



JOHN ENGLER  
GOVERNOR

STATE OF MICHIGAN  
DEPARTMENT OF ENVIRONMENTAL QUALITY  
LANSING



RUSSELL J. HARDING  
DIRECTOR

August 22, 2002

Mr. James E. Rice, Chairperson  
Jackson County Board of Commissioners  
120 West Michigan Avenue  
Jackson, Michigan 49201

Dear Mr. Rice:

The Department of Environmental Quality (DEQ) received the locally approved update to the Jackson County Solid Waste Management Plan (Plan) on March 7, 2001. Except for the items indicated below, the Plan is approvable. As outlined in the July 3, 2001 letter to you from Ms. Lynn Dumroese, DEQ, Waste Management Division (WMD), and as confirmed in your letters dated May 22, 2002, June 6, 2002, and July 2, 2002, the DEQ makes the following modifications to the Plan:

On page III-22, the second paragraph states, "facilities requiring an Act 641 permit or license shall be consistent with the siting criteria contained in this plan." This sentence contradicts the language on page III-34 which states, "Type II and type III landfills, transfer stations and processing plants other than incinerators may be sited by this plan." The Jackson County's (County's) intent was to site only those facilities as identified on page III-34. In order to alleviate any discrepancy, the sentence on page III-22 shall be changed to read, "facilities requiring an Act 451 permit or license shall be sited according to the siting criteria contained in this Plan."

On page III-35, the fourth bulleted item states that if areas mapped as wetlands on the overlay maps are found on site or within 300 feet of the site, the Jackson County Board of Public Works (Board of Public Works) may require the proposal's sponsor to obtain a wetlands determination to confirm no wetlands are located within the boundaries of the proposed disposal area. Section 11538(3) of Part 115, Solid Waste Management, of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended (Act 451), requires that a siting mechanism not be subject to discretionary acts on behalf of the local planning entity and that the procedure will guarantee a decision. The word "may" is a discretionary term and could be interpreted as not requiring all applicants to obtain a wetlands determination. In order to make this statement objective, the word "may" is replaced with the word "shall."

On page III-35, the siting process allows the Board of Public Works 45 days to review the request for a determination of consistency at a public meeting and further allows 30 days for an adjournment of the review meeting. The Board of Public Works is then required to report their determination of consistency to the County Board of Commissioners (BOC) within seven days after the review meeting. There is no default

mechanism established if the Board of Public Works does not report their determination of consistency to the BOC within this 82-day time period. The lack of a default mechanism for the Board of Public Works to make a determination on consistency leaves the procedure without any assurance that a decision will be made in a timely fashion. Therefore, a sentence shall be added to the second paragraph on page III-35 that states, "If the County Board of Public Works has not made their determination of consistency within 82 days of receipt of the application, the proposal shall be considered consistent with the Plan and forwarded to the BOC for their determination of consistency."

On page III-35, the siting process allows the BOC 45 days, after receiving the Board of Public Works' recommendation, to review the proposal and determine if it is consistent with the Plan. For the reasons mentioned above, a default mechanism should be established if the BOC does not make their determination of consistency within 45 days. Therefore, the following sentence is added to the third paragraph on page III-35, "If the BOC does not make their determination of consistency within 45 days of receiving the County Board of Public Works' recommendation, the proposal shall be considered consistent with the Plan."

On page III-37, the first paragraph states an expansion of the resource recovery facility beyond its current 200 tons per day (tpd) capacity to a maximum 300 tpd shall be considered consistent with this Plan. This information shall be moved to the Authorized Disposal Area Types section on page III-34.

On page III-37, the fifth paragraph states, "The following location criteria must also be met before a new disposal area shall be considered consistent with the plan." The term "also" is confusing because no siting criteria have been previously identified in the Plan. The siting criteria begin on page III-37; therefore, the term "also" is deleted from this paragraph.

As previously mentioned, section 11538(3) of Part 115 requires that a siting mechanism not be subject to discretionary acts by the local planning entity and that the procedure will guarantee a decision. As presented in the Plan, the Overlay Maps, prepared by the Region 2 Planning Commission, at a scale of 1"=4,000', do not provide a clear definition for the siting criteria. The maps are a beneficial tool for identifying general areas that are well suited for disposal areas; however, they should be referenced for informational purposes only. Using the maps while continuing to have the criteria objective and measurable would involve modifying the Overlay Maps to a scale of at least 1"=500' so the isolation distances referred to as part of the siting criteria are clearly defined and measurable. A current map of this scale does not exist and additional costs would be required in order to modify the Overlay Maps; therefore, in order to make the criteria objective and measurable, the following modifications shall be made.

On page III-37, item number 1 states, "The landfill shall not be located in a wetland as identified on Overlay Map IX. (Map 3-1)." For the reasons mentioned above, item number 1 is changed to read, "A facility shall not be located in a wetland regulated by Part 303, Wetlands Protection, of Act 451 unless a permit is issued." This modification shall also be made to criterion number 1 on pages III-38, III-39, and III-40.

On page III-37, item number 2 states, "The landfill shall not be located in a developed area as identified on Overlay Map VIII. (Map 3-2)." Overlay Map 3-2 does not clearly indicate which areas are developed areas, and this map does not provide a legend that indicates the shaded areas are the developed areas. In order to make this criterion objective and measurable, this criterion is changed to state, "Facilities may be located on property zoned as agricultural, industrial, or commercial. Facilities may also be located on un-zoned property but may not be located on property zoned residential." This modification shall also be made to criterion number 2 on pages III-38, III-39, and III-40.

On page III-37, item number 3 states, "The landfill shall not be located within the boundaries of the natural and scenic areas mapped on Overlay VI. (Map 3-3)." The terms "natural and scenic areas" are not clearly identified on Map 3-3; therefore, this criterion is deleted from the Plan. This modification shall also be made to criterion number 3 on page III-38.

On page III-37, item number 4 states, "The landfill shall not be located closer than 100 feet to the Norvell Mill Pond, ..., Ford Dam of the Michigan Center Lake Impoundment. Overlay Map VI. (Map 3-1)." These bodies of water are not identified on Map 3-1. By your letter dated May 22, 2002, the County has provided the town, section, and range locations to be included in the Plan in order to specifically identify each body of water. The town, section, and range locations shall also be used for criterion number 4 on page III-38 and criterion number 3 on pages III-39 and III-40.

On page III-38, the first criterion number 5 states, "The landfill shall not be located within 10,000 feet of a licensed public use airport, as identified on Overlay VII. (Map 3-6)." This criterion is objective and measurable without referring to the Overlay Map. In order to alleviate any discrepancy, the phrase "as identified on Overlay VII. (Map 3-6)." is deleted from this criterion.

On page III-38, criterion number 6 states, "The landfill shall not be located closer than 300 feet to any County or State Park, State Recreation Area, State Game Area or the Dahlem Environmental Center. Overlay Map VI (Map 3-3)." The Dahlem Environmental Center is not specifically identified on Map 3-3. The May 22, 2002 letter from you provides the town, section, and range location to be included in the Plan in order to specifically identify the Dahlem Environmental Center. The town, range, and section location shall also be used for criterion number 5 on page III-38.

On page III-38, item number 9 states, "The landfill shall not be located in a 100-year floodplain." In order to identify where the term "100-year floodplain" is defined, this criterion is changed to state, "The landfill shall not be located in a 100-year floodplain as defined by Rule 323.311 of the administrative rules of Part 31, Water Resources Protection, of Act 451." This modification shall also be made to criterion number 8 on page III-39, criterion number 5 on page III-39, and criterion number 5 on page III-40.

On page III-38, criterion number 11 states, "The landfill shall not be located in an area with significant sensitive surface formations as identified on Overlay Map V. (Map 3-4)." It is unclear, based on the information in Map 3-4, as to what a "significant sensitive surface formation" is. Therefore, this criterion is deleted from the Plan. This modification shall also be made to criterion number 10 on page III-39.

On page III-38, criterion number 12 states, "The landfill shall not be located in areas of groundwater recharge as identified on Overlay Map IV. (Map 3-5)." The Plan should be clarified to give objective certainty to this criterion by indicating that this definition will be based on the most recently available map from the United States Geological Survey, which delineates groundwater recharge areas. The first sentence is revised to read, "The landfill shall not be located in an area of groundwater recharge as defined by the most current available map from the United States Geological Survey or in a wellhead protection area, as defined by the Michigan Department of Environmental Quality." This modification shall also be made to criterion number 11 on page III-39 and to each criterion number 6, which appears twice on page III-40.

On page III-40, item number 7 under the criteria for new processing plants other than incinerators states, "The processing plant shall not be located closer than three (300) feet to any residence existing at the time the construction permit is issued." The County intended to establish a three hundred (300)-foot isolation distance; therefore, the term "three" is replaced with the term "three hundred." This modification shall also be made to criterion number 7 for new transfer facilities.

On pages III-40 through III-42, the Plan outlines an appeal process if a proposal is found to be inconsistent with the Plan based upon the information contained in the Overlay Maps. This process allows an applicant to submit more recent or more detailed information than what is shown in the Overlay Maps. The Overlay Maps will no longer be used as part of the siting criteria, but rather for informational purposes; therefore, the appeal process is no longer necessary. Further, this process allows other documents to be submitted that may contradict the information in the Overlay Maps. Allowing the use of other documents to determine consistency during the appeal process leaves room for discretionary decision making on behalf of the County. Therefore, the appeal process shall be deleted from the Plan.

On page III-46, Ordinance No. 6 regarding flow control has not been included in the list of local ordinances and regulations affecting solid waste. A copy of the ordinance has

been included in section D of the Attachments Section; therefore, it shall be added on page III-46.

Your May 22, 2002 letter also requested the approval of two additional modifications. The first modification involves replacing the existing language in item number 9 on page III-39 with the paragraph below. The proposed language is approvable; therefore, the following paragraph replaces the existing language:

The active work area at the facility shall not be located closer than one hundred (100) feet to adjacent property lines or road rights-of-way or closer than three hundred (300) feet to domiciles that exist at the time an advisory analysis is requested. In addition, the approval of an isolation distance that is less than two hundred (200) feet to adjacent property lines or road rights-of-way requires the existence of a berm which is not less than eight (8) feet high, which has a four-foot fence on top, and which is constructed around the perimeter of the active work area or the existence of natural screening that offers equivalent protection.

The second modification is to include a revised facility description and site map for the McGill Road Landfill. Your letter dated July 2, 2002, clarifies that the County has requested the inclusion of the revised information for the McGill Road Landfill because the future landfill development area located east of the permitted active Type II landfill, in accordance with the facility description and site map, should be included in the Plan. This letter further clarifies the County will not require the future development area to be sited according to the siting mechanism.

Finally, a clarification is needed in regard to the volume limits discussed in Attachment C of the County's agreement with Philip Environmental; however, this clarification does not require a modification to the Plan. This clarification is needed because volume limits are identified in the agreement, but are not addressed in the import/export authorizations of the Plan. The County's intent was to include volume limits, which exist as part of the agreement, for informational purposes only but not to include volume limits as part of the Plan. Therefore, this clarification makes clear that volume limits have not been established in the Plan and any changes to the Plan's authorization can only be done through a properly promulgated Plan amendment.

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

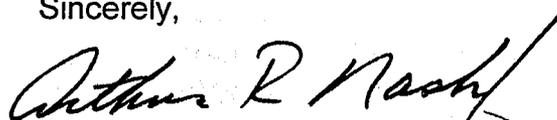
Mr. James E. Rice  
Page 6  
August 22, 2002

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 DEQ approval of the Plan neither restricts nor expands County authority to implement these enforceable mechanisms.

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

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

Sincerely,



Russell J. Harding  
Director *ACTING*  
517-373-7917

cc: Senator Philip E. Hoffman  
Representative Clark Bisbee  
Representative Mickey Mortimer  
Mr. Arthur R. Nash Jr., Deputy Director, DEQ  
Mr. Thomas M. Hickson, Legislative Liaison, DEQ  
Mr. Jim Sygo, DEQ  
Ms. Joan Peck, DEQ  
Mr. Jon Russell, DEQ – Jackson  
Ms. Rhonda Oyer Zimmerman, DEQ  
Ms. Lynn Dumroese, DEQ  
Jackson County File

**JACKSON COUNTY  
BOARD OF COMMISSIONERS**

James E. Rice  
Chair

Clifford Herl  
Vice-Chair

Jackson County Tower Building  
120 W. Michigan Avenue  
Jackson, Michigan 49201  
Phone (517) 788-4336  
FAX (517) 780-4755

July 2, 2002

Commissioners  
Gary D. Adams  
Floyd J. Baum  
Kenneth Beardslee  
Todd N. Brittain  
John R. Day  
Betty Jo DeForest  
David K. Elwell  
Robert J. Lacinski  
Gail Mahoney-Sherrod  
Robert L. McNitt  
Walter Pascal  
Judy M. Reynolds  
James E. Shotwell, Jr.

Ms. Lynn Dumroese  
Solid Waste Management Unit  
Waste Management Division  
Dept. of Environmental Quality  
P.O. Box 30473  
Lansing, MI 48909-7973

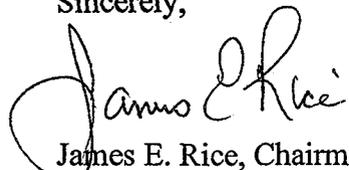
Dear Ms. Dumroese:

This letter is to provide clarification regarding Jackson County's request to revise the facility description for the McGill Road Landfill, as contained in the Jackson County Solid Waste Management Plan. The revised facility description was transmitted with our letter to you dated May 22, 2002, for inclusion with the final approval of the plan.

It is Jackson County's intent to include the future landfill development area located to the immediate east of the permitted active Type II landfill area at McGill Road, in accordance with the revised facility description and accompanying site plan. Should a request for a determination of consistency be submitted to Jackson County for this parcel, it is the County's intent to find the proposal consistent with the Jackson County Solid Waste Management Plan.

We appreciate your review of our request for the inclusion of the updated facility description and map in the final Solid Waste Management Plan and your request for clarification in this matter. Should you have any questions, please do not hesitate to call.

Sincerely,



James E. Rice, Chairman  
Board of Commissioners

WASTE MANAGEMENT DIVISION

JUL 08 2002

**JACKSON COUNTY  
BOARD OF COMMISSIONERS**

James E. Rice  
Chair

Clifford Herl  
Vice-Chair

Jackson County Tower Building  
120 W. Michigan Avenue  
Jackson, Michigan 49201  
Phone (517) 788-4336  
FAX (517) 780-4755

June 6, 2002

Commissioners

Gary D. Adams  
Floyd J. Baum  
Kenneth Beardslee  
Todd N. Brittain  
John R. Day  
Betty Jo DeForest  
David K. Elwell  
Robert J. Lacinski  
Gail Mahoney-Sherrod  
Robert L. McNitt  
Walter Pascal  
Judy M. Reynolds  
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Ms. Lynn Dumroese  
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Waste Management Division  
Dept. of Environmental Quality  
P.O. Box 30473  
Lansing, MI 48909-7973

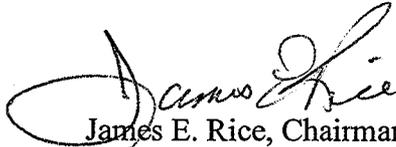
Dear Ms. Dumroese:

This letter is to clarify action taken by the Jackson County Board of Commissioners regarding changes to the Jackson County Solid Waste Management Plan. The Board of Commissioners in its meeting of May 21, 2002 reviewed and recommended changes to the County Solid Waste Management Plan. As noted in our letter of May 22, 2002 the board concurred with your recommended changes as contained in your letter of July 3, 2001, and with the understandings as described in the May 22 letter.

You have requested clarification regarding the County's policy concerning land fill placement in "developed areas" as described on Page III-37, Item #2 of the Jackson County Solid Waste Management Plan. Though not described in our letter of May 22, 2002, it is the intent of Jackson County that the criteria in regarding developed areas should read, "Facilities may be located on properties zoned as agricultural, industrial or commercial. Facilities may be also located on unzoned property, but may not be located on property zoned residential." This same language is intended to apply to Item #2 on Page(s) III-38, III-39, and III-40.

We trust this clarifies Jackson County's position regarding the placement of landfills in "developed areas". Should you have any question, please do not hesitate to call.

Sincerely,

  
James E. Rice, Chairman  
Board of Commissioners



MAY 23 2002

## **JACKSON COUNTY BOARD OF COMMISSIONERS**

James E. Rice  
Chair

Clifford Herl  
Vice-Chair

Jackson County Tower Building  
120 W. Michigan Avenue  
Jackson, Michigan 49201  
Phone (517) 788-4336  
FAX (517) 780-4755  
May 22, 2002

Commissioners  
Gary D. Adams  
Floyd J. Baum  
Kenneth Beardslee  
Todd N. Brittain  
John R. Day  
Betty Jo DeForest  
David K. Elwell  
Robert J. Lacinski  
Gail Mahoney-Sherrod  
Robert L. McNitt  
Walter Pascal  
Judy M. Reynolds  
James E. Shotwell, Jr.

Ms. Lynn Dumroese  
Solid Waste Management Unit  
Waste Management Division  
Dept. of Environmental Quality  
P.O. Box 30473  
Lansing, MI 48909-7973

Dear Ms. Dumroese:

In response to your letter dated July 3, 2001, the Jackson County Board of Commissioners respectfully requests Michigan Department of Environmental Quality (MDEQ) approval of the Jackson County Solid Waste Management Plan with the modifications recommended in your letter.

The Jackson County Board of Commissioners met in regular session on May 21, 2002 and reviewed the recommended changes to the Jackson County Solid Waste Management Plan. The Board of Commissioners concurred with your recommended changes. In approving the changes recommended by MDEQ, all of the recommendations contained within your July 3, 2001 letter were approved, with the following understanding:

1. Reference to Page(s) III - 37 #3 and III - 38 #3 Natural and Scenic Areas. The Board of Commissioners agrees the criterion should be deleted from the Plan.
2. Reference to Page(s) III - 37 #4, III - 39 #3, and III - 40 #3, bodies of water. Specific town, section, and range locations are as follows:

|                   |                  |               |
|-------------------|------------------|---------------|
| Norvell Mill Pond | Sections 3 & 4   | T.4S. - R.2E. |
| Horton Mill Pond  | Section 3        | T.4S. - R.2W. |
| Concord Mill Pond | Sections 26 & 27 | T.3S. - R.3W. |
| Minard Mill Pond  | Section 33       | T.1S. - R.2W. |
| Putney Mill Pond  | Sections 28 & 29 | T.4S. - R.1W. |
| Leoni Mill Pond   | Section 36       | T.2S. - R.1E. |
|                   | Section 1        | T.1S. - R.2W. |
| Tompkins Pond     | Section 21       | T.1S. - R.2E. |
| Ford Dam          | Section 19       | T.4S. - R.2E. |

3. Reference to Page(s) III - 39 #6, and III - 38 #5. The Dahlem Environmental Center is located at Sections 33 & 34, T.3S. -R.1W.
4. Reference to Page (s) III - 38 #11, and III - 39 #10. The Board of Commissioners agrees the criterion should be deleted from the Plan.

