymouth	1,400,000
Venice Park	869,565
	16,637,937 tons of capacity

Thus capacity which is currently available in the landfills whose owners have contracts with Saginaw County is well in excess of the landfill capacity which will is needed by Saginaw County.