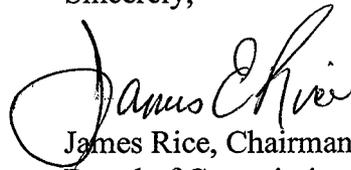
The Board of Commissioners also approved two other slight modifications to the Plan, and hereby requests MDEQ approval of these changes. First, the Board of Commissioners approved a slight revision to landfill setback standards (See Page III - 39, #9), consistent with the Part 115 Administrative Rules as follows:

“The active work area at the facility shall not be located closer than one hundred (100) feet to adjacent property lines or road rights-of-way or closer than three hundred (300) feet to domiciles that exist at the time an advisory analysis is requested. In addition, the approval of an isolation distance that is less than two hundred (200) feet adjacent property lines or road rights-of-way requires the existence of a berm which is not less than eight (8) feet high, which has a four-foot fence on top, and which is constructed around the perimeter of the active work area or the existence of natural screening that offers equivalent protection.”

Second, the Board of Commissioners approved a revised “Facility Description” for the McGill Road Landfill. This revision, Page III - 11 of the Plan, is included as an attachment to this letter.

Thank you for your consideration. We look forward to approval of the Jackson County Solid Waste Plan so that we may continue our efforts for comprehensive, convenient, and cost effective waste reduction and resource recovery efforts.

Sincerely,

  
James Rice, Chairman  
Board of Commissioners

SELECTED SYSTEM

FACILITY DESCRIPTIONS

Facility Type: Type II Landfill

Facility Name: McGill Rd. Landfill

County: Jackson Location: Town: 2S Range: 1W&1E Section(s): 24&19

Map identifying location included in Attachment Section:  Yes  No

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

Public  Private Owner: Waste Management, Inc.

Operating Status (check)

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

Waste Types Received (check all that apply)

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

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

Site Size:

Total area of facility property: 134.1 acres  
 Total area sited for use: 41.8 acres  
 Total area permitted: 15.1 acres  
 Operating: 15.1 acres  
 Not excavated: 20.3 acres

Current capacity: 2,393,000  tons or  yds<sup>3</sup>  
 Estimated lifetime: 17 years  
 Estimated days open per year: 310 days  
 Estimated yearly disposal volume: 115,000  tons or  yds<sup>3</sup>

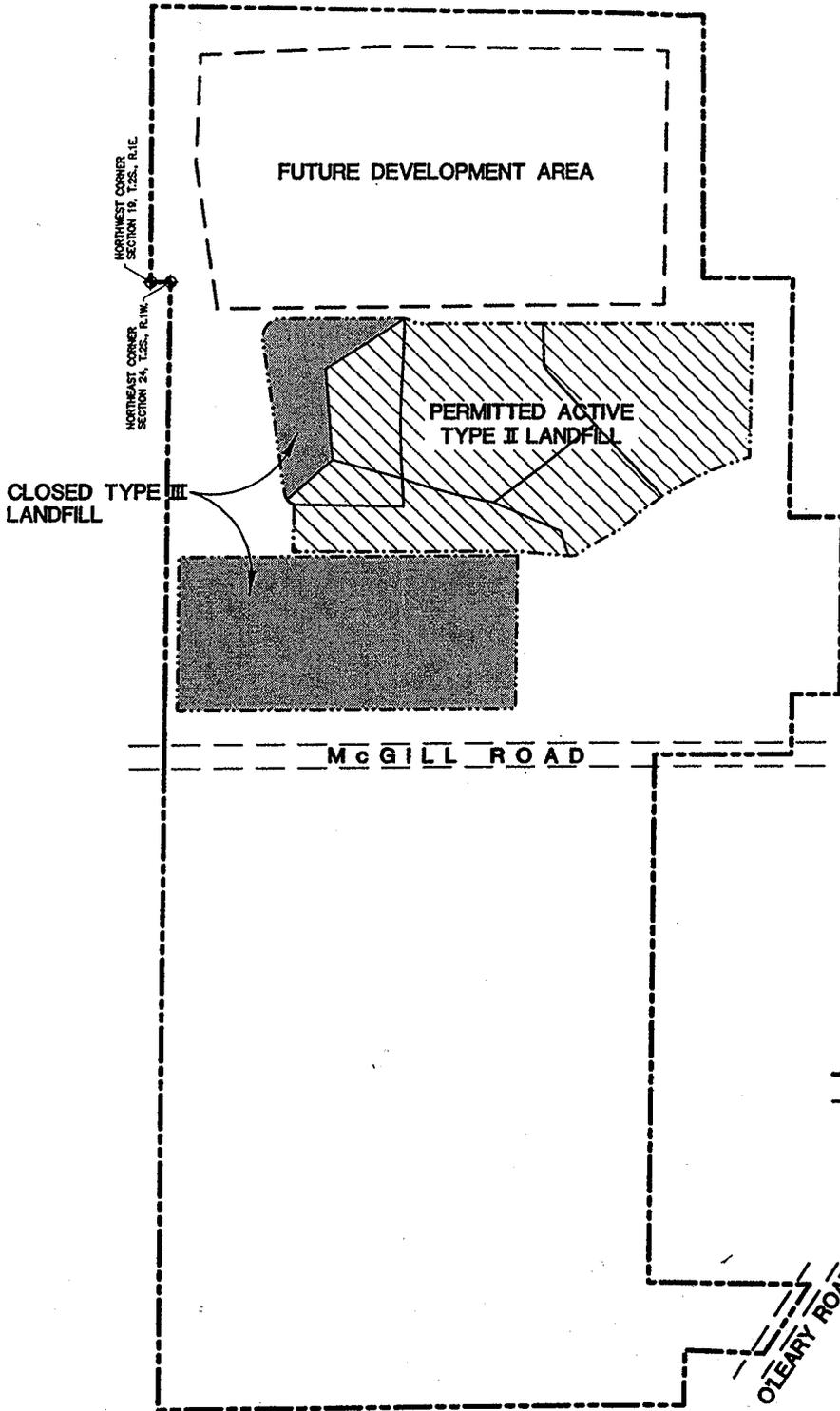
(if applicable)

Annual energy production:  
 Landfill gas recovery projects: \_\_\_\_\_ megawatts  
 Waste-to-energy incinerators: \_\_\_\_\_ megawatts

# TYPE II LANDFILL - MCGILL ROAD

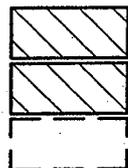


## MCGILL ROAD LANDFILL



### LEGEND

- PROPERTY LINE
- - - - - CELL OUTLINE



|   |               |
|---|---------------|
| TOTAL AREA OF FACILITY PROPERTY         | + 134.1 ACRES |
| TOTAL AREA PERMITTED                    | + 15.1 ACRES  |
| OPERATING AREA                          | + 15.1 ACRES  |
| NOT EXCAVATED (FUTURE DEVELOPMENT AREA) | + 20.3 ACRES  |

DATE: 04/26/02  
 DWG NAME: 7868ATTA 4-2002.DWG  
 JOB NO: 7868.04  
 SCALE: 1"=500'



# Region 2 Planning Commission

Jackson County Tower Building  
120 West Michigan Avenue  
Jackson, Michigan 49201

WASTE MANAGEMENT DIVISION

MAR 07 2001

RECEIVED

Fax: 517-788-4635

517-788-4426

Email: Region2@dmci.net

March 1, 2001

Solid Waste Management Unit  
Solid Waste Program Section  
Waste Management Division  
Department of Environmental Quality  
P.O. Box 30241  
Lansing, MI 48909

To Whom It May Concern:

Here is a copy of the *Jackson County Solid Waste Management Plan 1998 Update*. It has been adopted by the Jackson County Board of Commissioners and approved by 78% of the local units of government. It should be noted that no community voted to not approve it.

If there any questions about the plan, please feel free to contact me.

Sincerely,

Deborah L. Kuehn  
Principal Planner

Enc.

# **Solid Waste Management Plan**

**Jackson County, Michigan**

## **1998 UPDATE**

*Released for Public Comment*  
**March 17, 1999**

*Public Hearing Held by the*  
**Jackson County Solid Waste Management Planning Committee**  
**May 20, 1999**

*Recommended for Approval by the*  
**Jackson County Solid Waste Management Planning Committee**  
**September 15, 1999**

*Recommended for Approval by the*  
**Jackson County Board of Public Works**  
**May 22, 2000**

*Approved by the*  
**Jackson County Board of Commissioners**  
**June 20, 2000**

**1998 PLAN UPDATE COVER PAGE**

**Part 115, Solid Waste Management, of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended (NREPA), 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 update. 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.**

Not applicable.

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

| <u>Municipality</u> | <u>Original Planning County</u> | <u>New Planning County</u> |
|---------------------|---------------------------------|----------------------------|
|---------------------|---------------------------------|----------------------------|

Not applicable

**DESIGNATED PLANNING AGENCY PREPARING THIS PLAN UPDATE:**

Region 2 Planning Commission  
120 W. Michigan Avenue  
Jackson, Michigan 49201

**CONTACT PERSON:** Deborah L. Kuehn, Principal Planner

**ADDRESS:** Region 2 Planning Commission  
120 W. Michigan Avenue  
Jackson, MI 49201

**PHONE:** (517) 768-6711 **FAX:** (517) 788-4635

**EMAIL:** dkuehn@region2planning.com

**CENTRAL REPOSITORY LOCATION(S):** 1. Jackson County Administrator's Office, 120 W. Michigan, Jackson, MI 49201 2. Region 2 Planning Commission, 120 W. Michigan Avenue, Jackson, Michigan 49201.

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## EXECUTIVE SUMMARY

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

This 5-year update to the Jackson County Solid Waste Management Plan has been prepared pursuant to Part 115 of Public Act 451 of 1994, also known as the Natural Resources Protection Act. In preparing this plan update, goals and objectives were established to serve as an overall policy framework against which a plan for solid waste management could be developed. The goals include: protecting the public health, protecting natural resources from contamination, conserving and recovering resources, educating the public about solid waste issues and achieving an on-going solid waste planning, evaluation and management process.

As part of the plan update process, information was collected and analyzed on population and land development; environmental conditions; the waste stream; components of the solid waste management system including waste disposal, processing, collection, transportation, source reduction, resource recovery and ultimate disposal area uses; and the current institutional arrangements for the solid waste management system; for the purpose of developing and evaluating solid waste management alternatives.

The following is a summary of information determined to be relevant to the development of solid waste management alternatives for Jackson County:

1. The quantity of waste in Jackson County is not expected to change significantly over the next ten years.
2. The centers of waste generation are not expected to change significantly in the next ten years.
3. Waste hauling in Jackson County is controlled by the private sector. Residential waste collection is provided for almost exclusively through individual contracts between private sector haulers and county residents.
4. Waste disposal in Jackson County is controlled by county government which owns and operates a resource recovery facility at which solid waste is incinerated to produce steam and electrical energy.
5. The Type II landfill is privately owned. Jackson County maintains a contract with the owners to dispose of waste not disposed of through the Resource Recovery Facility.

6. The citizens of Jackson County indicated their support both for reduced dependence on landfills and for the use of incineration as a waste disposal option when they voted to put their full faith and credit behind the sale of general obligation bonds sold to finance construction of the Resource Recovery Facility.
7. The ash from the Resource Recovery Facility has been approved for disposal in a Type II landfill.
8. In 1994, the McGill Rd. landfill was approved by the Jackson County Board of Commissioners to develop a total of 41.8 acres with a capacity of 3,708,900 cubic yards of airspace. With a current rate of 183,170 cubic yards per year, the McGill Rd. landfill has another 15 years of approved capacity. Jackson County has a contract with the owners of the McGill Rd Landfill that obligates the owners to dispose of all excess solid waste and incinerator ash until 2014.
9. Recycling will increase the efficiency of incinerator operations. Noncombustible materials, like glass and scrap metal may interfere with "good burning", increase the volume of ash produced which must be landfilled and increase the amount of maintenance required. Diverting this material from the waste stream prior to incineration can lead to decreased maintenance costs.
10. The greatest potential for expanding recycling and composting opportunities in Jackson County lies with the education of the citizens and their understanding of the recycling process, and with the expansion of private waste haulers recycling centers.
11. The movement of waste between counties must be recognized in the plan of both the importing and exporting county. The Jackson County Board of Commissioners may enter into agreements with other counties for regular or contingency disposal subject to the criteria outlined in this plan.
12. All Type II waste imported into Jackson County for disposal on either a regular or contingency basis shall be subject to the provisions of the county flow control ordinance.
13. The RRF is operating at capacity. The cost of expanding the facility is prohibitive.

## OVERALL VIEW OF THE COUNTY

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| Township or<br>Municipality Name   | Population <sup>1</sup> | % Land Use <sup>2</sup> |       | % of Economic Base <sup>3</sup> |          |           |           |             |
|--|-------------------------|-------------------------|-------|---------------------------------|----------|-----------|-----------|-------------|
|  |                         | Rural                   | Urban | Ag                              | For      | Ind       | Com       | Oth         |
| City of Jackson  | 36,037                  | 0                       | 100   | -                               | -        | -         | -         | -           |
| All Villages<br>(Brooklyn, Concord,<br>Grass Lake,<br>Hanover, Parma,<br>and Springport) | 4,719                   | 20                      | 80    | -                               | -        | -         | -         | -           |
| Urban Townships<br>(Blackman, Leoni,<br>Napoleon, Spring<br>Arbor, and Summit)           | 64,398                  | 25                      | 75    | -                               | -        | -         | -         | -           |
| Rural Townships  | 50,009                  | 100                     | 0     | -                               | -        | -         | -         | -           |
| <b>Jackson County</b>  | <b>155,163</b>          | -                       | -     | <b>.2</b>                       | <b>0</b> | <b>34</b> | <b>19</b> | <b>46.8</b> |

1 Region 2 Planning Commission 1997 estimate based on estimate prepared by the Michigan Department of Management and Budget, 1996.

2 Region 2 Planning Commission, various land use surveys, 1973-1997.

3 U.S. Census, 1990.

## **EXECUTIVE SUMMARY**

### **CONCLUSIONS**

As part of the plan update, three solid waste management alternatives were investigated. Alternative #1 is to continue the present system, with an increased emphasis on recycling. Alternative #2 is to close the Resource Recovery Facility and landfill all of the waste generated within the county at the McGill Rd. landfill and increase the emphasis on recycling. Alternative #3 is to close the Resource Recovery Facility and the landfill and to transfer all solid waste outside of the county, while increasing the emphasis on recycling.

After considering these alternative waste management systems, Alternative #1 (the current system) was determined to be the most practicable. In addition, Jackson County will encourage increased recycling in order to increase the life of the McGill Rd. landfill.

### **SELECTED ALTERNATIVES**

The management system selected by this plan and the recommended strategies for implementation are summarized below:

1. The solid waste management system selected is one in which incineration for energy continues as the primary means of waste disposal with increased emphasis placed on source reduction, recycling and composting. The goal of this alternative is to use the Resource Recovery Facility to its full capacity and to reduce the use of Type II landfills to residues from the incinerator and other special wastes from which resources cannot be recovered through either incineration for energy, recycling or composting.
2. The selected alternative calls for continued availability of collection of source separated materials for recycling or composting as a means of increasing the volume of residential waste recovered prior to landfilling.
3. Private sector waste haulers are encouraged to include recycling and composting in the package of waste management options available to their customers.
4. Three disposal areas have been identified as specific sites which will be used to implement the selected alternative. They are: the Jackson County Resource Recovery Facility (RRF), the McGill Rd. landfill and Liberty Environmentalists landfill.
5. The Jackson County Board of Commissioners shall have ultimate responsibility for ensuring that adequate waste disposal areas are provided in a timely manner to meet the county's waste disposal needs and for determining whether a proposal to establish a new disposal area is consistent with the Jackson County Solid Waste Management Plan.

6. Environmentally sensitive or other restricted locations are established in the plan using the solid waste sensitivity overlay maps prepared by the solid waste advisory committee. These locations shall be avoided before a proposed disposal area shall be considered consistent with this plan.
7. Type III landfills and transfer stations may be sited at any time according to the criteria and procedures provided in the plan.
8. The County Board of Commissioners may enter into agreements with other counties for contingency disposal of solid waste subject to the criteria outlined in this plan.
9. All Type II waste imported into the county for disposal on either a regular or contingency basis shall be subject to the provisions of the Jackson County Flow Control Ordinance.
10. The plan recommends that each local unit of government determine which alternatives for the management of waste collection are best for it.
11. The plan recommends that the waste collection industry remain involved in material recovery as they have the opportunity to use avoided tipping fees to cover the cost associated with operating a recycling or composting program.
12. The Resource Recovery Facility operators are encouraged to support implementation of material recovery especially where it has the potential to reduce ash toxicity or improve air emissions. The other entities currently offering recycling and composting as waste management options will be encouraged to continue and expand.
13. The County Board of Commissioners or its agents shall be responsible for collecting all information needed to ensure implementation of this plan.

## 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 resources 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: Provide protection for the public health, safety, and welfare of the citizens of the County as it relates to the management of solid waste.

Objective 1.a To insure that all operating solid waste disposal areas comply with adopted laws and regulations for proper solid waste management.

Objective 1.b To insure that existing, licensed solid waste disposal facilities are sufficient to meet the County's waste disposal needs for the ten-year period immediately following adoption of this plan.

Objective 1. c To insure that there is a contingency plan for meeting the County's waste disposal needs in emergency situations.

Goal 2: Protect the County's natural resources from pollution and contamination that could result from improper or mismanaged waste disposal.

Objective 2.a To insure that proper disposal methods are being used in accordance with current regulations.

Objective 2.b To insure that ground and surface waters are not being contaminated from solid waste management practices.

Objective 2.c To minimize the use of landfills as a waste disposal option and to enforce existing regulations which prohibit the disposal of waste on land in regulated facilities, as a means of protecting the County's land resources.

Objective 2.d To insure compliance of operating facilities with air quality regulations minimizing the impact on neighboring uses of airborne particulate matter and odors associated with waste disposal practices.

Goal 3: To maximize the use of natural and man-made resources through conservation and recovery.

Objective 3.a To promote resource recovery systems where feasible.

Objective 3.b To assist both the private and public sector in instituting composting and recycling programs where feasible.

Goal 4: Use public education to promote a better understanding of solid waste management planning.

Objective 4.a To inform the public about existing solid waste management system and any proposed changes in the system.

Objective 4.b To develop support for solid waste management education and the value of recycling.

Goal 5: Maintain an efficient and environmentally sound waste collection system with adequate public facilities.

Objective 5.a To encourage local regulatory agencies and local units of government to consider the impact of ordinances (noise, etc.) On the overall cost-effective operation of the solid waste management business.

Goal 6: Achieve an on-going solid waste planning, evaluation and management process.

Objective 6.a To monitor on an annual basis indicators of successful plan implementation, including excising landfill capacity and volume of waste diverted from the waste stream due to recycling and composting.

Objective 6.b To update the solid waste management plan every five years.

Objective 6.c To monitor State and Federal legislation affecting solid waste management.

## DATA BASE

### Identification of sources of waste generation within the county, total quantity of solid waste generated to be disposed, and sources of information.

The following table estimates waste generation rates in Jackson County for the years 1997, 2002 and 2007.

| Waste Type              | Current Annual Volume, Tons (1997) | Five-Year Annual Volume, Tons (2002) | Ten-Year Annual Volume, Tons (2007) |
|-------------------------|------------------------------------|--------------------------------------|-------------------------------------|
| Municipal Solid Waste   | 107,764 tons                       | 110,255 tons                         | 111,555 tons                        |
| Industrial Solid Waste  | 316 tons                           | 325 tons                             | 335 tons                            |
| Incinerator ash         | 15,767 tons                        | 15,767 tons                          | 15,767 tons                         |
| Municipal sludge        | 5,260 tons                         | 5,313 tons                           | 5,366 tons                          |
| Construction demolition | 73,280 tons                        | 74,028 tons                          | 74,901 tons                         |

1. Current annual volumes were reported by the RRF, McGill Road Landfill, Liberty Environmental, Recycling Jackson and as results from a survey of local haulers.
2. Total MSW projections were made by calculating the ratio of county population (1996 are the most current estimates) to actual annual volume in 1996. The result is that in 1996, Jackson County generated 3.8 lbs. of MSW per person, per day. (According to the Solid Waste Association of North America (SWANA), the typical rate is 3.5 lbs./capita/day.) The 3.8 lbs./capita/day factor is multiplied by the 1997 population projections for Jackson County.
3. Industrial solid waste volumes were projected to change in relation to the number of industrial employees. The Michigan Employment and Security Commission projects the number of industrial employees in Jackson County to increase 6.5% between 1994 and 2005. This equals about .6% each year or 3% for five years. Therefore, industrial solid waste is projected to increase 3% between 1997 and 2002, and 3% between 2002 and 2007.
4. Construction demolition was projected to increase with the population at the rate of .47 tons/capita/year.
5. Municipal sludge for 1997 came from the City of Jackson Wastewater Treatment Plant and was projected to increase at the rate of the county's population increase.
6. Incinerator ash will remain constant because the RRF is working at capacity.

**TOTAL QUANTITY OF SOLID WASTE GENERATED - 189,921 tons in 2002**

**TOTAL QUANTITY OF SOLID WASTE NEEDING DISPOSAL - 145,881 tons in 2002.** \*

\* The RRF uses 59,807 tons of solid waste per year. That amount is subtracted from the total annual tonnage (110,255) and replaced with the total ash tonnage (15,767) to calculate the total quantity of solid waste needing disposal

Overall, the county does not anticipate major problems associated with managing the solid waste generated within its borders. Because the projected population increases are low, increases in the future volumes of waste generated within the county are also expected to be low and manageable within the current system.

In 1997, it is estimated that the county generated 142,580 tons of solid waste. The RRF annually incinerates an average of 59,800 tons of the solid waste generated in Jackson County. This incineration generates 15,760 tons of ash that is disposed of in the McGill Rd. landfill. The McGill Rd. landfill also disposes of the remaining municipal solid waste that exceeds the capacity of the RRF (23,610 tons in 1997) and the industrial solid waste and municipal sludge (316 tons and 5,260 tons respectively in 1997) for a total of 44,946 tons.

Of the 142,580 tons of solid waste generated annually in the county, 73,280 tons are estimated to be construction and demolition materials. Liberty Environmentalists disposes of 55,000 tons per year and has a constructed lifespan of 20 years. The McGill Rd. landfill disposes of the rest of the construction and demolition materials (18,280 tons in 1997.) The remaining 24,354 tons of waste is estimated to be yard waste and recycled materials.

Based on these calculations, the McGill Rd. landfill disposes of 63,226 tons of solid waste per year. The landfill space needed for 63,226 tons of solid waste is calculated based on the requirement of 1 cubic yard of space for every 1,000 lbs of waste.<sup>1</sup> This yields an annual requirement for 126,452 cubic yards of landfill space. In 1998, the owners of the McGill Rd. landfill estimated a remaining constructed capacity for 740,000 cubic yards, leaving 5.8 years of constructed space available. In addition, there is another 3 years of permitted, but not constructed, capacity.

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<sup>1</sup> P. 87, Jackson County Solid Waste Management Plan - 1988.

## **DATA BASE**

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

The solid waste disposal areas within Jackson County are the Jackson County Resource Recovery Facility, the USA Waste landfill on McGill Road, the Liberty Environmentalist Landfill, the Rives Township transfer station and the Henrietta Township transfer station.

#### **Jackson County Facilities**

##### **Jackson County Resource Recovery Facility**

The Jackson County Recovery Facility (RRF) was designed as a two hundred (200) ton per day, mass-burn waste to energy power plant. The plant has a seven-year average operating history of 59,807 tons per year. The RRF was constructed beginning in 1985 and began operations in late 1987. Since late 1989, the facility has been operated by Professional Services Group, Inc. The RRF serves as the primary means for the disposal of municipal solid waste in Jackson County conserving landfill space by reducing the volume of the residues to be landfilled by approximately ninety (90) percent. At the same time, the RRF recovers the energy from the refuse, thereby conserving natural energy resources, while operating in compliance with all applicable environmental regulations.

##### **McGill Road Landfill**

The McGill Road Landfill is a Type II facility with an approved capacity of 41.8 acres and a constructed capacity of 18.7 acres, on a 50.5-acre site. In 1997, it handled a volume of 63,226 tons.

##### **Liberty Environmentalist Landfill**

Liberty Environmental Landfill is a Type III landfill in Liberty Township with an estimated lifetime of 20 years. In 1997, the landfill received a volume of 55,000 tons of material from Jackson County.

##### **Rives Township Transfer Station**

The Rives Township Transfer Station operates on Saturdays between 9:00 a.m. and 2:00 p.m., with four roll-off containers. The waste is disposed of at the Jackson County Resource Recovery Facility.

##### **Henrietta Township Transfer Station**

The Henrietta Township Transfer Station operates on Saturdays between 9:00 a.m. and 3 p.m., roll-off containers. The waste is disposed of at the Jackson County Resource Recovery Facility.

**Facility Description Inventory Sheets Follow**

**DATA BASE**

FACILITY DESCRIPTIONS

Facility Type: Waste-to Energy Incinerator

Facility Name: Jackson County Resource Recovery Facility

County: Jackson Location: Town: 2S Range: Section(s): 14

Map identifying location included in Attachment Section:  Yes  No

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

Public  Private Owner: Jackson County

Operating Status

open  
 closed  
 licensed  
 construction permit  
 open, but closure  
 pending

Waste Types Received

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

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

Site Size:

Total area of facility property: \_\_\_\_\_ acres  
Total area site for use: \_\_\_\_\_ acres  
Total area permitted: \_\_\_\_\_ acres  
Operating: \_\_\_\_\_ acres  
Not excavated: \_\_\_\_\_ acres

Current capacity: (designed) 200 tons per day  
Estimated lifetime: 20 years  
Estimated days open per year: 365 days  
Estimated yearly disposal volume: 59,807 tons (per 7 year average)

(if applicable)

Annual energy production:  
Landfill gas recovery projects: \_\_\_\_\_ megawatts  
Waste-to-energy incinerators: 15,138 megawatts

FACILITY DESCRIPTIONS

Facility Type: Type III landfill

Facility Name: Liberty Environmentalists Landfill

County: Jackson Location: Town: 4S Range: 1W Section(s): 13

Map identifying location included in Attachment Section: X Yes        No

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

       Public X Private Owner: Liberty Environmentalists, Inc.

Operating Status

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

Waste Types Received

- X residential
- X commercial
- X industrial
- X construction and demolition
- contaminated soils
- X special wastes\*
- other:

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

Site Size:

Total area of facility property: 285 acres  
 Total area site for use: 65 acres  
 Total area permitted: 15 acres  
 Operating: 7.5 acres  
 Not excavated: 40 acres

Current capacity: 133,333 tons  
 Estimated lifetime: 20 years  
 Estimated days open per year: 300 days  
 Estimated yearly disposal volume: 55,000 tons

(if applicable)

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

FACILITY DESCRIPTIONS

Facility Type: Transfer Station

Facility Name: Rives Township Transfer Station

County: Jackson Location: State and Berry Rd. Town: 1S Range: 1W Section(s): 16

Map identifying location included in Attachment Section:  Yes  No

If facility is an incinerator or a transfer station, list the final disposal site and location for incinerator ash or transfer station wastes: Jackson County Resource Recovery Facility/ McGill Rd. Landfill.

Public  Private

Owner: Rives Township

Operating Status

open  
 closed  
 licensed  
 construction permit  
 open, but closure  
 pending

Waste Types Received

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

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

Site Size:

Total area of facility property: .5 acres  
Total area site for use: .5 acres  
Total area permitted: \_\_\_\_\_ acres  
Operating: \_\_\_\_\_ acres  
Not excavated: \_\_\_\_\_ acres

Current capacity: \_\_\_\_\_ tons or cubic yards  
Estimated lifetime: \_\_\_\_\_ years  
Estimated days open per year: 52 days  
Estimated yearly disposal volume: 511 tons

(if applicable)

Annual energy production:  
Landfill gas recovery projects: \_\_\_\_\_ megawatts  
Waste-to-energy incinerators: \_\_\_\_\_ megawatts

FACILITY DESCRIPTIONS

Facility Type: Transfer Station

Facility Name: Henrietta Township Transfer Station

County: Jackson Location: Bunker Hill Rd. Town: Range: Section(s):

Map identifying location included in Attachment Section:  X  Yes   No

If facility is an incinerator or a transfer station, list the final disposal site and location for incinerator ash or transfer station wastes: Jackson County Resource Recovery Facility/ McGill Rd. landfill.

X  Public   Private Owner: Henrietta Township

Operating Status

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

Waste Types Received

- X  residential
- commercial
- industrial
- construction and demolition
- contaminated soils
- special wastes\*
- other:

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

Site Size:

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

Current capacity:   cubic yards  
 Estimated lifetime:   years  
 Estimated days open per year:  52  days  
 Estimated yearly disposal volume:  690  tons

(if applicable)

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

FACILITY DESCRIPTIONS

Facility Type: Type II landfill

Facility Name: McGill Rd. Landfill

County: Jackson Location: Town: 2S Range: 1W Section(s): 24

Map identifying location included in Attachment Section:  X  Yes   No

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

Public  X  Private Owner: Waste Management, Inc

Operating Status

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

Waste Types Received

X  residential  
 X  commercial  
 X  industrial  
 X  construction and demolition  
 X  contaminated soils  
 X  special wastes\*  
  other:

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

Site Size:

Total area of facility property:  50.5  acres  
Total area site for use:  41.8  acres  
Total area permitted:  18.7  acres  
Operating:  7.8  acres  
Not excavated:  17.51  acres

Current capacity:  1,236,300  tons  
Estimated lifetime:  15  years  
Estimated days open per year:  310  days  
Estimated yearly disposal volume:  63,226  tons

(if applicable)

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

## 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.

#### Collection

There are no governmentally operated municipal collection systems in Jackson County. All of the haulers are private operators. Three villages (Concord, Cement City, and Parma) and the Lake Columbia Association (Columbia Township) contract with private haulers to provide residential service.

Below is a list of the collection services/licensed haulers within Jackson County. The list is intended to be all-inclusive but it may not be completely representative as hauling business are started or stopped. The services are provided county-wide. There are no service area limitations.

|                                     |                          |
|-------------------------------------|--------------------------|
| Action Fast Hauling                 | Lawrence Johnson         |
| American Hauling & Home Improvement | Lester Brothers          |
| Anderson Disposal                   | Liberty Environmentalist |
| Bernard Brown                       | Losee Carter             |
| Bill Barr, Inc.                     | Matthews Refuse          |
| Brad's Hauling                      | M & M Hauling            |
| Browning Ferris Industries          | Mess Refuse              |
| Bulldog Refuse                      | Michigan Center Garbage  |
| Charles Buckner                     | Midwest Refuse           |
| Charles Davis                       | MKA Trust                |
| Cut Rate Garbage                    | Modern Waste Systems     |
| David Finch                         | Northwest                |
|                                     | Red, White, and Blue     |
| Discount Refuse                     |                          |
| Emmons Residential Service          | RW Mercer                |
| Freemon Martin                      | T. Surgener              |
| Great Lake Waste                    | Sam's Iron & Metal       |
| Huco, Inc.                          | Senior Citizen's Refuse  |
| JDAK, Inc.                          | U-Call We Haul           |
| Jeff Hines                          | USA Waste                |
| J's Hauling                         | Walt's Hauling           |
| Kurpinski Sanitation                | William Padget           |
| Laidlaw Waste Systems               | Woodard                  |

## Transportation

The major routes used to transport refuse from the collection areas to the disposal sites are state highways and county primary roads. Road weight restrictions, especially when frost laws in effect, can have a significant impact on the movement of solid waste because these are generally high density loads. Weight limitations are set by the state of Michigan in the Motor Vehicle Traffic Code. There are two enforcement agencies: the Jackson County Road Commission, through the designated weigh master, and the Michigan Public Service Commission.

There are no locally imposed width limitations on these highways other than all vehicles greater than 8 feet, 6 inches, must obtain a permit from the County Road Commission for an oversized load.

## DATA BASE

### EVALUATION OF DEFICIENCIES AND PROBLEMS

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

*Costs and capacity of the Resource Recovery Facility.* The Resource Recovery Facility (RRF) is working at 90% capacity and cannot be increased without expanding the facility. However, the costs for expanding the RRF are prohibitive. Additionally, costs associated with the RRF, make Jackson County's tipping fee the highest in the state and one of the highest in the midwest. However, RRF meets the state's goal of using waste-to-energy technologies, and the Board of County Commissioners supports the continued operation of the RRF.

*Flow control uncertainty.* Jackson County depends on local haulers honoring the county's flow control ordinance as a guarantee of revenues for the RRF. The DEQ advises that "solid waste management plans (can) continue to restrict the disposal of solid waste generated in one Michigan county from disposal in another Michigan county unless such disposal is 'explicitly authorized' in the approved solid waste management plans of both the generating and disposing counties." However, litigation continues on whether or not counties can control the flow of solid waste. If the law is changed and the county cannot control the flow through the plan or through local ordinances, some other method of guaranteeing waste to the RRF will have to be enacted. Any such method will have to be a part of the solid waste plan.

*Landfill Capacity.* The owners of the McGill Road Landfill have a contract with Jackson County to provide disposal for up to 94,304 tons per year of the excess Type II waste and ash from the Jackson County Resource Recovery Facility. The term of the contract is for twenty (20) years or until April 12, 2014. The landfill currently has a constructed capacity of five (5) years and a permitted capacity for at least an additional three (3) years.

*Limited recycling opportunities and lack of local government support.* A positive result of the county's high tipping fees is that voluntary, unsubsidized recycling is encouraged. However, the rate of recycling is only 6% of the waste stream. This is below the state's goal of recycling 20% of the waste stream. The DEQ is encouraging an "increased emphasis in these plan updates on waste reduction, pollution prevention, recycling composting and related education activities. Increased emphasis on these issues will also reduce a county's disposal needs and will reduce the likelihood of a county falling below the 66 month trigger for mandatory disposal area siting.

*Illegal dumping.* Dumping on back roads is still a problem. More community clean-up days could help. There is also a problem with commercial haulers collecting fees from customers, but dumping on back roads. Residents should be aware that their haulers have to be licensed by the county. Tires are a disposal problem. Residents should be encouraged to leave their old tires with the store that sells the new tires.

## 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.

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#### *Current and Projected Population*

Jackson County's population is projected to increase by 5% between 1990 and 2000. Increases of 1.5% are projected between 2000 and 2005 and, 1% between 2005 and 2010. (See below.)

| <u>Year</u> | <u>Population</u>   |
|-------------|---------------------|
| 1990        | 149,756 (actual)    |
| 1995        | 154,121 (estimate)  |
| 2000        | 156,727 (projected) |
| 2005        | 158,675 (projected) |
| 2010        | 160,398 (projected) |

The projections and estimates were made by the Michigan Department of Management and budget, 1996. The 1990 actual figure is from the U.S. Census.

For purposes of the plan, estimates and projection were also made for 1997, 2002, and 2007.

|      |                     |
|------|---------------------|
| 1997 | 155,163 (estimate)  |
| 2002 | 157,507 (projected) |
| 2007 | 159,365 (projected) |

#### *Current and Projected Population Density and Centers*

In 1990, Jackson County had a population density of 212 persons per square mile. Estimates for 1997 show a density of 219 persons per square mile, with small increases projected for 2002 (222 persons per square mile) and 2007 (225 persons per square mile.)

As the only city in Jackson County, the city of Jackson currently has and is expected to maintain the greatest density and the largest population in the county. In 1990, that was 3,404 persons per square mile.

*Current and Projected Centers of Solid Waste Generation*

The location of centers of waste generation can be related to the density of development. Areas which contain concentrations of residential, commercial, or industrial uses are also areas which generate concentrations of waste. In general, the density of development is greatest in the City of Jackson, decreasing outward through the urban and rural townships. Other concentrated pockets of development exist in the outlying villages and in clustered lake developments. Factors which influence the pattern of development in Jackson County are the location of transportation facilities such as I-94, US-127, M-60, M-106, and M-50; the predominance of development; and the lack of central sewer and water services in much of the county.

## DATA BASE

### LAND DEVELOPMENT

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

The land development pattern of Jackson County is characterized by a large urban area, with the City of Jackson at the core and the townships of Blackman, Leoni, Napoleon, Spring Arbor, and Summit comprising the surrounding urban fringe area; small urban settlements located in an around both incorporated and unincorporated villages; lake development clusters; and dispersed rural development along county roads. For the purpose of this plan, Jackson County is divided into four subregions: the City of Jackson; the surrounding urban townships, including Blackman, Leoni, Napoleon, Spring Arbor, and Summit; the remaining rural townships; and the incorporated villages.

Residential development found throughout the county. Over the past two decades, the percentage of the county's population residing in the urbanized area has declined while there has been significant growth in the rural areas, especially in the lake communities. Although population growth is expected to be limited over the next ten years, the replacement of the older housing stock and the formation of new households can be expected to create some demand for new residential development.

Residential development is most dense in the City of Jackson, 7.8 d.u./res. acre (dwelling units per acre of residential land use), where residential land uses are characterized by older, established neighborhoods built on a grid street pattern.

Net residential density is much lower in the urban townships, 2.0 d.u./res. acre. The pattern of residential development in the urban townships may be characterized as sporadic. Residential development there has occurred in subdivisions whose placement is controlled by one or more of the following factors: the location of transportation corridors, the availability of central sewer and water, and the predominance of wetlands in certain sections of the county which prohibits development. A significant amount of residential development in the urban townships has also occurred on scattered sites along county roads.

The density of residential development in rural townships is even lower, 1.3 d.u./res. acre. Generally, residential development in the rural townships has occurred on scattered individual lots along county roads. Most residential subdivisions found in the rural townships are located in close proximity to incorporated and unincorporated villages, and around lakes in the eastern and southeastern areas of the county (see Map 4.2).

The villages have an average residential density of 2.5 d.u./res. acre. This is higher than the urban townships' but lower than the City of Jackson's. Generally, the villages may be described as compact residential communities built on a grid street pattern, with most development located along a major thoroughfare which traverses the villages.

Most of the acreage developed for commercial land use is located in the county's urban center. It is concentrated in the central business district, in shopping centers located near the periphery of

the City of Jackson, and in strip development along the major thoroughfares. Outside the urban area, the most intense commercial development is in the villages and lake areas.

Industrial land uses are focused in the City of Jackson, and in the surrounding, urbanized townships. Businesses and industries outside of the urbanized area are generally within the county's six villages. According to the Jackson County Overall Economic Development Program, future industrial development is likely to occur along the I-94 and M-50/US-127 corridors.

## DATA BASE

### SOLID WASTE MANAGEMENT ALTERNATIVES

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

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### **SOLID WASTE MANAGEMENT ALTERNATIVES AND EVALUATION**

#### **Description of the Alternatives**

Three alternatives are considered for solid waste management in Jackson County. They are built upon the disposal system selected in the current plan and have the most realistic chance of implementation. They are: 1) Maintain the existing system, with a greater emphasis on recycling; 2) Landfill all of the county's waste within the county, with an emphasis on recycling; 3) Transfer all waste out of the county, with an emphasis on recycling.

All of the alternatives include the following features:

- (1) Private haulers will be used for collection.
- (2) There will be a greater emphasis on recycling.
- (3) The county will continue to contract with the owners of the McGill Rd. landfill to dispose of Type II waste and ash that is not disposed of through the RRF.

#### **Alternative #1      Maintain the Existing System, with a Greater Emphasis on Recycling.**

Alternative #1 calls for the retention of the existing system with efforts intended to reduce waste generation, increase recycling and composting, encourage conservation, and improve the environment. The existing system includes the Jackson County Resource Recovery Facility as the dominant means of disposal for MSW.

The Resource Recovery Facility and the McGill Rd. landfill are operated as a combined system. Fees for the disposal of MSW are collected at the RRF regardless of whether the waste is disposed of at the RRF or at the landfill. This is necessary to ensure a steady flow of waste to the incinerator and to equitably distribute the costs of constructing and operating the incinerator over all of the generators of Type II waste.

The previous solid waste management plan noted that if the amount of waste generated in Jackson County does not increase, it is likely that additional waste will have to be imported into the County to fuel additional capacity developed at the incinerator. This has not been necessary.

The 1996 Solid Waste Task Force recommendations include the continued use of the RRF. The report states:

*Jackson County residents have consistently supported a self-sufficient policy of solid waste management and are against importation. The RRF was built because it provided the best use of municipal solid waste; reducing landfill quantities while recycling solid waste into electric and steam energy. The preferred hierarchy of Municipal Solid Waste management is: source reduction, reuse, recycling, incineration (with energy recovery) and landfilling (with gas recovery.)*

On July 22, 1997, the Jackson County Board of Commissioners voted to continue to operate the RRF.

Waste reduction/pollution prevention The existing system promotes waste reduction because of the relatively high costs of waste disposal. Items such as corrugated boxes used in shipping, are diverted from the waste stream in greater numbers than since before the development of the RRF. Pollution prevention has increased with the diversion of items such as car batteries.

Resource Conservation State and national incentives are still needed to reduce resource use per product, especially in the area of packaging. Packaging materials still constitute a large portion of the waste by volume in most waste disposal systems. At the county level, consumer education offers the greatest potential for increasing the volume of waste diverted from the system, through source reduction. Education can be used to increase consumer awareness of solid waste problems to source reduction will be considered when making purchasing decisions.

Collection process and transportation The predominate collection process currently used (and expected to be used in each of the alternatives) is the individual contract with a private hauler. There are no governmentally- operated municipal collection systems in Jackson County. There are government contracts with private haulers to provide collection for all of the locals residents in three villages (Concord, Cement City and Parma) and the Lake Columbia Association (Columbia Township.) All of the equipment and collection containers are handled privately.

There are also transfer stations located in Henrietta and Rives townships. The townships have agreements with local haulers to collect the waste and deliver it to the RRF.

Ultimate disposal area uses. Ultimate disposal area uses include recreational or open space use. Because of compaction, settling and decomposition, non-structural uses are preferred over agricultural and light structural uses. However, any use that adequately addresses the potential problems caused by waste decomposition, as determined by compliance with all applicable state and federal regulations, and which is consistent with local zoning ordinances, is a potential alternative.

Institutional arrangements. Through the establishment of Ordinance 6, all MSW generated in Jackson County must be disposed of in the county through the RRF. Currently, Jackson County has a contract with the owners of the McGill Rd. landfill to dispose of all waste not incinerated for energy at the RRF. This contract is in effect until 2014. Included in this contract is a provision for five recycle drop-off depots. Currently, some of the private haulers contract with their customers to provide recycling collection.

Resource recovery

The Resource Recovery Facility produces steam and electricity for the state prison complex.

Volume reduction. Volume reduction is accomplished through incineration and through existing recycling and composting programs. The ash and other materials that cannot be burned are disposed in the McGill Road Landfill.

Sanitary landfill. The landfill fills cells.

Recycling and composting programs. Recycling Jackson, a nonprofit organization, sponsors monthly recycling drives and provides the community with many education opportunities. Recycling and composting services are also provided by the private waste haulers. Curbside collection of source-separated materials for recycling and composting is encouraged. Jackson County will support these services by allocating funds to promote recycling within the county.

**Alternative #2**      **Landfill all of the county's waste within the county, with an emphasis on recycling.**

Alternative #2 assumes that the Resource Recovery Facility (RRF) is closed and that all of the county's solid waste is landfilled. It would require demonstration that the McGill Rd. landfill has the capacity to handle all of the waste for the next ten years. Currently, the landfill has a planned capacity of 10 years and a constructed capacity of 5 years. These capacities assume the continuation of the RRF. Without the RRF, the landfill would take in roughly 3 times the waste it now takes (assuming everything else remains the same.) This means that the planned capacity of the landfill would be reduced to 2.6 years.

Siting for landfill expansion would follow the process and criteria described in this plan.

Waste reduction, pollution prevention. See Alternative #1

Resource conservation. See Alternative #1

Collection processes and transportation. See Alternative #1

Ultimate disposal area uses. See Alternative #1

Institutional arrangements. The flow control ordinance or an alternate financing method would be necessary to guarantee the owners of the McGill Rd. landfill a minimum amount of waste to be landfilled, according to the county's contract. Also included in this contract is a provision for five recycle drop-off depots. Currently, some of the private haulers contract with their customers to provide recycling collection.

Resource recovery. There is no energy production with this alternative.

Volume reduction. There is no volume reduction through incineration.

Sanitary landfill. See Alternative #1.

Recycling and composting programs. See Alternative #1

**Alternative #3**      **Transfer all of the waste out of the county, with an emphasis on recycling.**

Alternative #3 is the closure of all disposal facilities within the county (RRF and landfill), and requires all waste generated in the county to be exported. For the purposes of the plan, this would require the identification of counties and facilities to which the waste will be exported. The actual agreements do not have to be included in the plan, but the receiving counties have to be identified.

It is assumed that transfer stations would have to be established at the McGill Rd. landfill site to facilitate the movement of solid waste out of the county.

The process and criteria for siting any transfer station is described in this plan.

Waste reduction, pollution prevention. See Alternative #1

Resource conservation. See Alternative #1

Collection processes and transportation. See Alternative #1

Ultimate disposal area uses. See Alternative #1

Institutional arrangements. The flow control ordinance would no longer be necessary since its purpose was to guarantee waste for the RRF. However, Jackson County's contract with the owners of the McGill Rd. landfill requires the county to maintain flow control.

Resource recovery. There is no energy production with this alternative.

Volume reduction. There is volume reduction through incineration with this alternative.

Sanitary landfill. There is no landfill for Type II waste within the county.

Recycling and composting programs. See Alternative #1

### **Evaluation of Alternatives**

Each of the alternatives was evaluated according to the following criteria:

- Technical feasibility for five- and ten-year periods - Can the alternative be implemented using presently available technology?**

- Economic feasibility for five- and ten-year periods** - How much will it cost to implement the alternative? Is this cost greater than the financial capability of existing public or private entities?
- Access to land and transportation networks for five- and ten-year periods** - Does the alternative require the acquisition of land to develop new facilities? Would the facilities be efficiently located? Are there existing all-season roads in proximity to the facilities?
- Energy consumption/production** - Is the alternative energy efficient for transportation and operation? Will energy be produced as part of the disposal process? Is so, would income cover costs of energy recovery?
- Environmental impacts** - What impacts would result from the implementation of the alternative? Would these result from the continuation of an existing facility or the construction of a new one? Would implementation result in long term environmental impacts associated with the operation and maintenance of solid waste facilities?
- Public health effects** - Would implementation of the alternative create, continue or mitigate public health hazards associated with improper handling or disposal of solid waste?
- Public acceptability** - Is the proposed alternative likely to be acceptable to local residents? Is the alternative likely to be politically acceptable to local municipalities? Would the alternative comply with applicable state laws, particularly Act 451?

The members of the solid waste planning committee considered each of the alternatives against each of these criteria and ranked them as *good, fair or poor*.

| <b>Evaluation Criterion</b>                                  | <b>Alternative #1</b> | <b>Alternative #2</b> | <b>Alternative #3</b> |
|--|-----------------------|-----------------------|-----------------------|
| Technical feasibility for 5- and 10-year periods             | good                  | good                  | good                  |
| Economic feasibility for 5- and 10-year periods              | good                  | poor                  | poor                  |
| Access to land and transportation for 5- and 10-year periods | good                  | fair                  | good                  |
| Effects on energy consumption/production                     | good                  | fair                  | poor                  |
| Environmental impacts  | good                  | fair                  | good                  |
| Public health effects  | good                  | fair                  | good                  |
| Public acceptability   | good                  | poor                  | good                  |

Alternative #1 is the selected solid waste management system for Jackson County.

## **SELECTED SYSTEM**

### **THE SELECTED SOLID WASTE**

### **MANAGEMENT SYSTEM**

**The Selected Solid Waste Management System (Selected System) is a comprehensive approach to managing Jackson County's solid waste and recoverable materials. The Selected System addresses the generation, transfer and disposal of Jackson County's solid waste. It aims to reduce the amount of solid waste sent for final disposal by volume reduction techniques and by various resource conservation and resource recovery programs. It also addresses collection processes and transportation needs that provide the most cost effective, efficient service. Proposed disposal area 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 solid waste management system is one in which incinerator for energy continues as the primary means of solid waste disposal with increased emphasis placed on source reduction, recycling and composting (Alternative #1). Private haulers are used to transport solid waste and deliver it to the Jackson County Resource Recovery Facility. Waste that cannot be processed through the RRF is transferred, to the privately-owned McGill Rd. landfill. Within the time frame of the plan, the McGill Rd landfill will either expand or a transfer station will be developed on the site. Waste delivered to the transfer station will be disposed of outside of the county by the owners of the landfill. Jackson County's flow control ordinance will remain in effect, requiring all waste to be delivered to a county-designated location (currently the RRF) at which the employees of the county may designate either the RRF or the landfill, or a future transfer station, as the location for the disposal.

When the RRF is down, all waste which would normally be processed at the facility, including waste imported from other counties, may be disposed of in any Type II landfill serving Jackson County's waste disposal needs. However, waste shall not be imported into Jackson County expressly for the purpose of landfilling.

**SELECTED SYSTEM**

**IMPORT AUTHORIZATION**

If a licensed solid waste disposal area is currently operating within the county, disposal of solid waste generated by the following **EXPORTING COUNTIES** are authorized by Jackson 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\***

| <b>IMPORTING COUNTY</b> | <b>EXPORTING COUNTY</b> | <b>FACILITY NAME</b> | <b>AUTHORIZED QUANTITY/DAILY</b> | <b>AUTHORIZED QUANTITY/ANNUAL</b> | <b>AUTHORIZED CONDITIONS</b> |
|-------------------------|-------------------------|----------------------|----------------------------------|-----------------------------------|------------------------------|
| Jackson                 | Allegan                 |                      |                                  |                                   |                              |
| Jackson                 | Barry                   |                      |                                  |                                   |                              |
| Jackson                 | Berrien                 |                      |                                  |                                   |                              |
| Jackson                 | Calhoun                 |                      |                                  |                                   |                              |
| Jackson                 | Cass                    |                      |                                  |                                   |                              |
| Jackson                 | Clinton                 |                      |                                  |                                   |                              |
| Jackson                 | Eaton                   |                      |                                  |                                   |                              |
| Jackson                 | Genessee                |                      |                                  |                                   |                              |
| Jackson                 | Gratiot                 |                      |                                  |                                   |                              |
| Jackson                 | Hillsdale               |                      |                                  |                                   |                              |
| Jackson                 | Ingham                  |                      |                                  |                                   |                              |
| Jackson                 | Ionia                   |                      |                                  |                                   |                              |

n/a - not applicable

\* Requires a formal agreement approved by the Jackson County Board of Commissioners.

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

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

Table 1 (cont'd)

**CURRENT IMPORT VOLUME AUTHORIZATION OF SOLID WASTE\***

| <b>IMPORTING COUNTY</b> | <b>EXPORTING COUNTY</b> | <b>FACILITY NAME</b> | <b>AUTHORIZED QUANTITY/DAILY</b> | <b>AUTHORIZED QUANTITY/ANNUAL</b> | <b>AUTHORIZED CONDITIONS</b> |
|-------------------------|-------------------------|----------------------|----------------------------------|-----------------------------------|------------------------------|
| Jackson                 | Kalamazoo               |                      |                                  |                                   |                              |
| Jackson                 | Lenawee                 |                      |                                  |                                   |                              |
| Jackson                 | Livingston              |                      |                                  |                                   |                              |
| Jackson                 | Macomb                  |                      |                                  |                                   |                              |
| Jackson                 | Monroe                  |                      |                                  |                                   |                              |
| Jackson                 | Montcalm                |                      |                                  |                                   |                              |
| Jackson                 | Muskegon                |                      |                                  |                                   |                              |
| Jackson                 | Newaygo                 |                      |                                  |                                   |                              |
| Jackson                 | Oakland                 |                      |                                  |                                   |                              |
| Jackson                 | St. Clair               |                      |                                  |                                   |                              |
| Jackson                 | St. Joseph              |                      |                                  |                                   |                              |
| Jackson                 | Sanilac                 |                      |                                  |                                   |                              |
| Jackson                 | Shiawassee              |                      |                                  |                                   |                              |
| Jackson                 | VanBuren                |                      |                                  |                                   |                              |
| Jackson                 | Washtenaw               |                      |                                  |                                   |                              |
| Jackson                 | Wayne                   |                      |                                  |                                   |                              |

n/a - not applicable

\* Requires a formal agreement approved by the Jackson County Board of Commissioners.

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

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

**SELECTED SYSTEM**

**If a new solid waste disposal area is constructed and operating in the future in the county, then disposal of solid waste generated by the exporting county is authorized by the importing county up to the authorized quantity according to the authorized conditions in Table 1-B.**

**Table 1-B**

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

| <b>EXPORTING COUNTY</b> | <b>IMPORTING COUNTY</b> | <b>FACILITY NAME</b> | <b>AUTHORIZED<br/>QUANTITY/DAILY</b> | <b>AUTHORIZED<br/>QUANTITY/ANNUAL</b> | <b>AUTHORIZED<br/>CONDITIONS</b> |
|-------------------------|-------------------------|----------------------|--------------------------------------|---------------------------------------|----------------------------------|
|-------------------------|-------------------------|----------------------|--------------------------------------|---------------------------------------|----------------------------------|

n/a - not applicable

\* Requires a formal agreement approved by the Jackson County Board of Commissioners.

**SELECTED SYSTEM**

**EXPORT AUTHORIZATION**

If a licensed solid waste disposal area is currently operating with 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\***

| <b>EXPORTING COUNTY</b> | <b>IMPORTING COUNTY</b> | <b>FACILITY NAME</b> | <b>AUTHORIZED QUANTITY/DAILY</b> | <b>AUTHORIZED QUANTITY/ANNUAL</b> | <b>AUTHORIZED CONDITIONS</b> |
|-------------------------|-------------------------|----------------------|----------------------------------|-----------------------------------|------------------------------|
| Jackson                 | Allegan                 |                      |                                  |                                   |                              |
| Jackson                 | Barry                   |                      |                                  |                                   |                              |
| Jackson                 | Berrien                 |                      |                                  |                                   |                              |
| Jackson                 | Calhoun                 |                      |                                  |                                   |                              |
| Jackson                 | Cass                    |                      |                                  |                                   |                              |
| Jackson                 | Clinton                 |                      |                                  |                                   |                              |
| Jackson                 | Eaton                   |                      |                                  |                                   |                              |
| Jackson                 | Genessee                |                      |                                  |                                   |                              |
| Jackson                 | Gratiot                 |                      |                                  |                                   |                              |
| Jackson                 | Hillsdale               |                      |                                  |                                   |                              |
| Jackson                 | Ingham                  |                      |                                  |                                   |                              |
| Jackson                 | Ionia                   |                      |                                  |                                   |                              |

n/a - not applicable

\*Requires a formal agreement approved by the Jackson County Board of Commissioners.

Table 2-A (cont'd)

CURRENT EXPORT VOLUME AUTHORIZATION OF SOLID WASTE\*

| EXPORTING COUNTY | IMPORTING COUNTY | FACILITY NAME | AUTHORIZED QUANTITY/DAILY | AUTHORIZED QUANTITY/ANNUAL | AUTHORIZED CONDITIONS |
|------------------|------------------|---------------|---------------------------|----------------------------|-----------------------|
| Jackson          | Kalamazoo        |               |                           |                            |                       |
| Jackson          | Lenawee          |               |                           |                            |                       |
| Jackson          | Livingston       |               |                           |                            |                       |
| Jackson          | Macomb           |               |                           |                            |                       |
| Jackson          | Monroe           |               |                           |                            |                       |
| Jackson          | Montcalm         |               |                           |                            |                       |
| Jackson          | Muskegon         |               |                           |                            |                       |
| Jackson          | Newaygo          |               |                           |                            |                       |
| Jackson          | Oakland          |               |                           |                            |                       |
| Jackson          | St. Clair        |               |                           |                            |                       |
| Jackson          | St. Joseph       |               |                           |                            |                       |

n/a - not applicable

\*Requires a formal agreement approved by the Jackson County Board of Commissioners.

Table 2 (cont'd)

**CURRENT EXPORT VOLUME AUTHORIZATION OF SOLID WASTE\***

| <b>EXPORTING COUNTY</b> | <b>IMPORTING COUNTY</b> | <b>FACILITY NAME</b> | <b>AUTHORIZED QUANTITY/DAILY</b> | <b>AUTHORIZED QUANTITY/ANNUAL</b> | <b>AUTHORIZED CONDITIONS</b> |
|-------------------------|-------------------------|----------------------|----------------------------------|-----------------------------------|------------------------------|
| Jackson                 | Sanilac                 |                      |                                  |                                   |                              |
| Jackson                 | Shiawassee              |                      |                                  |                                   |                              |
| Jackson                 | VanBuren                |                      |                                  |                                   |                              |
| Jackson                 | Washtenaw               |                      |                                  |                                   |                              |
| Jackson                 | Wayne                   |                      |                                  |                                   |                              |

n/a - not applicable

\*Requires a formal agreement approved by the Jackson County Board of Commissioners.

**SELECTED SYSTEM**

If a new solid waste disposal area is constructed and operates in the future in another county, then disposal of solid waste generated by the exporting county is authorized up to the authorized quantity according to the authorized conditions in Table 2-B if authorized for import in the approved solid waste management plan of the receiving county.

**Table 2-B**

**FUTURE EXPORT VOLUME AUTHORIZATION OF SOLID WASTE  
CONTINGENT ON NEW FACILITIES BEING SITED\***

| <b>EXPORTING COUNTY</b> | <b>IMPORTING COUNTY</b> | <b>FACILITY NAME</b> | <b>AUTHORIZED<br/>QUANTITY/DAILY</b> | <b>AUTHORIZED<br/>QUANTITY/ANNUAL</b> | <b>AUTHORIZED<br/>CONDITIONS</b> |
|-------------------------|-------------------------|----------------------|--------------------------------------|---------------------------------------|----------------------------------|
|-------------------------|-------------------------|----------------------|--------------------------------------|---------------------------------------|----------------------------------|

n/a - not applicable

\* Requires a formal agreement approved by the Jackson County Board of Commissioners.

**SELECTED SYSTEM**

**SOLID WASTE DISPOSAL AREAS**

The following identifies the names of existing disposal areas which will be used to provide the required capacity and management needs for the solid waste generated within the county for the next five and ten years and, if possible, the next ten years. Pages III-10 through III-14 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 used by the county for the planning period. Additional facilities within the county with applicable permits and licenses may be used 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:

McGill Road Landfill

Type A Transfer Facility:

Type B Transfer Facility:

Rives Township  
Henrietta Township

Type III Landfill:

Liberty Environmentalist Landfill

Processing Plant:

Incinerator:

None

Waste Piles:

Waste-to-Energy Incinerator:

Jackson County Resource Recovery Facility

Other:

**SELECTED SYSTEM**

**FACILITY DESCRIPTIONS**

Facility Type: Waste-to-Energy Incinerator

Facility Name: Jackson County Resource Recovery Facility

County: Jackson Location: Town: 2S Range: Section(s): 14

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: McGill Rd. Landfill

       Public   X   Private Owner: Jackson County

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

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

**Site Size:**

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

Current capacity: (designed)   200   tons  
Estimated lifetime:   20   years  
Estimated days open per year:   365   days  
Estimated yearly disposal volume  
(annual report, 7 year results):  59,807  tons

Annual energy production:  
Landfill gas recovery projects:        megawatts  
Waste-to-energy incinerators:  15,138  megawatts

FACILITY DESCRIPTIONS

Facility Type: Type II Landfill

Facility Name: McGill Rd. Landfill

County: Jackson Location: Town: 2S Range: 1W Section(s): 24

Map identifying location included in Attachment Section:  Yes  No

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

Public  Private Owner: Waste Management, Inc.

Operating Status

open  
 closed  
 licensed  
 construction permit  
 open, but closure  
 pending

Waste Types Received

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

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

Site Size:

Total area of facility property: 50.5 acres  
Total area site for use: 41.8 acres  
Total area permitted: 18.7 acres  
Operating: 7.8 acres  
Not excavated: 17.5 acres

Current capacity: 1,236,300 tons  
Estimated lifetime: 15 years  
Estimated days open per year: 310 days  
Estimated yearly disposal volume: 63,226 tons

(if applicable)

Annual energy production:  
Landfill gas recovery projects: \_\_\_\_\_ megawatts  
Waste-to-energy incinerators: \_\_\_\_\_ megawatts

FACILITY DESCRIPTIONS

Facility Type: Type III landfill

Facility Name: Liberty Environmentalists Landfill

County: Jackson Location: Town: 4S Range: 1W Section(s): 13

Map identifying location included in Attachment Section:  Yes  No

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

Public  Private Owner: Liberty Environmentalists, Inc.

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

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

Site Size:

|                                  |            |       |
|----------------------------------|------------|-------|
| Total area of facility property: | <u>285</u> | acres |
| Total area site for use:         | <u>65</u>  | acres |
| Total area permitted:            | <u>15</u>  | acres |
| Operating:                       | <u>7.5</u> | acres |
| Not excavated:                   | <u>40</u>  | acres |

|                                   |                |       |
|-----------------------------------|----------------|-------|
| Current capacity:                 | <u>133,333</u> | tons  |
| Estimated lifetime:               | <u>20</u>      | years |
| Estimated days open per year:     | <u>300</u>     | days  |
| Estimated yearly disposal volume: | <u>55,000</u>  | tons  |

(if applicable)

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

FACILITY DESCRIPTIONS

Facility Type: Transfer station

Facility Name: Rives Township Transfer Station

County: Jackson Location: Berry Rd. Town: 1S Range: 1W Section(s): 16

Map identifying location included in Attachment Section:  Yes  No

If facility is an incinerator or a transfer station, list the final disposal site and location for incinerator ash or transfer station wastes: Jackson County RRF, McGill Rd. landfill

Public  Private Owner: Rives Township

Operating Status

open  
 closed  
 licensed  
 construction permit  
 open, but closure  
 pending

Waste Types Received

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

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

Site Size:

Total area of facility property: .5 acres  
Total area site for use: .5 acres  
Total area permitted:        acres  
Operating:        acres  
Not excavated:        acres

Current capacity:        cubic yards or tons  
Estimated lifetime:        years  
Estimated days open per year: 52 days  
Estimated yearly disposal volume: 511 tons

(if applicable)

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

FACILITY DESCRIPTIONS

Facility Type: Transfer station

Facility Name: Henrietta Township Transfer Station

County: Jackson Location: Bunker Hill Rd. Town: Range: Section(s):

Map identifying location included in Attachment Section:  Yes  No

If facility is an incinerator or a transfer station, list the final disposal site and location for incinerator ash or transfer station wastes: Jackson County RRF, McGill Rd. landfill

Public  Private Owner: Henrietta Township

Operating Status

- open
- closed
- licensed
- construction permit
- open, but closure
- pending

Waste Types Received

- residential
- commercial
- industrial
- construction and demolition
- contaminated soils
- special wastes\*
- other:

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

Site Size:

Total area of facility property: .5 acres  
Total area site for use:          acres  
Total area permitted:          acres  
Operating:          acres  
Not excavated:          acres

Current capacity:          cubic yards or tons  
Estimated lifetime:          years  
Estimated days open per year: 52 days  
Estimated yearly disposal volume: 690 cubic yards

(if applicable)

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

## **SELECTED SYSTEM**

### **SOLID WASTE COLLECTION SERVICES AND TRANSPORTATION**

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

---

It is expected that solid waste collection services and transportation will continue to operate as described in Section II. All solid waste is currently collected by private haulers. It is expected that private waste haulers will continue to play a large part in the collection and transport of waste.

#### **Collection**

There are no governmentally operated municipal collection systems in Jackson County. All of the haulers are private operators. Three villages (Concord, Cement City, and Parma) and the Lake Columbia Association (Columbia Township) contract with private haulers to provide residential service.

Below is a list of the collection services/licensed haulers within Jackson County. The services are provided county-wide. There are no service area limitations.

|                                     |                          |
|-------------------------------------|--------------------------|
| Action Fast Hauling                 | Lawrence Johnson         |
| American Hauling & Home Improvement | Lester Brothers          |
| Anderson Disposal                   | Liberty Environmentalist |
| Bernard Brown                       | Losee Carter             |
| Bill Barr, Inc.                     | M & M Hauling            |
| Browning Ferris Industries          | Matthews Refuse          |
| Bulldog Refuse                      | Michigan Center Garbage  |
| Charles Buckner                     | Midwest Refuse           |
| Charles Davis                       | MKA Trust                |
| Cut Rate Garbage                    | Modern Waste Systems     |
| David Finch                         | Northwest                |
| David Shunk                         | Red, White, and Blue     |
| Discount Refuse                     | Great Lakes Waste        |
| Emmons Residential Service          | RW Mercer                |
| Freemon Martin                      | S & D                    |
| Brad's Hauling                      | Sam's Iron & Metal       |
| Huco, Inc.                          | Senior Citizen's Refuse  |
| JDAK, Inc.                          | T. Surgener              |
| Jeff Hines                          |                          |
| J's Hauling                         | Walt's Hauling           |
| Kurpinski Sanitation                | William Padget           |
| Laidlaw Waste Systems               | Woodard                  |

## Transportation

The major routes used to transport refuse from the collection areas to the disposal sites are state highways and county primary roads. Road weight restrictions, especially when frost laws in effect, can have a significant impact on the movement of solid waste because these are generally high density loads. Weight limitations are set by the state of Michigan in the Motor Vehicle Traffic Code. There are two enforcement agencies: the Jackson County Road Commission, through the designated weigh master, and the Michigan Public Service Commission.

There are no locally imposed width limitations on these highways other than all vehicles greater than 8 feet, 6 inches, must obtain a permit from the County Road Commission for an overside load.

**SELECTED SYSTEM**

**RESOURCE CONSERVATION EFFORTS:**

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

| Effort Description                          | Estimated Diversion (tons/year) |                            |                             |
|---|---------------------------------|----------------------------|-----------------------------|
|   | <u>Current</u>                  | <u>5<sup>th</sup> year</u> | <u>10<sup>th</sup> year</u> |
| Public education and promotional activities | 11,200                          | 19,900                     | 28,800                      |
|   |                                 |                            |                             |
|   |                                 |                            |                             |
|   |                                 |                            |                             |
|   |                                 |                            |                             |
|   |                                 |                            |                             |
|   |                                 |                            |                             |
|   |                                 |                            |                             |
|   |                                 |                            |                             |
|   |                                 |                            |                             |
|   |                                 |                            |                             |
|   |                                 |                            |                             |

Projections were based upon a goal of increasing recycling/waste reduction from 6% of the waste stream to 15%.

**SELECTED SYSTEM**

**WASTE REDUCTION, RECYCLING, & COMPOSTING PROGRAMS:**

**Volume Reduction Techniques**

The following describes the techniques used 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 | Estimated Air Space Conserved<br>(cubic yards/year) |                            |                             |
|-----------------------|---|----------------------------|-----------------------------|
|                       | <u>Current</u>                                      | <u>5<sup>th</sup> year</u> | <u>10<sup>th</sup> year</u> |
| Incineration          | 145,000   | 145,000                    | 145,000                     |
|                       |   |                            | 8 <sup>+</sup>              |
|                       |   |                            |                             |
|                       |   |                            |                             |
|                       |   |                            |                             |
|                       |   |                            |                             |
|                       |   |                            |                             |
|                       |   |                            |                             |
|                       |   |                            |                             |
|                       |   |                            |                             |
|                       |   |                            |                             |

## SELECTED SYSTEM

### Overview of Resource Recovery Programs:

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

---

Most of the materials found in Jackson County's MSW can be recycled somewhere in the county. Glass, plastics, motor oil, cardboard, newspaper, office paper, wood, grass clippings leaves and metals can all be recycled within the county. Most of the recycling requires the consumer to drop off the waste. There are some instances where private haulers are experimenting with curbside pick-up of recyclables. In the City of Jackson, private haulers are required by ordinance to offer their customers pick-up of recyclables if waste pick-up is only once a week. Also in the city, leaves are picked up by the city for composting.

There are no ordinances that require haulers to collect recyclable materials (except in the City of Jackson) or for consumers to sort and handle recyclables outside of household disposal waste. The Selected System does not include any for the future. The incentive to recycle remains in the relatively high tipping fees at the RRF.

- Recycling programs within the county are feasible. Details of existing and planned programs are included in 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 in 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:

## SELECTED SYSTEM

### RECYCLING AND COMPOSTING

The following is a brief analysis of the recycling and composting programs selected for the county in this plan. Additional information on operation of recycling and composting programs is included in Appendix A. The analysis covers various factors within the county and the impacts of these factors on recycling and composting. Following the written analysis, the tables on pages III - 23, 24, 25, & 26 list the existing recycling, composting, and source separation of hazardous material 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-27, 28, & 29 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.

In Jackson County recycling is handled by private haulers and by Recycling Jackson, a local non-profit recycling group.

Private Haulers. The dependence on private haulers is part of the current system and is continued into the selected system. This is because the private waste haulers have primary responsibility for collecting and transporting waste. Individual residents and business pay them a fee for providing waste management services. Some waste haulers have included recycling and composting as part of the waste management services offered. This private recycling service is financially possible because of the tipping fees avoided when the waste is not processed through the RRF.

The Selected System includes the continuation and possible expansion of recycling by private haulers. The haulers will continue to be responsible for designing their own recycling and /or composting programs, including designing the types of materials to be collected and the collection methods and equipment to be used. The volume of waste targeted for recovery by these recycling and composting programs is that which will reduce landfilling in Jackson County to nonrecoverable wastes and incinerator residues but which will not impact the flow of waste sufficient to meet the requirements of the RRF.

Finally, while recovery of either source or site separated materials is acceptable, program developers will be encouraged to include curbside collection of source separated materials in their program design because of the higher recovery rates achievable through such a program.

#### Recycling Jackson

Recycling Jackson will be encouraged to continue operating its recycling drop station and to continue recycling education. In the 1996-1997 fiscal year, this volunteer group recycled almost 1% of the MSW generated in the county.

The drop-off site for Recycling Jackson may have to be relocated if the property is sold or otherwise developed. Also, in order for Recycling Jackson to expand, a secure site is needed that is larger and that will

allow for processing on site.

### Jackson County

In the contract for services, the owners of the McGill Rd. landfill are required to provide four new drop-off centers for recycling.

To allow any future drop-off centers to be consistent with the plan, it is import to include this statement from the current plan: The location of recycling drop-off centers, processing plants and composting facilities shall be governed as follows: facilities requiring an Act 641 permit or license shall be consistent with the siting criteria contained in this plan. All other such facilities shall be sited in compliance with local zoning ordinances.

The selected systems calls for the implementation of advertising to promote all of the recycling services available within the county. Jackson County will provide the funding for the advertisements.

Recycling Jackson and the Jackson County Health Department also work together to sponsor an annual household hazardous waste disposal day. County residents may bring certain items to a designated site for proper disposal. A nominal fee is charged.

### City of Jackson

The City of Jackson composts the leaves collected from city streets and offers the compost to interested residents. Over 200 yards of compost is collected and used by the residents

**SELECTED SYSTEM**

**TABLE III-1**

**RECYCLING:**

| <u>Program Name</u>                  | <u>Service Area</u> | <u>Public or Private</u> | <u>Collection Point</u> | <u>Collection Frequency</u> | <u>Materials Collected</u> | <u>Program Management Responsibilities</u> |                  |                   |
|--------------------------------------|---------------------|--------------------------|-------------------------|-----------------------------|----------------------------|--|------------------|-------------------|
|                                      |                     |                          |                         |                             |                            | <u>Development</u>                         | <u>Operation</u> | <u>Evaluation</u> |
| Recycling Jackson                    | Jackson County      | Private                  | d                       | w                           | ABCDEF                     | 4  | 4                | 4                 |
| Emmons Service                       | Jackson County      | Private                  | d                       | d                           | ABCDEF                     | 5  | 5                | 5                 |
| Modern Waste                         | Jackson County      | Private                  | d                       | d                           | ABCDEF                     | 5  | 5                | 5                 |
| BFI                                  | Jackson County      | Private                  | d                       | d                           | ABCEF                      | 5  | 5                | 5                 |
| Henrietta Township                   | Jackson County      | Public                   | d                       | w                           | ABDEF                      | 6  | 6                | 6                 |
| Rives Township                       | Rives Township      | Public                   | d                       | w                           | ABCDEF                     | 6  | 6                | 6                 |
| RRF                                  | Jackson County      | Public                   | d                       | d                           | F                          | 2  | 2                | 2                 |
| Omni Source (Jackson Fibers)         | Jackson County      | Private                  | d                       | d                           | CFD                        | 5  | 5                | 5                 |
| Waste Management                     | Jackson County      | Private                  | d                       | d                           | CFJ                        | 5  | 5                | 5                 |
| Liberty Environmentalist             | Jackson County      | Private                  | d                       | d                           | DF                         | 5  | 5                | 5                 |
| Northwest Refuse                     | Jackson County      | Private                  | d                       | d                           | ABCDEF                     | 5  | 5                | 5                 |
| Omni Source (Jackson Iron and Metal) | Jackson County      | Private                  | d                       | d                           | F                          | 5  | 5                | 5                 |
| Sam's Iron and Metal                 | Jackson County      | Private                  | d                       | d                           | F                          | 5  | 5                | 5                 |

- (a) 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.
- (b) Identified by 1= Designated Planning Agency; 2 = County Board of Commissioners; 3 = Department of Public Works; 4 = Environmental Group; 5 = Private Owner/Operator; 6 = Other
- (c) Identified by c = curbside; d = drop-off; o = onsite' and if other, explained.
- (d) 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.
- (e) 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.

**SELECTED SYSTEM**

**TABLE III-2**

**COMPOSTING:**

| <u>Program Name</u>        | <u>Service Area</u> | <u>Public or Private</u> | <u>Collection Point</u> | <u>Collection Frequency</u> | <u>Materials Collected</u> | <u>Program Management Responsibilities</u> |                  |                   |
|----------------------------|---------------------|--------------------------|-------------------------|-----------------------------|----------------------------|--|------------------|-------------------|
|                            |                     |                          |                         |                             |                            | <u>Development</u>                         | <u>Operation</u> | <u>Evaluation</u> |
| Emmons Service             | Jackson County      | Private                  | d                       | d                           | GL                         | 5  | 5                | 5                 |
| Liberty Environmentalist   | Jackson County      | Private                  | d                       | d                           | GLW                        | 5  | 5                | 5                 |
| Leaf collection/composting | City of Jackson     | Public                   | c                       | Fa                          | L                          | 6  | 6                | 6                 |
|                            |                     |                          |                         |                             |                            |  |                  |                   |
|                            |                     |                          |                         |                             |                            |  |                  |                   |
|                            |                     |                          |                         |                             |                            |  |                  |                   |
|                            |                     |                          |                         |                             |                            |  |                  |                   |
|                            |                     |                          |                         |                             |                            |  |                  |                   |
|                            |                     |                          |                         |                             |                            |  |                  |                   |

- (a) 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.
- (b) Identified by 1= Designated Planning Agency; 2 = County Board of Commissioners; 3 = Department of Public Works; 4 = Environmental Group ; 5 = Private Owner/Operator; 6 = Other
- (c) Identified by c = curbside; d = drop-off; o = onsite; and if other, explained.
- (d) 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.
- (e) 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

**SELECTED SYSTEM**

**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.

| <u>Program Name</u>                  | <u>Service Area</u> | <u>Public or Private</u> | <u>Collection Point</u> | <u>Collection Frequency</u> | <u>Materials Collected</u> | <u>Program Management Responsibilities</u> |                  |                   |
|--------------------------------------|---------------------|--------------------------|-------------------------|-----------------------------|----------------------------|--|------------------|-------------------|
|                                      |                     |                          |                         |                             |                            | <u>Development</u>                         | <u>Operation</u> | <u>Evaluation</u> |
| Household Hazardous Waste Collection | Jackson County      | Public                   | d                       | Annual                      | AR,A,AN,B,2,C,P,PS         | 2  | 2                | 2                 |
| Emmons Service                       | Jackson County      | Private                  | d                       | d                           | UB1                        | 5  | 5                | 5                 |
| Liberty Environmentalist             | Jackson County      | Private                  | d                       | d                           | UP,B1                      | 5  | 5                | 5                 |
| RRF                                  | Jackson County      | Public                   | d                       | d                           | B1B2                       | 2  | 2                | 2                 |
| Henrietta Township                   | Jackson County      | Public                   | d                       | w                           | B1                         | 6  | 6                | 6                 |
| Rives Township                       | Rives Township      | Public                   | d                       | w                           | B1                         | 6  | 6                | 6                 |
| Omni Source (Jackson Fibers)         | Jackson County      | Private                  | d                       | d                           | B1                         | 5  | 5                | 5                 |
| Sam's Iron and Metal                 | Jackson County      | Private                  | d                       | d                           | B1                         | 5  | 5                | 5                 |
| Taylor Rental                        | Jackson County      | Private                  | d                       | d                           | B2                         | 5  | 5                | 5                 |
| K-Mart                               | Jackson County      | Private                  | d                       | d                           | B1                         | 5  | 5                | 5                 |
| Autoworks                            | Jackson County      | Private                  | d                       | d                           | UA                         | 5  | 5                | 5                 |
| Jenk's Oil                           | Jackson County      | Private                  | d                       | d                           | U                          | 5  | 5                | 5                 |

| <u>Program Name</u>          | <u>Service Area</u> | <u>Public or Private</u> | <u>Collection Point</u> | <u>Collection Frequency</u> | <u>Materials Collected</u> | <u>Program Management Responsibilities</u> |                  |                   |
|------------------------------|---------------------|--------------------------|-------------------------|-----------------------------|----------------------------|--|------------------|-------------------|
|                              |                     |                          |                         |                             |                            | <u>Development</u>                         | <u>Operation</u> | <u>Evaluation</u> |
| Valvoline Instant Oil Change | Jackson County      | Private                  | d                       | d                           | U                          | 5  | 5                | 5                 |
| T.C's Garage                 | Jackson County      | Private                  | d                       | d                           | AN, U A                    | d  | d                | d                 |

Source of information, Jackson Citizen-Patriot, 1998, list of Jackson-area recycling sites.

- (a) 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.
- (b) Identified by 1= Designated Planning Agency; 2 = County Board of Commissioners; 3 = Department of Public Works; 4 = Environmental Group (Identified on page 27); 5 = Private Owner/Operator; 6 = Other (Identified on page 27)
- (c) Identified by c = curbside; d = drop-off; o = onsite; and if other, explained.
- (d) Identified by d = dally; w = weekly; b = biweekly; m = monthly; and if seasonal service also indicated by Sp = Spring; Su = Summer; Fa = Fall; Wi = Winter.
- (e) Identified by the materials collected by listing of the letter located by that material type. AR = Aerosol Cans; A = Automotive Products except Used Oil, Oil Filters & Antifreeze; AN = Antifreeze; B1 = Lead Acid Batteries; B2 = Household Batteries; C= Cleaners and Polishers; H = Hobby and Art Supplies; OF = Used Oil Filters; P = Paints and Solvents; PS = Pesticides and Herbicides; PH = Personal and Health Care Products; U = Used Oil; OT = Other Materials and identified.



**SELECTED SYSTEM**

**PROPOSED COMPOSTING:**

| Program Name<br>(If known) | Service Area | Public or<br>Private | Collection<br>Point | Collection<br>Frequency | Materials<br>Collected | Development | Operation | Evaluation |
|----------------------------|--------------|----------------------|---------------------|-------------------------|------------------------|-------------|-----------|------------|
|----------------------------|--------------|----------------------|---------------------|-------------------------|------------------------|-------------|-----------|------------|

See Table III-2

**TABLE III-5**

**SELECTED SYSTEM**

**TABLE III-6**

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

| <u>Program Name</u><br><u>(if known)</u> | <u>Service Area</u> | <u>Public or</u> |               | <u>Collection</u><br><u>Point</u> | <u>Collection</u><br><u>Frequency</u> | <u>Materials</u><br><u>Collected</u> | <u>Program Management Responsibilities</u> |                  |                   |
|--|---------------------|------------------|---------------|-----------------------------------|---------------------------------------|--------------------------------------|--|------------------|-------------------|
|  |                     | <u>Private</u>   | <u>Public</u> |                                   |                                       |                                      | <u>Development</u>                         | <u>Operation</u> | <u>Evaluation</u> |
| See Table III-3                          |                     |                  |               |                                   |                                       |                                      |  |                  |                   |
|  |                     |                  |               |                                   |                                       |                                      |  |                  |                   |
|  |                     |                  |               |                                   |                                       |                                      |  |                  |                   |
|  |                     |                  |               |                                   |                                       |                                      |  |                  |                   |

**SELECTED SYSTEM**

**IDENTIFICATION OF RESOURCE RECOVERY MANAGEMENT ENTITIES:**

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

---

Environmental Groups:

Recycling Jackson

Other

Jackson County Board of Commissioners - RRF

Emmons Service

Modern Waste

BFI

Northwest Refuse

Henrietta Township

Rives Township

Omni Source (Jackson Fiber)

Waste Management

Liberty Environmentalists

Omni Source (Jackson Iron and Metal)

Sam's Iron and Metal

**SELECTED SYSTEM**

**PROJECTED DIVERSION RATES:**

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

| <u>Collected Material</u> | <u>Projected Annual Tons Diverted</u> |                            |                             |
|---------------------------|---------------------------------------|----------------------------|-----------------------------|
|                           | <u>Current</u>                        | <u>5<sup>th</sup> Year</u> | <u>10<sup>th</sup> Year</u> |
| A. TOTAL PLASTICS:        | 1,120                                 | 1,990                      | 2,880                       |
| B. NEWSPAPER + D.         | 5,488                                 | 9,751                      | 14,112                      |
| C. CORRUGATED CONTAINERS  |                                       |                            |                             |
| D. TOTAL OTHER PAPER:     | See "B"                               |                            |                             |
| E. TOTAL GLASS:           | 896                                   | 1,592                      | 2,304                       |
| F. OTHER MATERIALS        | 1,568                                 | 2,786                      | 4,032                       |
| F1.                       |                                       |                            |                             |
| F2.                       |                                       |                            |                             |

| <u>Collected Material</u>      | <u>Projected Annual Tons Diverted</u> |                            |                             |
|--------------------------------|---------------------------------------|----------------------------|-----------------------------|
|                                | <u>Current</u>                        | <u>5<sup>th</sup> Year</u> | <u>10<sup>th</sup> Year</u> |
| G. GRASS & LEAVES:             |                                       |                            |                             |
| H. TOTAL WOOD WASTE:           |                                       |                            |                             |
| I. CONSTRUCTION AND DEMOLITION |                                       |                            |                             |
| J. FOOD AND FOOD PROCESSING:   | 1,008                                 | 1,791                      | 2,592                       |
| K. TIRES:                      |                                       |                            |                             |
| L. TOTAL METALS:               | 1,120                                 | 1,990                      | 2,880                       |
| F3.                            |                                       |                            |                             |
| F4.                            |                                       |                            |                             |

Current diversions based on the current estimate of total waste that is recycled (page II-1) and proportioned by the % component of the waste stream (from the paper, *Official Position of Recycling Jackson*. - Paper = 49%, Plastic= 10%, Glass= 8%, Food = 9%, Other = 14%.

**MARKET AVAILABILITY FOR COLLECTED MATERIALS:**

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

| <u>Collected Material</u> | <u>In-State Markets</u> | <u>Out-of-State Markets</u> |
|---------------------------|-------------------------|-----------------------------|
| A. TOTAL PLASTICS:        |                         |                             |
| B. NEWSPAPER:             |                         |                             |
| C. CORRUGATED CONTAINERS: |                         |                             |
| D. TOTAL OTHER PAPER:     |                         |                             |
| E. TOTAL GLASS:           |                         |                             |
| F1.                       |                         |                             |
| F2.                       |                         |                             |

| <u>Collected Material</u>       | <u>In-State Markets</u> | <u>Out-of-State Markets</u> |
|---------------------------------|-------------------------|-----------------------------|
| G. GRASS AND LEAVES             |                         |                             |
| H. TOTAL WOOD WASTE:            |                         |                             |
| I. CONSTRUCTION AND DEMOLITION: |                         |                             |
| J. FOOD AND FOOD PROCESSING:    |                         |                             |
| K. TIRES:                       |                         |                             |
| L. TOTAL METALS:                |                         |                             |
| F3.                             |                         |                             |
| F4.                             |                         |                             |

**SELECTED SYSTEM**

**EDUCATIONAL AND INFORMATIONAL PROGRAMS:**

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

| Program Topic (a) | Delivery Medium (b) | Target Audience (c) | Program Provider (d)   |
|-------------------|---------------------|---------------------|------------------------|
| 1,2,3,4,5         | r,n,o,f             | p,b,i, s (K-12)     | EG (Recycling Jackson) |
|                   |                     |                     |                        |
|                   |                     |                     |                        |
|                   |                     |                     |                        |
|                   |                     |                     |                        |
|                   |                     |                     |                        |
|                   |                     |                     |                        |
|                   |                     |                     |                        |
|                   |                     |                     |                        |

- (a) Identified by 1 = recycling; 2 = composting; 3 = household hazardous waste; 4 = resource conservation; 5 = volume reduction; 6 = other which is explained.
- (b) 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 listed.
- (c) 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.
- (d) 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.

**SELECTED SYSTEM**

**TIMETABLE FOR SELECTED SYSTEM IMPLEMENTATION**

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

**TABLE III-7**

| <b>Management Components</b>                             | <b>Timeline</b> |
|--|-----------------|
| Incineration and resource recovery                       | Ongoing         |
| Landfilling  | Ongoing         |
| Waste hauling  | Ongoing         |
| Educational programs                                     | Ongoing         |
| Hazardous waste collection day                           | Ongoing         |
| Transfer stations (Henrietta and Rives Townships)        | Ongoing         |
| Recycling drop-off (Recycling Jackson / private haulers) | Ongoing         |
| Recycling drop-off centers (five additional sites)       | 1999            |
| Composting   | Ongoing         |
|  |                 |
|  |                 |
|  |                 |
|  |                 |
|  |                 |
|  |                 |
|  |                 |
|  |                 |
|  |                 |
|  |                 |

## **SELECTED SYSTEM**

## **SITING REVIEW PROCEDURES**

### **AUTHORIZED DISPOSAL AREA TYPES**

Type II and type III landfills, transfer stations and processing plants other than incinerators may be sited by this plan. Resource Recovery Facilities or incinerators may not be sited by this plan.

### **SITING CRITERIA AND PROCESS**

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

The Jackson County Board of Commissioners shall have ultimate responsibility for ensuring that adequate waste disposal areas are provided in a timely manner to meet the County's waste disposal needs and for determining whether a proposal to establish a new disposal area is consistent with the Jackson County Solid Waste Management Plan.

The following procedure shall be used to determine if a proposal to develop a new solid waste disposal area is consistent with the Jackson County Solid Waste Management Plan. The Jackson County Board of Public Works shall be responsible for initial review of such proposals.

The sponsor of a proposed solid waste disposal area shall make a request in writing to the County Board of Public Works asking for a determination of consistency. The request shall include at a minimum the following information:

- The names and addresses of the project sponsor, the owners of the proposed facility and of the property where the disposal area will be sited, the operators of the proposed disposal area if different from the owners.
- A brief written description of the type of disposal area proposed for construction.
- A description of similar facilities operated elsewhere by any of the following: the project sponsor, the owners of the property, and/or facility, and the proposed operators of the facility.

- A written description of the type and quantity of waste to be managed and of the geographic area, by county and state, from which the waste will be obtained.
- A written description of how the owners of the proposed disposal areas will ensure compliance with the County Flow Control Ordinance and with the goals of this plan.
- A site plan of the proposed disposal area which shall include at a minimum a map at a scale of 1:100' showing the property boundaries of the proposed disposal area, and the location of all features from the *Solid Waste Sensitivity Overlay Maps*, which are either on site or within 300' of the proposed site. If the proposed disposal area is a landfill, the boundaries of the area which will receive fill must also be shown on the site plan.
- If areas mapped as wetlands on the *Solid Waste Sensitivity Overlay Maps* are found on site or within 300 feet of the site, the County Board of Public Works may require that the proposal's sponsor obtain a wetlands determination from either the MDNR or another qualified professional to confirm that no wetlands are located within the boundaries of the proposed disposal area.

The County Board of Public Works shall review the request for a determination of consistency at a public meeting, within forty-five (45) days of receipt. A review meeting may be adjourned for up to thirty (30) days to allow the proposal's sponsor to gather additional information needed for the Board of Public Works to complete their review.

The County Board of Public Works shall report their findings to the County Board of Commissioners within seven (7) days after the review meeting, along with a recommendation to either find the proposed solid waste disposal area consistent or not consistent with the County Solid Waste Management Plan.

Within 45 days of receiving the County Board of Public Works recommendation, the County Board of Commissioners shall review, at a public meeting, the request for a determination of consistency. The County Board of Commissioners shall by resolution, carried by a majority of the full membership, find that the proposal to develop a new solid waste disposal area is either consistent or not consistent with the plan. Each proposal will be evaluated only against the criteria specified in the plan.

In addition to the applicant, the County Board of Commissioners shall be notify the following of their findings: the chief executive officer of municipalities within 2 ½ miles of the proposed site; the Jackson County Health Department; the Jackson County Road Commission; the Michigan Department of Environmental Quality; the Jackson County Drain Commissioner; and the County Board of Public Works.

Because the consistency of a proposal to develop a new waste disposal area may change with time, if within one year of receiving a determination of consistency from the County Board of Commission a construction permit has not been issued by the DEQ, the project sponsor shall obtain an extension of the determination of consistency from the County Board of Commissioners

In evaluating for consistency with the County Solid Waste Management Plan, a proposal to construct or operate a solid waste disposal area, the following shall be considered:

### *Landfills*

Any Type II landfill developed to serve Jackson County's waste disposal needs shall be designed to handle both the residue from the incinerator and those portions of the Jackson County waste stream which are not being recovered through some other means. These landfills shall also be developed with the understanding that the goal of the plan is to reduce landfilling to a minimum, to be used for disposal of incinerator residues and other non-recoverable wastes, and thus the quantity of waste being landfilled in the County will decrease with time.

A new Type II landfill may be sited in Jackson County at any time by the owners of the then currently operating landfills, which are serving Jackson County's waste disposal needs, provided that the landfill shall only receive residues from the incinerator, nonrecoverable wastes from the Jackson County waste stream and other portions of the Jackson County waste stream which are in excess of the capacity of the incinerator.

If the owners of the then currently operating landfills have not applied for and received a determination of consistency for a new Type II landfill by the time the remaining Type II landfill capacity available to the County reaches 66 months, or if they have not applied for a received a DEQ construction permit for a new Type II landfill, which was previously found to be consistent with this plan, by the time the remaining landfill capacity available to the County reaches 4 years, the County Board of Commissioners shall assume responsibility for providing a new Type II landfill to meet the county's waste disposal needs through one or more of the following mechanisms:

- negotiations with the owners of the then currently operating Type II landfill for development of additional landfill capacity.
- negotiations with officials from surrounding counties for inclusion in their solid waste management plan and use of landfill capacity in their county.
- development of a county-owned and operated Type II landfill
- development of a Request for Proposals (RFP) to construct and operate a new Type II landfill to serve Jackson County and selection of a new landfill operator based on specifications in the RFP (this may include either county or private sector ownership of landfills.)

## *Waste-to-Energy Incineration - Resource Recovery Facility*

Expansion of the resource recovery facility beyond its current 200 tpd capacity to its "as planned" maximum expansion capacity of 300 tpd shall be considered consistent with this plan. Construction of a new resource recovery facility shall require an amendment to this plan which must include a description of the type and quantity of waste to be imported for processing as well as an enumeration of the geographic areas of solid waste haulers which will be supplying waste to fuel the additional capacity.

### *Transfer Stations*

In evaluating proposed transfer stations for consistency with this plan, the following shall be considered. Type II waste shall only be transferred to other disposal areas in counties with which there is a signed agreement and which are listed in Table 2A. Transfer stations which will simply facilitate the intra-county transportation of waste may be sited at anytime.

### *Type III Landfills*

The maximum number of Type III landfills operating in Jackson shall be one. A new Type III landfill may be sited whenever there are no Type III landfills operating in the county, or when the existing Type III landfill has an estimated capacity of 24 months. Type III waste is not subject to the provisions of the County Flow Control Ordinance.

### *Solid Waste Sensitivity Overlay Maps*

Nine solid waste sensitivity overlay maps (1"= 4,000' ) were prepared by the Region 2 Planning Commission for the previous solid waste management plan. Each map displays the characteristics of an environmental feature such as wetlands, developed areas, or areas of groundwater recharge and flow. When the nine transparencies are placed over a base map of Jackson County, areas not suitable for hosting solid waste disposal facilities are identified. For the plan document, six of these maps have been reduced and duplicated. The maps are represented in the plan document as Maps 3-1 through 3-6.

The following location criteria must also be met before a new disposal area shall be considered consistent with the plan.

#### New Type II Landfills

1. The landfill shall not be located in a wetland as identified on Overlay Map IX. (Map 3-1)
2. The land fill shall not be located in a developed area as identified on Overlay Map VIII. (Map 3-2)
3. The landfill shall not be located within the boundaries of the natural and scenic areas mapped on Overlay VI. (Map 3-3)
4. The landfill shall not be located closer than 100 feet to the Norvell Mill Pond, Horton Mill Pond, Concord Mill Pond, Minard Mill Pond, Putney Mill Pond, Leoni Pond, Tompkins Pond, Liberty Mills, Ford Dam of the Michigan Center Lake Impoundment. Overlay Map VI. (Map 3-1)

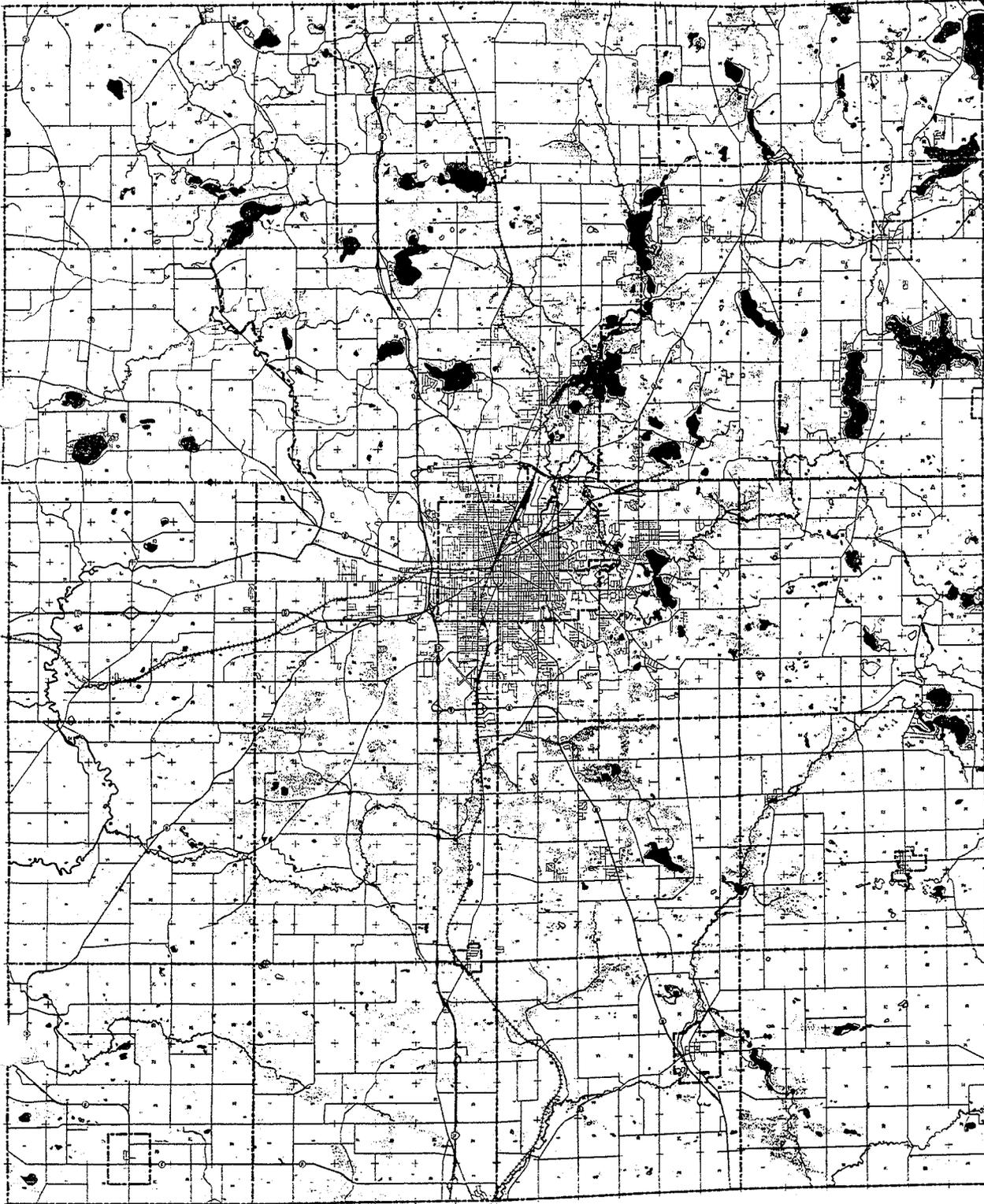
# Jackson County Michigan

Map 3-1

## Wetlands



Source: Jackson County Land Resource Inventory,  
Region 2 Planning Commission (1985)

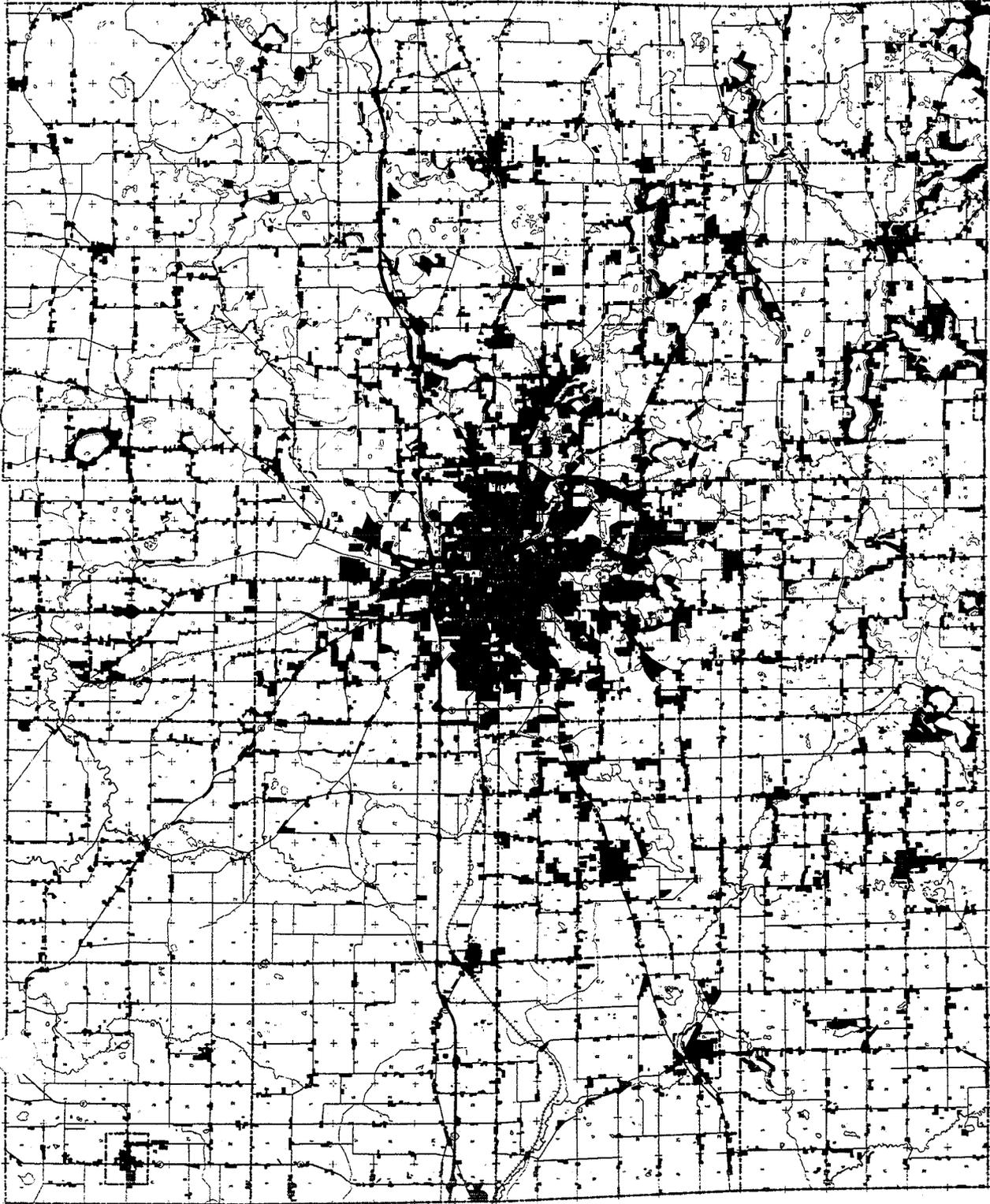


# Jackson County Michigan

Map 3-2

## Developed Areas

Source: Jackson County Land Resource Inventory,  
Region 2 Planning Commission (1985)



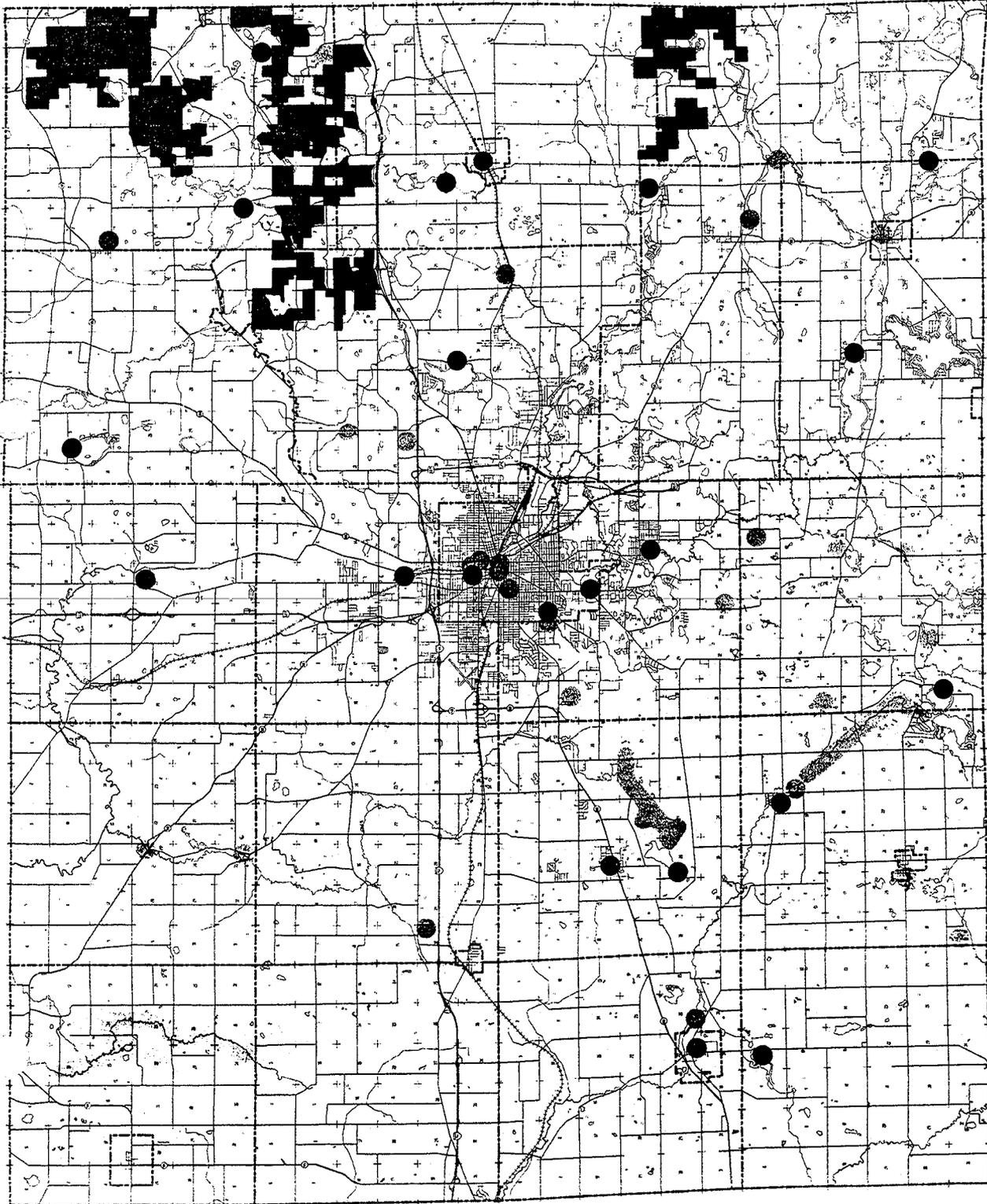
# Jackson County Michigan

Map 3-3

## Cultural & Natural Features

-  Natural & Scenic Areas
-  State Parks & Game Areas
-  Historic Sites
-  County Parks

Source: Michigan Department of State - History Division,  
Jackson County Recreation Plan, Region 2  
Area-wide Waste Treatment Management Study  
- Appendix 1 (1985)



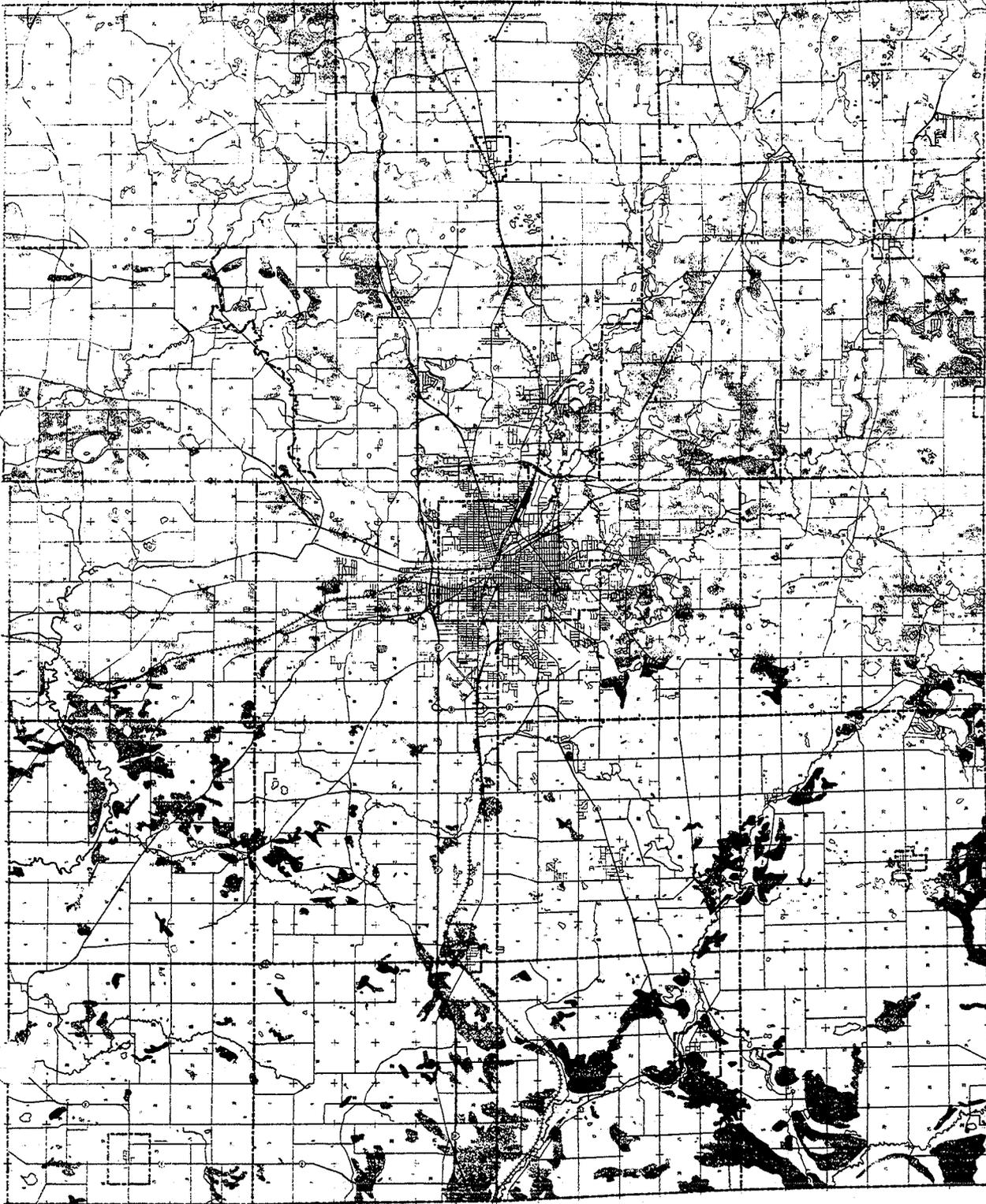
# Jackson County Michigan

Map 3-4

## Sensitive Surface Formations

-  Outwash Sediments
-  Drainageways
-  Kettles

Source: George Egan, Consultant Geologist to the  
Region 2 Planning Commission (1985)

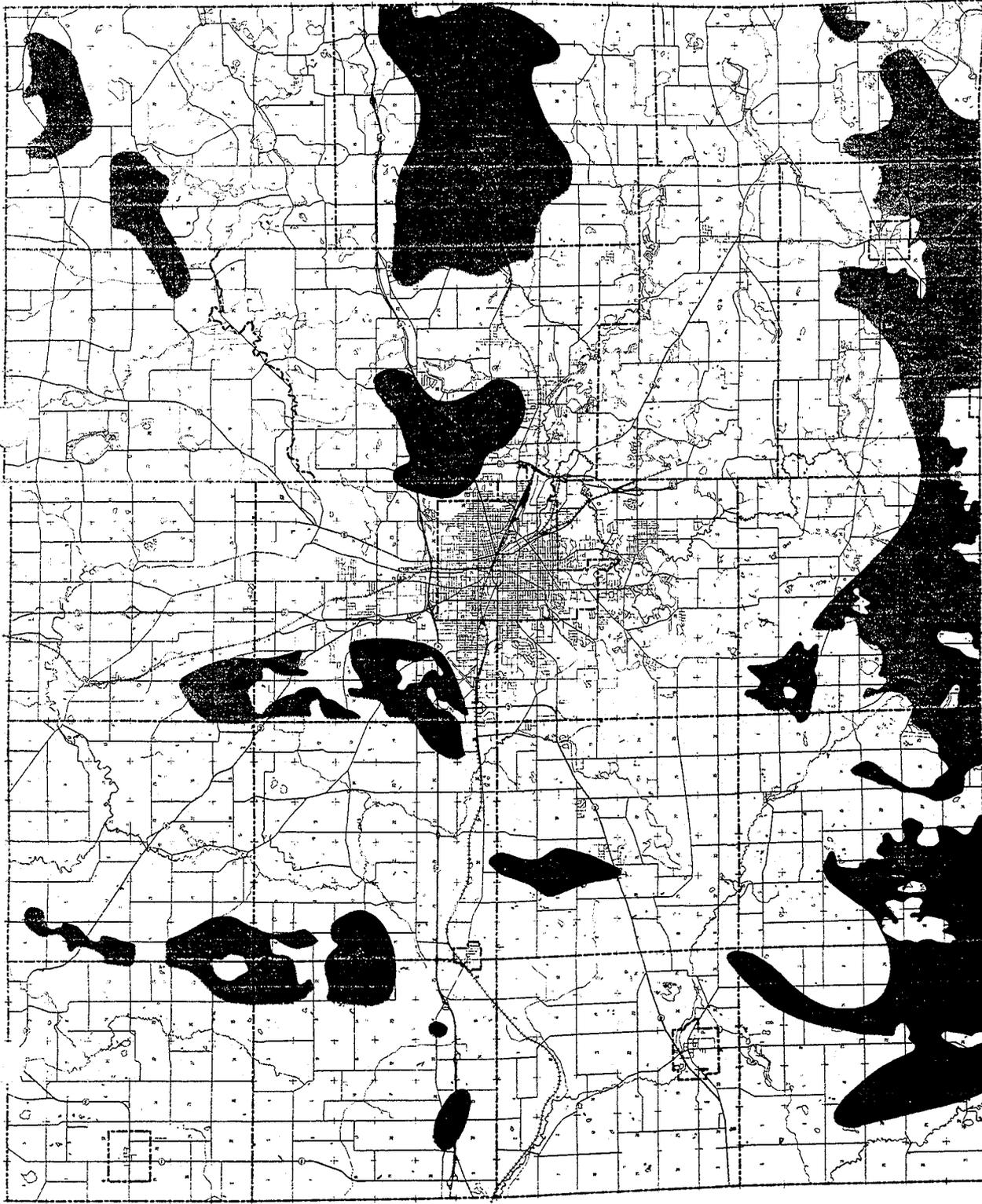


# Jackson County Michigan

Map 3-5

## Areas of Groundwater Recharge

Source: George Egan, Consultant Geologist to the  
Region 2 Planning Commission (1985)



# Jackson County Michigan

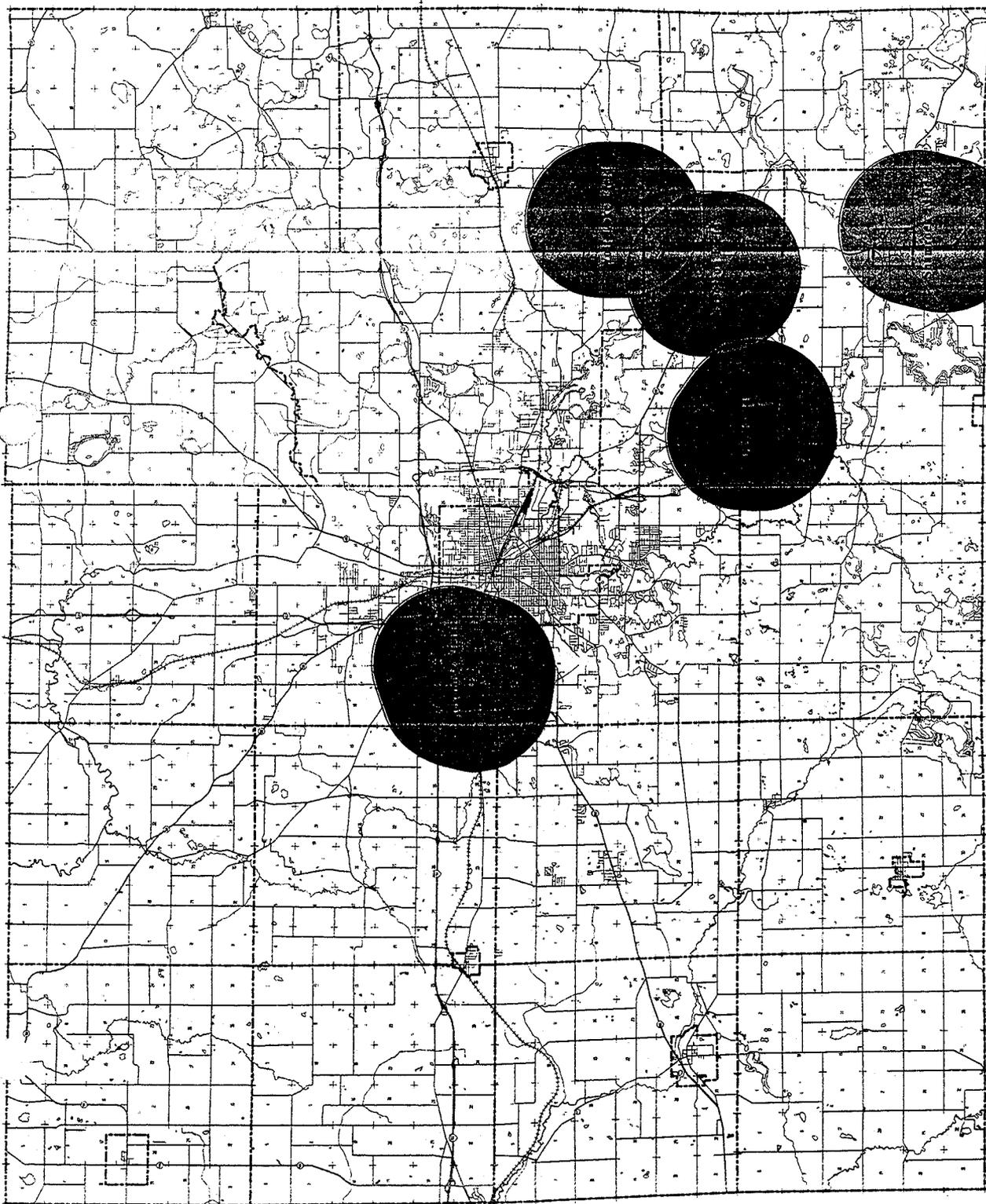
Map 3-6

## Licensed Public Use Airports

Area Within 10,000 ft. Radius



Source: Michigan Department of Transportation  
- Aeronautics Commission (1986)



5. The landfill shall not be located within 10,000 feet of a licensed public use airport, as identified on Overlay VII. (Map 3-6)
6. The landfill shall not be located closer than 300 feet to any County or State Park, State Recreation Area, State Game Area or the Dahlem Environmental Center. Overlay Map VI. (Map 3-3)
7. The landfill shall not be located closer than 300 feet to any historic site, district or structure included on the federal or state register of historic places. Overlay VI. (Map 3-3)
8. The landfill shall not be located in any area identified by the MDNR natural resources inventory as a habitat of a threatened or endangered species.
9. The landfill shall not be located in a 100-year floodplain.
10. The active work area and leachate collection system of any landfill shall not be located closer than one hundred (100) feet to adjacent road right-of-way or lakes and perennial streams, or closer than three hundred (300) feet to property lines or residences existing at the time of issuance of a construction permit.
11. The landfill shall not be located in an area with significant sensitive surface formations as identified on Overlay Map V. (Map 3-4)
12. The landfill shall not be located in areas of groundwater recharge as identified on Overlay Map IV. (Map 3-5)

#### New Type III Landfills

1. The landfill shall not be located in a wetland as identified on Overlay Map IX. (Map 3-1)
2. The landfill shall not be located in a developed area as identified on Overlay Map VIII. (Map 3-2)
3. The landfill shall not be located within the boundaries of the natural and scenic areas mapped on Overlay VI. (Map 3-3)
4. The landfill shall not be located closer than 100 feet to the Norvell Mill Pond, Horton Mill Pond, Concord Mill Pond, Minard Mill Pond, Putney Mill Pond, Leoni Pond, Tompkins Pond, Liberty Mills, Ford Dam of the Michigan Center Lake Impoundment. Overlay Map VI. (Map 3-1)
5. The landfill shall not be located closer than 300 feet to any County or State Park, State Recreation Area, State Game Area or the Dahlem Environmental Center. Overlay Map VI. (Map 3-3)

6. The landfill shall not be located closer than 300 feet to any historic site, district or structure included on the federal or state register of historic places. Overlay VI. (Map 3-3)
7. The landfill shall not be located in any area identified by the MDNR natural resources inventory as a habitat of a threatened or endangered species.
8. The landfill shall not be located in a 100-year floodplain.
9. The active work area and leachate collection system of any landfill shall not be located closer than one hundred (100) feet to adjacent road right-of-way or lakes and perennial streams, or closer than three hundred (300) feet to property lines or residences existing at the time of issuance of a construction permit.
10. The landfill shall not be located in an area with significant sensitive surface formations as identified on Overlay Map V. (Map 3-4)
11. The landfill shall not be located in areas of groundwater recharge as identified on Overlay Map IV. (Map 3-5)

#### Resource Recovery Facilities

1. New resource recovery facilities shall not be sited by this plan.

#### New Processing Plants Other Than Incinerators

1. The processing plant shall not be located within a wetland as identified on Overlay Map IX. (Map 3-1)
2. In developed areas, as identified on Overlay Map VIII, processing plant sites shall be located only in districts used for agriculture, commerce or industry. (Map 3-2)
3. The processing plant shall not be located closer than 100 feet to the Norvell Mill Pond, Horton Mill Pond, Concord Mill Pond, Minard Mill Pond, Putney Mill Pond, Leoni Pond, Tompkins Pond, Liberty Mills, Ford Dam, or the Michigan Center Lake Impoundment. Overlay Map VI. (Map 3-1)
4. The processing plant shall not be located in any areas identified by the MDNR natural resources inventory as habitats of threatened or endangered species.
5. The processing plant shall not be located in a 100-year floodplain.

6. The processing plant shall not be located in areas of groundwater recharge. Overlay IV. (Map 3-5)
7. The processing plant shall not be located closer than three (300) feet to any residence existing at the time the construction permit is issued.

New Transfer Facilities

1. The transfer facility shall not be located within a wetland as identified on Overlay Map IX. (Map 3-1)
2. In developed areas, as identified on Overlay Map VIII, transfer facility sites shall be located only in districts used for agriculture, commerce or industry (Map 3-2)
3. The transfer facility shall not be located closer than 100 feet to the Norvell Mill Pond, Horton Mill Pond, Concord Mill Pond, Minard Mill Pond, Putney Mill Pond, Leoni Pond, Tompkins Pond, Liberty Mills, Ford Dam, or the Michigan Center Lake Impoundment. Overlay Map VI. (Map 3-1)
4. The transfer facility shall not be located in any areas identified by the MDNR natural resources inventory as habitats of threatened or endangered species.
5. The transfer facility shall not be located in a 100-year floodplain.
6. The transfer facility shall not be located in areas of groundwater recharge. Overlay IV. (Map 3-5)
7. The transfer facility shall not be located closer than three (300) feet to any residence existing at the time the construction permit is issued.

*Inconsistency with Plan*

In those instances where a proposed solid waste disposal area is found to be inconsistent with the Plan based upon the information contained in the overlay maps, the applicant may submit an appeal to the County Board of Commissioners requesting a revision of the content of the overlay maps to reflect the availability of more recent or more detailed information.

It is the responsibility of the applicant to provide the County Board of Commissioners with the information needed to review and evaluate the appeal for a revision of the content of the overlay maps. The applicant shall also show that the revisions to the overlay maps will be provided for an equivalent or greater degree of protection for the public health and environment.

If an appeal is granted and the area meets all the other criteria established in the Plan, it

shall be considered consistent with the Plan, with no amendment to the Plan necessary.

*Appeals Process*

1. Application:

a. At least 90 days prior to application for a construction permit, the applicant must notify the County Board of Commissioners in writing that an appeal of the content of the overlay maps is being made. With each notice, the following must be submitted:

- Twenty (20) copies of a statement and related documentation addressing the content of the overlay maps which are being appealed.
- The name of the applicant's representative who will attend all meetings, be responsible for providing all further information necessary to review the proposal and who may negotiate any amendment of agreements.
- A fee equal to \$150.00.

b. At the time an applicant notifies and supplies the required data to the County Board of Commissioners on a proposed solid waste disposal area, the County Board of Commissioners will notify:

- the chief executive officer of municipalities within 2 ½ miles of the proposed site;
- the Jackson County Health Department;
- the Jackson County Road Commission;
- the Michigan Department of Environmental Quality
- the Jackson County Drain Commissioner

2. Establish Review:

At their next regular meeting, the County Board of Commissioners will:

- a. set the date for their review.
  - b. review meetings shall be preceded by at least one publication in a newspaper of general circulation in the County at least ten (10) days prior to the date of the meeting indicating the place, time, and purpose of the meeting as well as location of the areas on the overlay maps which are being appealed.
3. **Review:**
- The County Board of Commissioners shall review the applicant's appeal within forty-five (45) days of receipt. A review meeting can be adjourned for up to 30 days to gather further information.
4. **Decision**
- The County Board of Commissioners may either:
- a. grant the appeal wholly or partly, or
  - b. deny the appeal.
5. Once the decision of the Board of Commissioners has been made, the Board of Commissioners will notify the applicant, the Department of Environmental Quality, the Board of Public Works and all of the parties identified in 1(b).

## SELECTED SYSTEM

### SOLID WASTE MANAGEMENT COMPONENTS

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

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The Jackson County solid waste system will be managed by a variety of governments and private interests. However, the ultimate responsibility belongs to the Jackson County Board of Commissioners (BoC). The BoC oversees the management of the Resource Recovery Facility, and maintains a contract with the owners of the McGill Rd. landfill for disposal services. The BoC has responsibility for approving the locations for new or expanding solid waste disposal facilities. The BoC also adopted the county's flow control ordinance and the ordinance that requires private haulers to be licensed by the county.

Some of the responsibilities for plan implementation are left to private businesses, industries, organizations and individuals. The policies in this plan are unlikely to be implemented without private participation. Especially important are the educational programs implemented by Recycling Jackson, and the recycling opportunities offered by the private haulers and by Recycling Jackson.

Henrietta and Rives Townships also have management responsibilities with the operation of their transfer stations.

**SELECTED SYSTEM**

**IDENTIFICATION OF RESPONSIBLE PARTIES**

Document which entities within the county will have management responsibilities over the following areas of the plan.

**Resource Conservation:**

Source or Waste Reduction - None

Product Reuse - None

Reduced Material Volume - None

Increased Product Lifetime- None

Decreased Consumption - None

**Resource Recovery Programs:**

Composting - City of Jackson, private haulers.

Recycling - Recycling Jackson, private haulers, Jackson County

Energy Production - Jackson County Resource Recovery Facility

**VOLUME REDUCTION TECHNIQUES:**

Resource Recovery Facility - Jackson County Board of Commissioners

**SELECTED SYSTEM**

**COLLECTION PROCESSES:**

**Transportation:**

Private haulers, Jackson County Road Commission

**Disposal Areas:**

Processing Plants - Jackson County Board of Commissioners

Incineration - Jackson County Board of Commissioners, Jackson County Resource Recovery Facility

Transfer Stations - Jackson County Board of Commissioners, Rives Township, Henrietta Township

Sanitary Landfills - Jackson County Board of County Commissioners

**Ultimate Disposal Area Uses:**

Jackson County Board of Commissioners

**Local Responsibility for Plan Update Monitoring & Enforcement:**

Jackson County Board of Commissioners

**Educational and Informational Programs:**

Jackson County Board of Commissioners

Documentation of acceptance of responsibilities is contained in Appendix D.

**LOCAL ORDINANCES AND REGULATIONS AFFECTING  
SOLID WASTE DISPOSAL**

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

- 1. Section 11538.(8) and rule 710 (3) of Part 115 prohibits enforcement of all county and local ordinances and regulations pertaining to solid waste disposal areas unless explicitly included in an approved solid waste management plan. Local regulations and ordinances intended to be part of this plan must be specified below and the manner in which they will be applied described.
- 2. This plan recognizes and incorporates as enforceable the following specific provisions based on existing zoning ordinances:
- 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.
  - 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.

## 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 the DEQ. The county's process for determination of annual capacity and submission of the county's capacity certification is as follows: