

STATE OF MICHIGAN



JOHN ENGLER, Governor

DEPARTMENT OF ENVIRONMENTAL QUALITY

"Better Service for a Better Environment"

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

INTERNET: www.deq.state.mi.us

RUSSELL J. HARDING, Director

March 9, 2001

Mr. Mark Grebner, Chairperson
Ingham County Board of Commissioners
P.O. Box 319
Mason, Michigan 48854

Dear Mr. Grebner:

The Department of Environmental Quality (DEQ) received the locally approved update to the Ingham County Solid Waste Management Plan (Plan) on July 24, 2000. Except for the items indicated below, the Plan is approvable. As outlined in the October 23, 2000 letter to Mr. James R. Wilson, Ingham County Health Department, from Ms. Lynn Dumroese, DEQ, Waste Management Division, and as confirmed by Ingham County Board of Commissioners' Resolution Number 00-271 as transmitted from Mr. Bruce B. Bragg, Ingham County Health Department, on December 4, 2000, to Ms. Dumroese, the DEQ makes the following modifications to the Plan:

On page 77, the fourth paragraph states, "Part II addresses the general procedures for submittal and determination of consistency with the Plan." Further, the Plan states Part III addresses the same items. Part II on page 78 outlines the "Committee Procedures;" therefore, the above sentence is changed to state, "Part II addresses the Solid Waste Facility Siting Committee (SWFSC) procedures."

On page 78, the first sentence states, "When the BOC [Ingham County Board of Commissioners] determines the siting proposal is consistent with the Plan, the BOC will appoint the SWFSC to implement the siting mechanism container [sic] herein." The term consistent is confusing because the BOC will not determine the consistency of a proposal until the end of the siting process. This sentence is changed to read as follows, "When the BOC determines the siting proposal is administratively complete, the BOC will appoint the SWFSC to implement the siting mechanism."

The term consistency is used to mean administratively complete in the first paragraph of Part III on page 78. This sentence states, "The BOC shall determine consistency and ask the DPA [Designated Planning Agency] to initiate the review process for the SWFSC." In order to reflect the correct siting procedure, this sentence is changed to state, "The BOC shall determine if the proposal is administratively complete and ask the DPA to initiate the review process for the SWFSC."

On page 79, the first paragraph states the DPA shall have 15 days to determine if the application is administratively complete. The intent of Ingham County (County) was to have the DPA review the proposal to determine if it is administratively complete and forward their recommendation to the BOC, who will have responsibility for the final determination of administrative completeness. A default mechanism has not been established should the DPA fail to make their recommendation to the BOC; therefore, the following sentence is added to the first paragraph, "If the DPA does not make their recommendation to the BOC within the 15-day time frame, the proposal shall be considered administratively complete and will be forwarded to the BOC for their determination."

On page 79, the last paragraph states, "The review period for the proposal begins on the day the proposal is determined to be administratively complete by the BOC, or at the first full committee meeting of the SWFSC if the siting mechanism is triggered." The date the BOC determines the application to be administratively complete and the date of the first committee meeting of the SWFSC are two separate dates. Previously on page 78, the Plan states the first meeting of the SWFSC will trigger the review process. This step of the siting process should be clarified to give certainty regarding which date will be used as the start of the siting review period. In order to remain consistent with the previous language of the Plan, this sentence is changed to read, "The review period for the proposal begins at the first committee meeting of the SWFSC. If the committee has not met within 15 days after the BOC has appointed the SWFSC, the BOC will proceed with the review of the proposal."

On page 79, the last paragraph states, "At the end of 15 calendar days after receipt of proposal by the BOC, and they fail to act as specified above, the review period will officially begin." This sentence is the default mechanism to initiate the review process should the BOC fail to determine if the application is administratively complete within 15 days. As written, this sentence does not clearly convey this process, and the only 15-day time frame that has been discussed in the siting process is the 15-day time frame for the DPA to make their recommendation to the BOC regarding the proposal being administratively complete. In addition, modifications have already been suggested to clarify the start date of the review period; therefore, this sentence is no longer necessary. In order to clarify that the BOC will have 15 days to determine if an application is administratively complete and establish a default mechanism, the following sentences are added to this paragraph, "After receiving the recommendation from the DPA, the BOC shall have 15 days to determine if the application is administratively complete. If the BOC fails to make their determination within 15 days, the application shall be considered administratively complete."

On page 80, the first paragraph states, "The BOC can determine at this time if they want the DPA to review the proposal for administrative and PLAN process consistency, or appoint the SWFSC to initiate the site review process." The County's intent was to allow the BOC to choose either the DPA or the SWFSC to perform the siting review. There is no mention of the DPA being responsible for performing the

siting review, nor is there any further discussion of the procedure when the DPA is responsible for reviewing the proposal for consistency. In order to convey what the County's intent was in approving the Plan, significant modifications would be needed throughout the entire siting process. In order to alleviate any confusion regarding the siting process, this existing sentence is deleted from the Plan. The County may choose to revise the siting process in order to reflect their intent when approving the Plan; however, that would need to be accomplished through a properly promulgated Plan amendment.

On page 81, the second paragraph in Part IV states, "The DPA and/or SWFSC shall evaluate the adequacy of the information required by this Part." Throughout the entire siting process, there is no mention of the SWFSC having any responsibility in determining whether or not the application is administratively complete. The BOC is the only other party that has been mentioned as being responsible for determining if a proposal is administratively complete. In order to be consistent with the previous language in the siting process, this sentence now reads, "The DPA and/or the BOC shall determine if all information required by this Part is submitted."

On page 86, the second sentence in the Administrative Completeness Determination section states, "If the developer has referenced or included specific information addressing each of the items above, the proposal shall be considered administratively complete." The Plan previously states the requirements of a complete application include the information required in Part IV, all necessary documentation demonstrating compliance with the criteria in Part V or Part VI, and a written description of the proposed facility and its intended use. In order to alleviate any discrepancy regarding what is the requirement for a complete application, this sentence is modified to read:

The proposal shall be considered administratively complete if the developer has referenced or included specific information addressing each of the items above, has submitted the necessary documentation demonstrating compliance with the criteria in Part V or Part VI, whichever is applicable, and has included a written description of the proposed facility and its intended use.

On page 88, the question associated with criterion number 7 states, "Is specific documentation included?" The criterion does not appear to be whether or not documentation was provided; therefore, the question should be modified to reflect the requirement of the criterion. The determination of consistency is not based on how many answers are yes or no, but rather, if the proposal meets the requirement of the specific criterion. In order to alleviate any discrepancy regarding what is required to meet the criterion, the question associated with criterion number 7 now reads, "Is the facility located in an environmental area or in areas of unique habitat?"

In addition, the questions associated with criteria 8, 9, 10, and 11 on page 88 should be changed to reflect the requirements of the criteria. The questions are changed to read as follows:

8. Is the landfill located within 10,000 feet of a licensed airport?
9. Is the facility located on lands enrolled under Part 361?
10. Is the facility located in a 100-year flood plain?
11. Is the facility located on a parcel of at least 50 acres?

[On page 89, criterion number 15](#) appears to be a design and operation standard. Evaluating whether the design of the site provides staging and parking such that access roads remain free of waiting vehicles is difficult to determine unless a facility has already been constructed. In order to make this criterion objective and measurable, the following sentence shall replace the current language, "The developer must submit a signed statement agreeing to provide staging and parking areas for trucks, employees, and visitors such that access roads remain free of waiting vehicles." In addition, the corresponding question is changed to read, "Is the signed statement included?" This comment also applies to criterion number 10 on [page 92](#).

[Once again, on page 89, criterion number 16](#) appears to be a design and operation standard and would be difficult to evaluate unless a facility has been constructed. In addition, the second sentence in this criterion states, "The landscaping must serve as an effective sight barrier around the active fill area." There is no definition of what the term "effective" means. In order to make this criterion objective and measurable, the following sentence replaces the current language, "The developer must submit a signed statement agreeing to provide and maintain landscaping, including shrubbery, trees, and berming, in order to beautify the view of the landfill." The corresponding question is also changed to read, "Is the signed statement included?"

[On page 91, the question corresponding to criterion number 5 states](#), "Is specific documentation included?" The criterion does not require documentation to be provided; therefore, this question is changed to reflect the requirement of the criterion and now reads, "Is the facility located on a parcel of land at least 50 acres in size?"

[Once again, on page 92, the question associated with criterion number 9](#) does not appear to reflect the requirement of the criterion. This question is modified to read, "Is access to the site directly through a residential subdivision?"

[On page 93, the second question for criterion number 12 states](#), "Is the required documentation included?" The criterion does not ask for documentation to be submitted; therefore, this question is deleted from the Plan.

[On page 93, the question corresponding to criterion number 13](#) asks for documentation; however, the criterion states a facility shall not be located on lands enrolled under Part 361, Farmland and Open Space Preservation, of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended (Act 451). In order for the question to reflect the requirement of the criterion, the question is changed to read, "Is the facility proposed to be constructed on lands enrolled under Part 361?"

[On page 98](#), the terms business and/or residential are used after the second question titled "Type of disposal area affected." Inadvertently, the County described the type of community that the ordinance was affecting, rather than the type of disposal area. In order to alleviate any discrepancy regarding the local ordinances, the terms business and/or residential are deleted from the ordinances listed on pages 98 and 99.

[On page 99](#), reference to the Delhi Charter Township ordinance, as written, provides overly broad authority for adoption and enforcement of local regulations, and a copy of the ordinance was not included in the Attachments. Section 11538(8) of Part 115, Solid Waste Management, of Act 451 preempts enforcement of all local regulation of disposal area location, development, and operation except to the degree approved by the DEQ as part of the Plan. The County provided a copy of the Delhi Charter Township ordinance; therefore, in order to alleviate any discrepancy regarding what is authorized in the Plan, a copy of the ordinance is added to the Local Ordinances section in the Attachments. Because a copy of the Delhi Charter Township ordinance is included in the Plan, the language that states the developer should call Mr. Tom Reich for requirements or restrictions regarding this ordinance, is deleted from the Plan.

[Section D-3 contains Ordinance No. 235](#) regulating refuse collection and disposal practices in the city of Williamston. As written, this ordinance contains language requiring local licensing of disposal areas, which is not authorized under Section 11538(8) of Part 115. This ordinance contains additional information that does not apply to disposal areas; therefore, those sections of the ordinance remain enforceable whether or not they are included in the Plan. In order to alleviate any confusion regarding the local regulations that are authorized in the Plan, Ordinance No. 235 is deleted from the Plan.

[On page 29, the first paragraph states](#), "If a licensed solid waste disposal area is currently operating within another County and meets all conditions set forth in the Plan, including any conditions established in Appendix A or pertaining to Appendix A, ..." Further, on page A-8 in Appendix A, the second proposed funding mechanism outlines how the County may choose to have contractual agreements with disposal facilities authorized to dispose of waste generated in the County and as part of this contract, these disposal facilities will pay a fee for accepting the County's waste. This language indicates that if the County chooses to implement this funding mechanism, solid waste generated in the County is not authorized for export to the

specific disposal facility unless a contract has been executed and only those facilities which enter into contractual agreements are authorized for export. A clarification is needed to confirm the County has sufficient disposal capacity because it is unclear which facilities in Table 2-A are authorized for export and will provide disposal capacity should this funding mechanism be implemented. In order to clarify the County has sufficient disposal capacity upon implementation of this funding mechanism, copies of the fully executed contracts, to date, are added to the Listed Capacity section of the Plan.

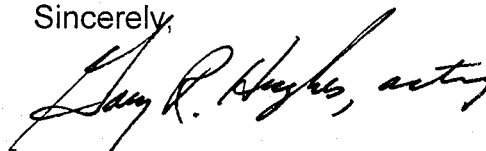
With these modifications, the County's updated Plan is hereby approved and the County now assumes responsibility for the enforcement and implementation of this Plan. Please ensure that a copy of this letter is included with copies of the approved Plan distributed by the County.

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

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

The DEQ applauds your efforts and commitment in addressing the solid waste management issues in Ingham County. If you have any questions, please contact Ms. Dumroese, Solid Waste Management Unit, at 517-373-4738.

Sincerely,



Russell J. Harding
Director
517-373-7917

cc: Senator John J. H. Schwarz, M.D.
Senator Dianne Byrum
Representative Paul N. DeWeese
Representative Virg Bernero
Representative Michael Murphy
Representative Gretchen Whitmer
Mr. James R. Wilson, Ingham County Health Department
Mr. Arthur R. Nash Jr., Deputy Director, DEQ
Mr. Timothy R. Sowton, Legislative Liaison, DEQ
Mr. Jim Sygo, DEQ
Ms. Joan Peck, DEQ
Mr. Seth Phillips, DEQ - Shiawassee
Ms. Lynn Dumroese, DEQ
Ingham County File

Ingham County Health Department

Bruce B. Bragg, M.P.H., Director
Dean G. Sienko, M.D., M.S., Medical Director

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FAX (517) 887-4310
December 4, 2000

Administration
(517) 887-4311

Ms. Lynn Dumroese
Solid Waste Management Unit
Waste Management Division
Michigan Department of Environmental Quality
Hollister Building P.O. Box 30478
Lansing Mi, 48909-7973

Subject: Ingham County Plan Update


Dear Ms. Dumroese:

In your October 23, 2000, letter to Jim Wilson, you proposed several changes to the Ingham County Solid Waste Management Plan Update. By way of this letter, I am informing you that the Ingham County Board of Commissioners has reviewed the changes you have proposed. The Board accepts these changes and requests that they be appended to the Plan Update by reference in the Department of Environmental Quality's approval letter for the Plan Update.

Attached is a copy of the Resolution adopted by the Board of Commissioners at the November 28, 2000 meeting wherein they accept the changes to the Plan Update you proposed in your October 23, 2000, letter. The resolution also agrees to have MDEQ administratively make these modification to the Plan as part of the MDEQ approval process.

Ingham County greatly appreciates the support and assistance from you and your colleagues in developing the Ingham County Solid Waste Management Plan Update. We look forward to your communication announcing the final approval of the Plan. If you have any questions or concerns, please do not hesitate to call me at (517) 887-4311 or Jim Wilson at (517) 887-4523.

Sincerely,


Bruce Bragg, MPH
Director

Attachment

cc: Jerry Ambrose w/o attachment
Naomi Gaynor w/o attachment
Bob Godbold w/o attachment
John Neilsen w/o attachment
Jim Wilson w/o attachment

Introduced by the Human Services and Finance Committees of the:

INGHAM COUNTY BOARD OF COMMISSIONERS

**RESOLUTION TO ACCEPT MODIFICATION TO THE INGHAM COUNTY SOLID WASTE PLAN
UPDATE PROPOSED BY THE MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY**

RESOLUTION #00-271

WHEREAS, the Ingham County Board of Commissioners has adopted a Solid Waste Plan Update after substantial work by the Ingham County Solid Waste Planning Committee to develop and recommend the update to the 1990 Solid Waste Management Plan; and

WHEREAS, the Board of Commissioners submitted the Solid Waste Plan Update to the Director of the Michigan Department of Environmental Quality (MDEQ) for consideration and approval; and

WHEREAS, the MDEQ has advised that a number of modifications to the Plan must be made in order for the Plan to be acceptable to MDEQ Director; and

WHEREAS, the MDEQ proposed modifications have been reviewed by the Health Department and Controller's staff and also by the County Attorney, with the conclusion that the changes are editorial in nature and not substantive; and

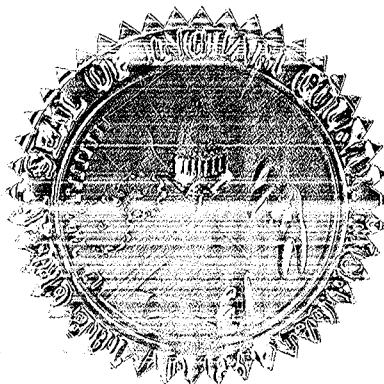
WHEREAS, the Health Officer recommends that the Board of Commissioners approve of the MDEQ modifications and agree to have the MDEQ administratively make these modifications to the Plan as part of the MDEQ approval of the Plan.

THEREFORE BE IT RESOLVED, that the Ingham County Board of Commissioners' MDEQ proposed modifications, included in the October 23, 2000 letter to Mr. James R. Wilson from Lynn Dumroese, Solid Waste Management Unit, and supports the MDEQ administratively making these modifications to the Plan as part of the MDEQ approval of the Plan.

BE IT FURTHER RESOLVED, that the Health Officer is directed to communicate this acceptance to the MDEQ Director.

HUMAN SERVICES: Yeas: Czarnecki, Smiley, Grebner, Schmidt, Severino **Nays:** None
Absent: None **Approved 11/20/00**

FINANCE: Yeas: Bernero, Grebner, Czarnecki, McDonald, Schafer, Juall, Minter
Nays: **Absent:** None **Approved 11/21/00**



STATE OF MICHIGAN)

)ss

COUNTY OF INGHAM)

I, Mike Bryanton, Clerk for the County of Ingham, do hereby certify that the above and foregoing is a true and correct copy of a resolution adopted by the Board of Commissioners of the County of Ingham, Michigan on November 28, 2000 as appears of record in my office, and that I have compared the same with the original, and that it is a true transcript therefrom and of the whole thereof.

IN TESTIMONY WHEREOF, I have hereunto set my hand and affixed the seal of said County at Mason, Michigan, this 29th day of November A.D. 2000.

MIKE BRYANTON, INGHAM COUNTY CLERK

by Aerisa Borsuk
Deputy Clerk

Ingham County Health Department

Bruce B. Bragg, M.P.H., Director
Dean G. Sienko, M.D., M.S., Medical Director

Human Services Building
5303 South Cedar Street
O. Box 30161
Lansing, Michigan 48909-7661
FAX (517) 887-4310

Administration
(517) 887-4311

July 20, 2000

Michigan Department of Environmental Quality
Solid Waste Management Unit
Attention : Lynn Dumroese
Hollister Building, P.O. Box 30478
Lansing, MI, 48909-7973

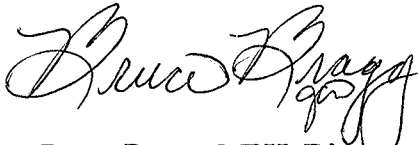
Dear Ms. Dumroese:

On behalf of the Ingham County Board of Commissioners, I am submitting a copy of Ingham County Solid Waste Management Plan Update 2000 for your approval and review. The Plan was adopted by the Board of Commissioners on April 25, 2000 and to date has been approved by 18 of 24 municipalities. Although seventy five percent of the municipalities have approved the Plan, we will continue to present the Plan to all remaining municipalities and we are hopeful of all 24 eventually adopting the Plan.

The ICHD was appointed as the designated agency for the Plan update. Jim Wilson, Special Programs Coordinator, Bureau of Environmental Health was the principal staff person assigned to work with the Solid Waste Management Planning Committee.

We greatly appreciate the support and assistance from you and the DEQ staff. Our Plan closely follows the DEQ Plan Format and the Guide to Preparing the Plan was an excellent tool to reference during this process. I look forward to hearing from you in the near future regarding your evaluation of the Ingham County Plan. If you have questions or concerns, please do not hesitate to call me at (517) 887-4311 or Jim Wilson (517) 887-4523.

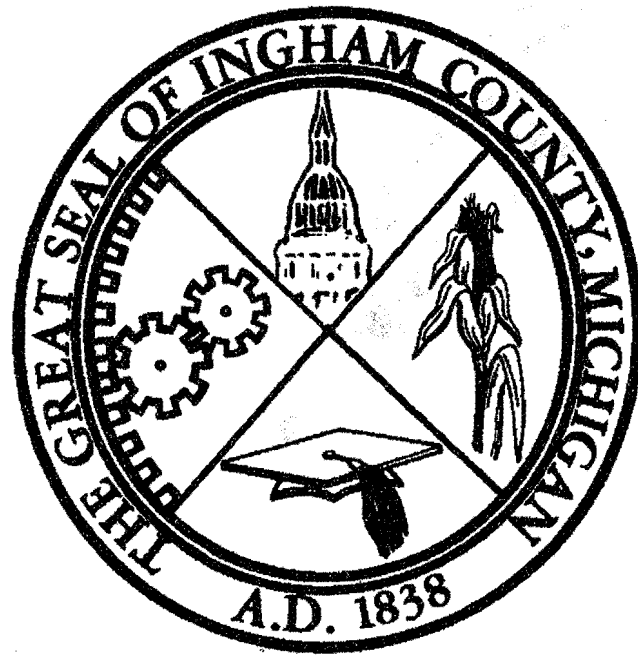
Sincerely,



Brace Bragg, MPH, Director
Ingham County Health Department
Ingham County Designated Planning Agency

James R. Wilson

INGHAM COUNTY SOLID WASTE MANAGEMENT PLAN



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

5/2/2000

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INGHAM COUNTY 2000 PLAN UPDATE COVER PAGE

The natural Resources and Environmental Protection Act, 1994 PA 451, as amended (NREPA), Part 115, Solid Waste Management, and its Administrative Rules, requires that each County have a Solid Waste Management Plan Update (Plan) approved by the Michigan Department of Environmental Quality (DEQ). Section 11539a requires the DEQ to prepare and make available a standardized format for the preparation of these Plan updates. This Plan was prepared using the standard format provided by DEQ with alteration.

DATE SUBMITTED TO THE DEQ: *July 20 , 2000*

This Plan only includes Ingham County and no other Counties are participating in this Plan.

No municipalities from outside Ingham County have requested to be included in this Plan nor have any municipalities from within Ingham County requested or been approved to be included in the Plan of another County according to Section 11536 of Part 115 of the NREPA.

DESIGNATED PLANNING AGENCY PREPARING THIS PLAN UPDATE:

Ingham County Health Department

CONTACT PERSON:

Jim Wilson

ADDRESS:

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Lansing, MI 48909*

PHONE:

(517)887-4523

FAX: *(517)887-4560*

E-MAIL:

HE_WILSON@Ingham.Org

CENTRAL REPOSITORY LOCATIONS:

*Ingham County Health Department,
Bureau of Environmental Health
5303 S. Cedar Street
Lansing, MI 48909*

EXECUTIVE SUMMARY

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

Ingham County is located in south central lower Michigan, covers over 560 square miles, is divided into 16 townships and has 23 local units of government. It has a diverse population of approximately 285,737, which has experienced a slight decline since 1993. The county has a highly educated work force of which >29% of the year group >25 years old have a B.S. degree or higher. The State capital is located in the northwest corner of the county in the City of Lansing and the city is surrounded by five communities referred to as the Greater Lansing area (City of Lansing, City of East Lansing, Meridian, Delhi, and Lansing Township; Delta Township is in Eaton County, but is considered part of the Greater Lansing Area). The Greater Lansing area houses approximately 84% of the population and although there has been a shift in population, the majority has stayed in the Greater Lansing area. Ingham County has a median family income of >\$40,000 dollars and has approximately 100,000 occupied housing units. The county has a work force >140,000 of which 100,000 are supported by the private sector and the majority of these jobs are related directly or indirectly to the auto industry. The economic structure of Ingham County relies heavily on three major employers, State government, General Motors, and Michigan State University. These employers employ >30% of the County's work force.

Population centers and growth rates are key elements in forecasting future solid waste trends and needs. The information provided here, and in the tables in the Demographic Section, is from the U.S. Census Bureau, Michigan Information Center and Tri-County Regional Planning Agency. Although there has been a population shift, it has been mostly in the Greater Lansing area. Municipalities have solid waste systems in place that can handle the change.

Ingham County's population appears to be stabilized and the projected growth rate through the year 2010 is only 3%. This should not impact on existing solid waste systems. Governmental programs (Brownfield, Pollution Prevention, Environmental Regulations) are focusing more and more on encouraging migration of jobs and facilities back to the cities. This may reverse the previous trend, but the impact on solid waste systems should be minimal.

The Ingham County Board of Commissioners believe a County Solid Waste Program is the key element in the management of solid waste in Ingham County. The Board has supported a solid waste program that monitors and enforces solid waste in Ingham County from generation to the final disposal. They passed a resolution, with 100% support, for the implementation of the Solid Waste Management Plan update process and made appointments of personnel and agencies represented on the Committee. Chair, Linda Sims, gave the opening comments at the initial Solid Waste Planning Committee meeting in December of 1997, with the following guidance. She recognized the Health Department as the Designated Planning Agency, and directed that they would provide staffing and technical assistance to the Committee. Commissioner Sims expressed the significant need for educational efforts and asked that the Committee keep recycling and waste reduction in the forefront. Commissioner Sims stated that funding for the Solid Waste Management Program is important and that Ingham County can be proud of its accomplishments, thanks both to the efforts of the public and private sectors. Commissioner Sims stressed that we want the best for our citizens and that a long process lay before the Committee, but this is a good group and we can be confident the Committee will strengthen and improve our Plan.

OVERVIEW OF THE COUNTY

| Township or Municipality Name | Population | % Land Use | | % of Economic Base* | | | | |
|------------------------------------|----------------|-------------|-------------|---|------------|----------------|-------------|------------|
| | | Rural | Urban | Ag | For | Ind | Com | Other |
| <u>Alaiedon Township</u> | <u>3,268</u> | <u>90%</u> | <u>10%</u> | <u>66%</u> | <u>10%</u> | <u>0.1%</u> | <u>2%</u> | <u>22%</u> |
| <u>Aurelius Township</u> | <u>2,864</u> | <u>84%</u> | <u>16%</u> | <u>74%</u> | <u>13%</u> | <u>no data</u> | <u>0.2%</u> | <u>13%</u> |
| <u>Bunker Hill Township</u> | <u>1,929</u> | <u>97%</u> | <u>3%</u> | <u>58%</u> | <u>21%</u> | <u>no data</u> | <u>0.1%</u> | <u>21%</u> |
| <u>Delhi Township</u> | <u>21,066</u> | <u>65%</u> | <u>35%</u> | <u>30%</u> | <u>17%</u> | <u>0.9%</u> | <u>5%</u> | <u>47%</u> |
| <u>East Lansing City</u> | <u>48,192</u> | <u>9%</u> | <u>91%</u> | <u>Data included in Lansing & Meridian Twps</u> | | | | |
| <u>Dansville Village</u> | <u>439</u> | <u>67%</u> | <u>33%</u> | <u>Data included within Ingham Township</u> | | | | |
| <u>Ingham, balance of Twp</u> | <u>1,692</u> | <u>69%</u> | <u>31%</u> | <u>64%</u> | <u>18%</u> | <u>nodata</u> | <u>0.2%</u> | <u>18%</u> |
| <u>Lansing City</u> | <u>121,051</u> | <u>3%</u> | <u>97%</u> | <u>Data included within Lansing Township</u> | | | | |
| <u>Lansing Township</u> | <u>8,657</u> | <u>0%</u> | <u>100%</u> | <u>4%</u> | <u>8%</u> | <u>5%</u> | <u>15%</u> | <u>68%</u> |
| <u>Webberville Village</u> | <u>1,784</u> | <u>36%</u> | <u>64%</u> | <u>Data included within Leroy Township</u> | | | | |
| <u>Leroy, balance of Twp</u> | <u>2,095</u> | <u>73%</u> | <u>27%</u> | <u>75%</u> | <u>10%</u> | <u>0.1%</u> | <u>0.7%</u> | <u>14%</u> |
| <u>Leslie City</u> | <u>2,116</u> | <u>19%</u> | <u>81%</u> | <u>Data included within Leslie Township</u> | | | | |
| <u>Leslie Township</u> | <u>2,319</u> | <u>98%</u> | <u>2%</u> | <u>72%</u> | <u>11%</u> | <u>nodata</u> | <u>0.6%</u> | <u>16%</u> |
| <u>Locke Township</u> | <u>1,635</u> | <u>98%</u> | <u>2%</u> | <u>79%</u> | <u>11%</u> | <u>0%</u> | <u>0.1%</u> | <u>10%</u> |
| <u>Mason City</u> | <u>7,374</u> | <u>19%</u> | <u>81%</u> | <u>Data included within Vevay Township</u> | | | | |
| <u>Meridian Township</u> | <u>38,864</u> | <u>45%</u> | <u>55%</u> | <u>21%</u> | <u>14%</u> | <u>0.2%</u> | <u>8%</u> | <u>57%</u> |
| <u>Onondaga Township</u> | <u>2,706</u> | <u>86%</u> | <u>14%</u> | <u>66%</u> | <u>18%</u> | <u>no data</u> | <u>0.3%</u> | <u>17%</u> |
| <u>Stockbridge Village</u> | <u>1,172</u> | <u>0%</u> | <u>100%</u> | <u>Data included within Stockbridge Twp</u> | | | | |
| <u>Stockbridge, balance of Twp</u> | <u>1,983</u> | <u>83%</u> | <u>17%</u> | <u>64%</u> | <u>18%</u> | <u>no data</u> | <u>0.7%</u> | <u>17%</u> |
| <u>Vevay Township</u> | <u>3,898</u> | <u>94%</u> | <u>6%</u> | <u>62%</u> | <u>11%</u> | <u>0.7%</u> | <u>0.7%</u> | <u>26%</u> |
| <u>Wheatfield Township</u> | <u>1,670</u> | <u>92%</u> | <u>8%</u> | <u>72%</u> | <u>15%</u> | <u>0.3%</u> | <u>0.3%</u> | <u>12%</u> |
| <u>White Oak Township</u> | <u>1,158</u> | <u>100%</u> | <u>0%</u> | <u>78%</u> | <u>13%</u> | <u>no data</u> | <u>0%</u> | <u>9%</u> |
| <u>Williamston City</u> | <u>2,960</u> | <u>19%</u> | <u>81%</u> | <u>Data included within Williamstown Twp</u> | | | | |
| <u>Williamstown Township</u> | <u>4,651</u> | <u>65%</u> | <u>35%</u> | <u>53%</u> | <u>11%</u> | <u>no data</u> | <u>1%</u> | <u>35%</u> |

*Source: Tri-County Regional Planning Agency

*Ag = Agriculture; For = Forestry; Ind = Industry; Com = Commercial; Other = Water, Wetlands, Barren & Open lands, Transportation, Mineral Extraction & Wells, Outdoor Recreation.

| | | | |
|----------------------------|----------------|--------------|----------------|
| Total Population: | <u>285,543</u> | Total Acres: | <u>358,903</u> |
| Total Agriculture (acres): | <u>209,352</u> | | |
| Total Forestry (acres): | <u>49,670</u> | | |
| Total Industry (acres): | <u>1,612</u> | | |
| Total Commercial (acres): | <u>8,020</u> | | |
| Total Other (acres): | <u>90,249</u> | | |

Ag = Agriculture; For = Forestry; Ind = Industry; Com = Commercial; Other = Water, Wetlands, Barren & Open lands, Transportation, Mineral Extraction & Wells, Outdoor Recreation.

CONCLUSION

The selected solid waste management system consists of the best management practices which meet the needs of Ingham County. Resource conservation, waste reduction and resource recovery will remain major features of the selected system. While landfilling will continue to be the method of disposal for much of Ingham County waste, programs based upon the three components, resource conservation, waste reduction and resource recovery, will be created and improved to increase diversion rates. The selected system meets or exceeds the State's Solid Waste Policy Goals.

SELECTED ALTERNATIVES

The Solid Waste Planning Committee appointed sub-committees to develop and recommend strategies and methods to be utilized by the County to handle its solid waste for this planning period. Proposals and concepts were presented to the full committee and evaluated for the selection of the solid waste system. Alternative systems were considered but non-selected as proposed in the Appendix.

Ingham County will maintain its current system of waste management consisting of the private and public collection of residential, commercial and industrial wastes. The reason landfilling was chosen to be continued, was that it has been found to work in our community. While land filling remains the predominant method of waste disposal, the County will strive to work cooperatively with other entities to enhance existing waste reduction and recovery efforts and develop new programs. Increasing the volume of waste diverted from landfills through these programs will be the focus of the selected waste management system for this planning period.

INTRODUCTION

GOALS & OBJECTIVES

To comply with Part 115 and its requirements, each Plan must be directed towards goals and objectives based on the purposes stated in Part 115, Section 11538.(1)(a), 11541.(4) and the State Solid Waste Policy adopted pursuant to this Section, and Administrative Rules 711(b)

(i) and (ii). At a minimum, the goals must reflect two major purposes of Solid Waste Management Plans:

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

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

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

The following goals and objectives were developed for implementation and support of the State and County's Solid Waste Management Plan. Goals are statements of purpose and reflect the intent of the Plan and the objectives are the avenues and tools to accomplish the goals. Some objectives have measurable outputs while others are concise statements to accomplish the intent.

GOAL 1:

Develop and implement integrated solid waste management programs which provide for the protection of public health and the environment.

Objective 1a: Annually fund the necessary resources to enforce, implement and provide education and guidance for the diversion activities of the waste stream to meet the intent of the Plan.

Objective 1b: Assist communities in the development of local environmental protection programs through management strategies and inventory of existing and potential sources of contamination for the protection of our groundwater.

Objective 1c: Expand the existing household hazardous waste collection program to include more items and develop a strategy to fund and site a permanent collection facility.

Objective 1d: Ensure regulated and non-regulated hazardous waste are managed and disposed of in accordance with Federal, State, and local regulations and EPA best management practices.

Objective 1e: Report annually to the Board of Commissioners on the fulfillment of the Solid Waste Plan goals and objectives.

GOAL 2:

Work regionally with other government agencies, municipalities and organizations to find common solutions to solid waste problems, minimize duplication of effort and to cooperate on solid waste education, recycling, marketing and disposal.

Objective 2a: Develop Ingham County government waste minimization, resource recovery and buy recycled programs which could act as a model for other agencies, municipalities, businesses and organizations.

Objective 2b: Insure the efforts to design a base level of community solid waste management, including composting and recycling, for all Ingham County residents.

Objective 2c: Promote countywide recycling opportunities and encourage recycling among local businesses.

GOAL 3:

Develop within the solid waste infrastructure a resource protocol to ensure that the materials generated in the solid waste stream are minimized and the remaining utilized to the maximum extent possible and with regards to their interrelation with the economy, market and good sound environmental practices.

Objective 3a: Provide education and guidance to the general public, private/public sector and governmental units on best management practices for the implementation of individual and local composting operations.

Objective 3b: Provide a communication network system for the general public, public/private sector and governmental units to obtain solid waste information and educational materials concerning recycling, waste reduction, household hazardous waste, composting and other special concerns relating to solid waste management.

Objective 3c: Support solid waste education to special groups (i.e. schools, community service groups and environmental groups) and community functions or activities.

Objective 3d: Develop Pollution Prevention (P2) concepts into the educational infrastructure to ensure the minimization of all forms of waste.

Objective 3e: Provide education to the general public about the various waste reduction or handling options including, but not limited to, consumer purchasing practices and volume based collection systems.

GOAL 4:

Develop within the Plan a solid waste infrastructure that addresses collection, transportation, and disposal of solid waste; and establish mechanisms for management, implementation, enforcement and amendment of the Plan. The Plan should reflect the best management practices for Ingham County and all units of government within its geographical borders.

Objective 4a: Establish a core county* concept in the Plan for authorization of counties and having export/import parity in solid waste flow between jurisdictions.

Objective 4b: Establish requirements in the Plan that solid waste disposal facilities must meet to be authorized in the Plan and receive Ingham County solid waste.

Objective 4c: Develop funding mechanisms to support implementation and enforcement of the Plan.

GOAL 5:

Encourage the purchase and use of products manufactured from recycled materials in the commercial, private and municipal sectors.

Objective 5a: The County will take the lead in the procurement of recycled products for county governmental units and encourage local governments and businesses through educational programs and encouraging the adoption of recycled products purchase policies.

Objective 5b: Work cooperatively with the local economic development organization to recruit businesses which manufacture items from recycled material.

Objective 5c: Identify and promote construction and home improvement products manufactured from recycled materials which meet building codes and performance standards.

Objective 5d: Provide education on recycled and reusable product procurement opportunities, specifications and performance.

* Core Counties shall be defined as counties authorized in each others Plan and having export/import parity in Solid Waste flow between their jurisdictions.

DATA BASE

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

The failure to collect data on solid waste reduction, reuse, recycling and composting in residential, commercial and industrial sectors is a major impediment to solid waste planning and improved solid waste management. Without the collection of such data immediately, the county will be thwarted in efforts to measure the effectiveness of solid waste management programs and to determine trends.

The county should implement a program to collect data on solid waste management through methods including, but not limited to:

1. A periodic survey of residential, commercial and industrial generators to determine recycling rates and recycled materials;
2. Periodic waste stream assessments, preferably at the point of generation;
3. Outreach to and data collection efforts from established recycling programs.

The county should publish an annual report of the collected data and make it available, both electronically and in paper format.

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

| <u>Sources of Solid Waste</u> | <u>Quantity Waste/Cubic Yards</u> |
|-------------------------------|-----------------------------------|
| Residential | 769,906 |
| Manufacturing | 137,077 |
| Commercial | <u>373,163</u> |
| | 1,280,146 |

TOTAL QUANTITY OF SOLID WASTE GENERATED: 1,280,146/Cu.Yd./Yr.

Tons or Cubic Yards in 1 Year

TOTAL QUANTITY OF SOLID WASTE NEEDING DISPOSAL:

Tons or Cubic Yards in FY98 1,123,099/Cu.Yd./Yr.

Per reports to DEQ from Granger,
Daggett & C&C Landfill

Residential

$$\# \text{Residents} \times \frac{4.4 \text{ lbs/day}}{600 \text{ lbs/Cu.Yd.}} \times 365 = 769,906 \text{ CU.YD./YR.}$$

Manufacturing

$$\# \text{ Employees} \times \frac{10.6 \text{ lbs/day}}{600 \text{ lbs/Cu.Yd.}} \times 260 = 137,077 \text{ CU.YD./YR.}$$

Commercial

$$\# \text{ Employees} \times \frac{5.6 \text{ lbs/day}}{600 \text{ lbs/Cu.Yd.}} \times 260 = 373,163 \text{ CU.YD./YR.}$$

*Based on 1997 estimates from EPA.

SOLID WASTE DISPOSAL AREAS

The following is a summary of those landfills that were authorized in the previous Plan* to serve Ingham County's solid waste disposal needs for the planning period. Detailed facility information follows:

| FACILITY | LOCATION | ANNUAL DISPOSAL VOLUME (Cu. Yd.) | CURRENT CAPACITY (Cu. Yd.) | ESTIMATED CAPACITY REMAINING | Amount of Ingham County Waste Accepted Annually | Authorized Condition |
|---------------------|--------------------|----------------------------------|--|---|---|----------------------|
| Granger - Watertown | Clinton | 600,000 | 7,616,000 | 32 Years | 100% | Primary |
| Granger - Wood Rd. | Clinton/ Ingham | 600,000 | 10,981,000 | 34 Years | 100% | Primary |
| Daggett | Ingham | 7,000 | 60,000 | 7 Years | 40,000 cu.yd. | Primary |
| C&C | Calhoun | 1,100,000 | 7,570,000 | 7 Years | 988,787 cu.yd. | Primary |
| Venice Park | Shiawassee | 1,000,000 | 2,000,000 cu.yd.- Expansion will yield an additional 15,000,000 cu. yd. | 1.5 Years - Expansion pending, which will increase capacity remaining to 30 years | N/A | Contingency |
| McGill Rd. | Jackson | 63,266 Tons | 1,236,000 | 15 Years | N/A | Contingency |

Primary - Authorized Use On Daily Basis

Contingency - When capacity at primary facilities has been exceeded and can no longer meet the goals of the Plan, the contingent facilities will be utilized.

*1990

For an inventory and description of all solid waste disposal areas within the County, and to be utilized by the County to meet its disposal needs for the planning period, look to The Selected Solid Waste Management Section for list of facilities.

FACILITY DESCRIPTIONS

Facility Type: Type III

Facility Name: Daggett Sand & Gravel

County: Ingham Location: Town: 4N Range: 2W Section: 3

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: Daggett Sand & Gravel, Inc.

| Operating Status (check) | | Waste Types Received (check all that apply) | |
|-------------------------------------|---------------------|---|--------------------|
| <input checked="" type="checkbox"/> | open | <input type="checkbox"/> | residential |
| <input type="checkbox"/> | closed | <input type="checkbox"/> | commercial |
| <input checked="" type="checkbox"/> | licensed | <input type="checkbox"/> | industrial |
| <input type="checkbox"/> | un-licensed | <input checked="" type="checkbox"/> | construction |
| <input type="checkbox"/> | construction permit | <input type="checkbox"/> | contaminated soils |
| <input type="checkbox"/> | open, but closure | <input type="checkbox"/> | special wastes * |
| <input type="checkbox"/> | pending | <input type="checkbox"/> | other: _____ |

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

Site Size:

| | | |
|-----------------------------------|---------------------|------------------|
| Total area of facility property: | <u>10</u> | acres |
| Total area sited for use: | <u>6.4</u> | acres |
| Total area permitted: | <u>6.4</u> | acres |
| Operating: | <u>2-3</u> | acres |
| Not excavated: | <u>-</u> | acres |
| Current capacity: | <u>60,000</u> | yds ³ |
| Estimated lifetime: | <u>7</u> | years |
| Estimated days open per year: | <u>250</u> | days |
| Estimated yearly disposal volume: | <u>7-8 Thousand</u> | yds ³ |

(if applicable)

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

FACILITY DESCRIPTIONS

Facility Type: Type II

Facility Name: Granger Grand River Avenue Landfill

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

Map identifying location included in Attachment Section: Yes X No

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

 Public X Private Owner: Granger Land Development Co.

| Operating Status (check) | | Waste Types Received (check all that apply) | |
|--------------------------|---------------------|---|-------------------------------|
| <u> X </u> | open | <u> X </u> | residential |
| <u> — </u> | closed** | <u> X </u> | commercial |
| <u> X </u> | licensed | <u> X </u> | industrial |
| <u> — </u> | un-licensed | <u> X </u> | construction & demolition |
| <u> X </u> | construction permit | <u> X </u> | contaminated soils |
| <u> — </u> | open, but closure | <u> X </u> | special wastes * |
| <u> — </u> | pending | <u> X </u> | other: <u>Type III Wastes</u> |

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

Site Size:

| | | | |
|---|------------------|------------------|------------|
| Total area of facility property:** | <u>180.9</u> | acres | |
| Total area sited for use:(Plan) | <u>120.9</u> | acres | |
| Total area permitted:(For Disposal, i.e. SWB) | | <u>85.7</u> | acres |
| Operating:(Licensed & Certified) | <u>54.1</u> | acres | |
| Not Developed: | <u>31.6</u> | acres | |
| Current capacity: | <u>7,617,000</u> | yds ³ | Air Yards |
| Estimated lifetime: | <u>32</u> | years | |
| Estimated days open per year: | <u>300</u> | days | |
| Estimated yearly disposal volume: | <u>600,000</u> | yds ³ | Gate Yards |
| (if applicable) | | | |
| Annual energy production: | | | |
| Landfill gas recovery projects: | <u>4.0</u> | megawatts | |
| Waste-to-energy incinerators: | <u> — </u> | megawatts | |

**Includes acres of (separate) closed facility to be consistent with DEQ numbers on Permits and Licenses.

FACILITY DESCRIPTIONS

Facility Type: Type II

Facility Name: Granger Wood Street Landfill

County: Clinton/Ingham Location: Town: 5N/4N Range: 2W Section(s): 34/3

Map identifying location included in Attachment Section: Yes X No

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

 Public X Private Owner: Granger Waste Management Company

| Operating Status (check) | | Waste Types Received (check all that apply) | |
|--------------------------|---------------------|---|------------------------------|
| <u> X </u> | open | <u> X </u> | residential |
| <u> </u> | closed** | <u> X </u> | commercial |
| <u> X </u> | licensed | <u> X </u> | industrial |
| <u> </u> | un-licensed | <u> X </u> | construction & demolition |
| <u> X </u> | construction permit | <u> X </u> | contaminated soils |
| <u> </u> | open, but closure | <u> X </u> | special wastes * |
| <u> </u> | pending | <u> X </u> | other: <u>Type III Waste</u> |

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

Site Size:

| | | | |
|--|-------------------|------------------|--|
| Total area of facility property:** | <u>302.8</u> | acres | |
| Total area sited for use (Plan) | <u>194.8</u> | acres | +67 (future permitting in Ingham County) |
| Total area permitted: (For Disposal, ie. SWB) | <u>104.3</u> | acres | |
| Operating: (Licensed & Certified) | <u>49.5</u> | acres | |
| Not Developed | <u>54.8</u> | acres | |
| Current capacity: | <u>10,981,000</u> | yds ³ | Air Yards |
| Estimated lifetime: | <u>34</u> | years | |
| Estimated days open per year: | <u>260</u> | days | |
| Estimated yearly disposal volume: (if applicable) | <u>600,000</u> | yds ³ | Gate Yards |
| Annual energy production: | | | |
| Landfill gas recovery projects: | <u>3.2</u> | megawatts | |
| Waste-to-energy incinerators: | <u> </u> | megawatts | |

**Includes acres of (separate) Paulson Street Facility to be consistent with DEQ numbers on Permits and Licenses. Also includes spoil/borrow areas to be consistent with DEQ numbers on Permits and Licenses.

FACILITY DESCRIPTIONS

Facility Type: Type II & Type III

Facility Name: Waste Management of Michigan/Venice Park Recycling & Disposal Facility

County: Shiawassee Location: Town: T7N Range: R4E Section(s): 26/27

Map identifying location included in Attachment Section: Yes X No

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

 Public X Private Owner: Waste Management of Michigan

| | | | |
|--------------------------|---------------------|---|--|
| Operating Status (check) | | Waste Types Received (check all that apply) | |
| <u> X </u> | open | <u> X </u> | residential |
| <u> </u> | closed | <u> X </u> | commercial |
| <u> X </u> | licensed | <u> X </u> | industrial |
| <u> </u> | un-licensed | <u> X </u> | construction & demolition |
| <u> </u> | construction permit | <u> X </u> | contaminated soils |
| <u> </u> | open, but closure | <u> X </u> | special wastes * |
| <u> </u> | pending | <u> X </u> | other: <u>Solidification Operation</u> |

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

Site Size: CURRENT

| | | |
|----------------------------------|------------|-------|
| Total area of facility property: | <u>325</u> | acres |
| Total area sited for use: | <u>80</u> | acres |
| Total area permitted: | <u>80</u> | acres |
| Operating: | <u>42</u> | acres |
| Not excavated: | <u>2.5</u> | acres |

| | | |
|--|------------------|--|
| Current capacity: <u>REMAINING</u> | <u>2,200,000</u> | <u> </u> tons or <u> X </u> yds- Gate Cubic Yards |
| Estimated lifetime: | <u>2</u> years | <u>25</u> Years |
| Estimated days open per year: | <u>281</u> days | |
| Estimated yearly disposal volume: (if applicable) | <u>1,000,000</u> | <u> </u> tons or <u> X </u> yds- Gate Cubic Yards |
| Annual energy production: | | |
| Landfill gas recovery projects: | <u>11,500</u> | megawatts |
| Waste-to-energy incinerators: | <u>N/A</u> | megawatts |

FACILITY DESCRIPTIONS

Facility Type: Type II Landfill

Facility Name: McGill Road Landfill

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

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

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

 Public X Private Owner: Waste Management of Michigan, Inc.

| Operating Status (check) | | Waste Types Received (check all that apply) | |
|--------------------------|---------------------|---|---------------------------|
| <u>X</u> | open | <u>X</u> | residential |
| <u> </u> | closed | <u>X</u> | commercial |
| <u>X</u> | licensed | <u>X</u> | industrial |
| <u> </u> | un-licensed | <u>X</u> | construction & demolition |
| <u> </u> | construction permit | <u>X</u> | contaminated soils |
| <u> </u> | open, but closure | <u>X</u> | special wastes * |
| <u> </u> | pending | <u>X</u> | other: _____ |

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

Site Size:

| | | |
|-----------------------------------|------------------|------------------|
| Total area of facility property: | <u>50.5</u> | acres |
| Total area sited for use: | <u>41.8</u> | acres |
| Total area permitted: | <u>18.7</u> | acres |
| Operating: | <u>7.8</u> | acres |
| Not excavated: | <u>17.5</u> | acres |
| Current capacity: | <u>1,236,000</u> | yds ³ |
| Estimated lifetime: | <u>15</u> | years |
| Estimated days open per year: | <u>305</u> | days |
| Estimated yearly disposal volume: | <u>63,226</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: Williamston Transfer Station

County: Ingham Location: Town: T3N Range: R1E Section(s): 1

Map identifying location included in Attachment Section: Yes X No

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

 Public X Private Owner: BFI

| Operating Status (check) | | Waste Types Received (check all that apply) | |
|--------------------------|---------------------|---|---------------------------|
| <u> X </u> | open | <u> X </u> | residential |
| <u> — </u> | closed | <u> X </u> | commercial |
| <u> X </u> | licensed | <u> — </u> | industrial |
| <u> — </u> | un-licensed | <u> X </u> | construction & demolition |
| <u> — </u> | construction permit | <u> — </u> | contaminated soils |
| <u> — </u> | open, but closure | <u> — </u> | special wastes * |
| <u> — </u> | pending | <u> — </u> | other: _____ |

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

Site Size:

| | | |
|----------------------------------|--------------|-------|
| Total area of facility property: | <u> 9 </u> | acres |
| Total area sited for use: | <u> — </u> | acres |
| Total area permitted: | <u> — </u> | acres |
| Operating: | <u> — </u> | acres |
| Not excavated: | <u> — </u> | acres |

| | | |
|-----------------------------------|--------------------|---------------------------------------|
| Current capacity: | <u> — </u> | tons or <u> — </u> yds ³ |
| Estimated lifetime: | <u> — </u> | years |
| Estimated days open per year: | <u> 260 </u> | days |
| Estimated yearly disposal volume: | <u> 208,000 </u> | yds ³ |

(if applicable)

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

FACILITY DESCRIPTIONS

Facility Type: Sanitary Landfill, Type II

Facility Name: C&C Landfill

County: Calhoun Twp: Convis Location: Town: 1S Range: 6W Section(s): 28

Map identifying location included in Attachment Section: Yes X No

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

 Public X Private Owner: BFI Waste Systems of North America, Inc.

| Operating Status (check) | | Waste Types Received (check all that apply) | |
|--------------------------|---------------------|---|---------------------------|
| <u>X</u> | open | <u>X</u> | residential |
| <u> </u> | closed | <u>X</u> | commercial |
| <u>X</u> | licensed | <u>X</u> | industrial |
| <u> </u> | un-licensed | <u>X</u> | construction & demolition |
| <u> </u> | construction permit | <u>X</u> | contaminated soils |
| <u> </u> | open, but closure | <u>X</u> | special wastes * |
| <u> </u> | pending | <u> </u> | other: _____ |

* Explanation of special wastes, including a specific list and/or conditions: Non-hazardous solid and semi-solid wastes, no hazardous or liquid wastes

Site Size:

| | | |
|--|------------------|---|
| Total area of facility property: | <u>224</u> | acres |
| Total area sited for use: | <u> </u> | acres |
| Total area permitted: | <u>154</u> | acres |
| Operating: | <u>33</u> | acres |
| Not excavated:(not constructed) | <u>21</u> | acres Does not include Type III area |
| Current capacity: | <u>3,360,000</u> | yds ³ Airspace remaining as of 11/1/97 7,570,000 gate cubic yards |
| Estimated lifetime: | <u>7</u> | years |
| Estimated days open per year: | <u>286</u> | days |
| Estimated yearly disposal volume: (if applicable) | <u>1,100,000</u> | yds ³ Gate |
| Annual energy production: | | |
| Landfill gas recovery projects: | <u> </u> | megawatts |
| Waste-to-energy incinerators: | <u> </u> | megawatts |

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.

Solid waste management services in Ingham County are a combination of private and municipal collections and privately owned landfills. The cities of Lansing and East Lansing provide weekly garbage pick-up and curbside recycling. They also offer periodic speciality collections for difficult to dispose of items such as appliances, furniture, Christmas trees, yard waste, etc.

The smaller municipalities of Williamston, Webberville, Leslie and Mason contract with private haulers to provide weekly garbage pick-up for their citizens. The remainder of the county is covered by subscription based waste collection services. Most of the private haulers also offer curbside recycling to residents for an additional fee.

The business sector relies on subscription based collections offered by the many large and small haulers located in and around Ingham County. The small haulers provide the "you call, we haul" service for the large volume, infrequent, or bulky item collections.

Current disposal options are limited to 4 facilities, two Granger Landfills (both in Clinton County), C&C Landfill (BFI, Calhoun County), and Daggett Sand and Gravel (Ingham County). With the adoption of this Solid Waste Plan update, the options for solid waste disposal will expand to include the facilities identified in the Solid Waste Disposal Areas Section of this Plan.

CURRENT SOLID WASTE COLLECTION SERVICE PROVIDERS

| SERVICE PROVIDER | PUBLIC/ PRIVATE | SERVICE AREA | PAYMENT | DISPOSAL FACILITY |
|---------------------------|-----------------|----------------------|--------------|--|
| City of Lansing | Public | City of Lansing | General Fund | Granger Landfill |
| City of East Lansing | Public | City of East Lansing | General Fund | Granger Landfill |
| Allied Disposal Company | Private | Ingham County | Customer | Granger Landfill |
| BFI | Private | Ingham County | Customer | C&C Landfill |
| Daggett Rolloff | Private | Ingham County | Customer | Daggett Landfill |
| Granger Container Service | Private | Ingham County | Customer | Granger Landfill |
| Waste Management | Private | Ingham County | Customer | Williamston Transfer Station to Granger Landfill |

The companies listed in the chart provide commercial and residential collection services for the majority of the county. Another dozen or more small companies provide pick-ups for construction clean-up, tree and brush removal, appliance and other bulky items, and one time clean-ups.

EVALUATION OF DEFICIENCIES AND PROBLEMS

The following is a brief listing of the deficiencies or problems in the existing Solid Waste Management Plan*:

- Inadequate funding for educational programs.
- Lack of cooperative efforts to establish regional programs; educational programs, joint marketing of recyclable materials, joint purchase of products with recycled content, etc.
- Few/difficult to access outlets for specialty wastes; fluorescent light tubes, C&D waste, household batteries, household hazardous waste, waste oil, polystyrene, plastic bags, etc.
- Poor coverage of recycling in multi-unit housing.
- Inability to obtain recycling figures from various entities to aid in the assessment of the existing programs, planning and implementation of promotional/educational programs.
- Inadequate outlets for yard waste for out county area.
- Few local efforts directed at business recycling.
- Poor promotion of existing programs.
- Inadequate outreach regarding solid waste issues to out county area, especially schools.
- Lack of disposal options for haulers.

*Deficiencies are not reflective of any individual municipality.

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 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.

RESIDENTIAL WASTE GENERATION*

| | 1998 Population | Waste** | 2003 Population | Waste | 2008 Population | Waste | %Population Change |
|-------------------|--------------------|---------|--------------------|---------|--------------------|---------|-----------------------|
| Alaiedon Twp. | 3,300 | 8,580 | 3,380 | 8,788 | 3,460 | 8,996 | 3.0 |
| Aurelius Twp. | 3,182 | 8,273 | 3,492 | 9,079 | 3,802 | 9,885 | 13.8 |
| Bunkerhill Twp. | 1,943 | 5,052 | 1,978 | 5,143 | 2,013 | 5,234 | 2.2 |
| Delhi Twp. | 21,690 | 56,394 | 23,250 | 60,450 | 24,810 | 64,506 | 9.8 |
| East Lansing | 48,192 | 125,299 | 46,122 | 119,917 | 44,052 | 114,535 | -4.9 |
| Dansville | 441 | 1,146 | 451 | 1,173 | 461 | 1,199 | 0.5 |
| Ingham Township | 1,785 | 4,641 | 1,940 | 5,044 | 2,096 | 5,450 | 12.4 |
| Lansing | 120,501 | 313,303 | 119,131 | 309,741 | 117,761 | 306,179 | -1.3 |
| Lansing Twp. | 8,569 | 22,279 | 8,349 | 21,707 | 8,129 | 21,135 | -2.9 |
| Webberville | 1,812 | 4,711 | 1,882 | 4,893 | 1,952 | 5,075 | 5.1 |
| Leroy Township | 1,940 | 5,044 | 2,135 | 5,551 | 2,330 | 6,058 | 12.5 |
| Leslie City | 2,094 | 5,444 | 2,039 | 5,301 | 1,984 | 5,158 | -2.9 |
| Leslie Township | 2,383 | 6,196 | 2,543 | 6,612 | 2,703 | 7,028 | 9.0 |
| Locke Township | 1,673 | 4,350 | 1,768 | 4,597 | 1,863 | 4,844 | 7.5 |
| Mason | 7,576 | 19,698 | 8,081 | 21,011 | 8,586 | 22,324 | 9.0 |
| Meridian Twp. | 39,938 | 103,839 | 42,623 | 110,820 | 45,308 | 117,801 | 9.0 |
| Onondaga Twp. | 2,794 | 7,264 | 3,014 | 7,836 | 3,234 | 8,408 | 10.7 |
| Stockbridge | 1,162 | 3,021 | 1,137 | 2,956 | 1,112 | 2,891 | -2.5 |
| Stockbridge Twp. | 2,054 | 5,340 | 2,234 | 5,808 | 2,414 | 6,276 | 12.1 |
| Vevay Township | 3,974 | 10,332 | 4,164 | 10,826 | 4,354 | 11,320 | 6.3 |
| Wheatfield Twp. | 1,702 | 4,425 | 1,782 | 4,633 | 1,862 | 4,841 | 6.3 |
| White Oak Twp. | 1,186 | 3,084 | 1,256 | 3,267 | 1,336 | 3,474 | 7.8 |
| Williamston | 2,972 | 7,727 | 3,002 | 7,805 | 3,032 | 7,883 | 1.3 |
| Williamstown Twp. | 4,773 | 12,410 | 5,078 | 13,203 | 5,383 | 13,996 | 8.5 |
| Total | 287,636 | 747,854 | 290,831 | 756,161 | 294,037 | 764,496 | |

*Source of information Tri- County Regional Planning.

**Waste Volume in Cubic Yards.

WASTE GENERATION FOR MANUFACTURING*

| | 1998 Employees | Waste** | 2003 Employees | Waste | 2008 Employees | Waste |
|-------------------|-------------------|---------|-------------------|---------|-------------------|---------|
| Alaiedon Twp. | 313 | 1,440 | 319 | 1,467 | 329 | 1,513 |
| Aurelius Twp. | 33 | 152 | 34 | 156 | 36 | 166 |
| Bunkerhill Twp. | 87 | 400 | 89 | 409 | 93 | 428 |
| Delhi Twp. | 801 | 3,685 | 817 | 3,758 | 858 | 3,947 |
| East Lansing | 3,276 | 15,070 | 3,342 | 15,373 | 3,509 | 16,141 |
| Dansville | 16 | 74 | 16 | 74 | 17 | 78 |
| Ingham Township | 46 | 212 | 47 | 216 | 49 | 225 |
| Lansing | 18,340 | 84,364 | 18,707 | 86,052 | 19,642 | 90,353 |
| Lansing Twp. | 2,205 | 10,143 | 2,249 | 10,345 | 2,361 | 10,861 |
| Webberville | 159 | 731 | 162 | 745 | 170 | 782 |
| Leroy Township | 86 | 396 | 89 | 409 | 93 | 428 |
| Leslie City | 125 | 575 | 128 | 589 | 134 | 616 |
| Leslie Township | 27 | 124 | 28 | 129 | 29 | 133 |
| Locke Township | 10 | 46 | 10 | 46 | 11 | 51 |
| Mason | 734 | 3,376 | 749 | 3,445 | 786 | 3,616 |
| Meridian Twp. | 2,157 | 9,922 | 2,200 | 10,120 | 2,310 | 10,626 |
| Onondaga Twp. | 45 | 207 | 46 | 212 | 48 | 221 |
| Stockbridge | 50 | 230 | 51 | 235 | 54 | 248 |
| Stockbridge Twp. | 16 | 74 | 16 | 74 | 17 | 78 |
| Vevay Township | 277 | 1,274 | 283 | 1,302 | 297 | 1,366 |
| Wheatfield Twp. | 63 | 290 | 64 | 294 | 67 | 308 |
| White Oak Twp. | 9 | 41 | 9 | 41 | 9 | 41 |
| Williamston | 376 | 1,730 | 384 | 1,766 | 403 | 1,854 |
| Williamstown Twp. | 39 | 179 | 40 | 184 | 42 | 193 |
| Total | 29,290 | 134,735 | 29,879 | 137,441 | 31,364 | 144,273 |

*Source of information Tri- County Regional Planning.

**Waste volume in Cubic Yards.

WASTE GENERATION FOR COMMERCIAL BUSINESSES*

| | 1998 Employees | Waste** | 2003 Employees | Waste | 2008 Employees | Waste |
|-------------------|-------------------|----------------|-------------------|----------------|-------------------|----------------|
| Alaiedon Twp. | 1,647 | 3,953 | 1,680 | 4,032 | 1,764 | 4,234 |
| Aurelius Twp. | 174 | 418 | 177 | 425 | 186 | 446 |
| Bunkerhill Twp. | 456 | 1,094 | 183 | 439 | 192 | 461 |
| Delhi Twp. | 4,202 | 10,085 | 4,286 | 10,286 | 4,500 | 10,800 |
| East Lansing | 17,197 | 41,733 | 17,540 | 42,096 | 18,417 | 44,201 |
| Dansville | 82 | 197 | 84 | 202 | 88 | 211 |
| Ingham Township | 240 | 576 | 245 | 588 | 257 | 617 |
| Lansing | 96,287 | 233,657 | 98,213 | 235,711 | 103,124 | 247,498 |
| Lansing Township | 11,575 | 27,780 | 11,807 | 28,337 | 12,397 | 29,753 |
| Webberville | 834 | 2,002 | 851 | 2,042 | 894 | 2,146 |
| Leroy Township | 451 | 1,082 | 460 | 1,104 | 483 | 1,159 |
| Leslie City | 657 | 1,577 | 670 | 1,608 | 704 | 1,690 |
| Leslie Township | 141 | 338 | 144 | 346 | 151 | 362 |
| Locke Township | 52 | 125 | 53 | 127 | 56 | 134 |
| Mason | 3,857 | 9,257 | 3,934 | 9,442 | 4,131 | 9,914 |
| Meridian Twp. | 11,327 | 27,185 | 11,554 | 27,730 | 12,132 | 29,117 |
| Onondaga Twp. | 235 | 564 | 240 | 576 | 252 | 605 |
| Stockbridge | 263 | 631 | 268 | 643 | 281 | 674 |
| Stockbridge Twp. | 83 | 199 | 85 | 204 | 89 | 214 |
| Vevay Township | 1,452 | 3,485 | 1,481 | 3,554 | 1,555 | 3,732 |
| Wheatfield Twp. | 332 | 797 | 339 | 814 | 356 | 854 |
| White Oak Twp. | 50 | 120 | 51 | 122 | 54 | 130 |
| Williamston | 1,978 | 4,747 | 2,018 | 4,843 | 2,119 | 5,086 |
| Williamstown Twp. | 204 | 490 | 208 | 499 | 218 | 523 |
| Total | 153,776 | 372,092 | 157,571 | 375,770 | 164,400 | 394,561 |

*Source of information Tri- County Regional Planning.

**Waste volume in Cubic Yards.

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 greatest anticipated changes in land development in the next 5 and 10 years will be in the residential areas. The population is moving away from the Lansing/East Lansing metropolitan area to the communities and rural areas surrounding Lansing/East Lansing (see list below). Although the major residential, commercial and industrial waste generation will remain within the greater metropolitan area, some commercial development is expected along the commuter routes and industrial development in the small communities' industrial parks.

POPULATION CHANGES ANTICIPATED OVER THE NEXT 5 TO 10 YEARS

>10% INCREASE

Aurelius Township
Ingham Township
Leroy Township
Onondaga Township
Stockbridge Township

5-10% INCREASE

Delhi Township
Village of Webberville
Leslie Township
Locke Township
City of Mason
Meridian Township
Vevay Township
Wheatfield Township
White Oak Township
Williamstown Township

SOLID WASTE MANAGEMENT ALTERNATIVES

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

The criteria set forward to evaluate the alternative systems include: technical feasibility, economic feasibility, energy consumption/production, land access/transportation, environmental impacts, public health effects, and public acceptability. Each alternative was examined for each criteria and points were awarded on an acceptability scale (5 being the highest score; 1 the lowest). Please refer to the following Table for ranking of each of the alternatives.

System 1 Current Solid Waste Management System

The current system involves the components of waste reduction, resource conservation and resource recovery, while exporting the remaining waste to landfills. This system provides recycling/composting opportunities for Ingham County residents/businesses and provides ample disposal capacity to handle the remaining waste.

System 2 Current Solid Waste Management System with Enhanced Waste Reduction and Resource Recovery Programs.

This alternative system would place emphasis on resource recovery and waste reduction via expanded educational programs, collection programs and other initiatives to reduce the volume of waste being land filled.

System 3 Recovery/Processing Facility Sited in Ingham County

Siting a Cooperative Materials Recovery Facility (MRF) in the County, while continuing to export waste to landfills. A greater volume of specific materials would increase market availability and prices obtained for various commodities. Facility management would be a cooperative effort between public and private entities and would ensure fair and competitive pricing.

System 4 Waste to Energy Facility

Siting, construction, maintenance and operation of a WTE facility by a private entity.

System 5 Solid Waste Disposal Facility

Siting, construction, maintenance and operation of a landfill by a private entity.

SOLID WASTE MANAGEMENT ALTERNATIVE RANKING

| Criterion | System 1 | System 2 | System 3 | System 4 | System 5 |
|---------------------------------|----------|----------|----------|----------|----------|
| Technical Feasibility | 5 | 5 | 5 | 5 | 5 |
| Economic Facility | 4 | 4 | 3 | 2 | 2 |
| Energy Consumption & Production | 3 | 3 | 4 | 4 | 4 |
| Land Access/Transportation | 5 | 5 | 3 | 2 | 2 |
| Environmental Impacts | 4 | 5 | 4 | 1 | 2 |
| Public Health Effects | 4 | 4 | 4 | 2 | 3 |
| Public Acceptability | 4 | 5 | 4 | 1 | 2 |
| Total Points | 29 | 31 | 27 | 17 | 20 |
| Ranking | 2 | 1 | 3 | 5 | 4 |

Note: 1 = Highest Ranking and 5 = Lowest Ranking.

THE SELECTED SOLID WASTE MANAGEMENT SYSTEM

The Selected Solid Waste Management System (Selected System) is a comprehensive approach to managing the County's solid waste and recoverable materials. The Selected System addresses the generation, transfer and disposal of the County's solid waste. It aims to reduce the amount of solid waste sent for final disposal by volume reduction techniques and by various resource conservation and resource recovery programs. It also addresses collection processes and transportation needs that provide the most cost effective, efficient service. Proposed disposal 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, funding mechanisms and coordination of the Selected System is included in the Appendix A. Following is an overall description of the Selected System:

The selected Solid Waste Management System is the infrastructure of the Plan. Its components are the mechanism for the total management of Ingham County's solid waste. Its concept is cradle to grave, and 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. The system uses the multimedia approach and the base structure delineates responsibilities for planning, implementation, enforcement, legal, technical and financial responsibilities for all entities recognized in the Plan. It was founded on the belief that governmental agencies lead roles should be on the health, educational and environmental aspects of the Plan. Therefore, governmental agencies primary roles are administratively and educationally driven for the implementation of the Plan. It establishes the roles, of the private sector and some municipalities, as the functional elements in the collection, transporting and disposal of solid waste. The Plan's goals and objectives were developed to try and allow for the diversified solid waste field and markets we are in today, and to uphold the Michigan Solid Waste Policy goal. To achieve these components, and integrate them into the management system, the SWPC has selected to develop the infrastructure based on a Core County concept. This will generate an open market within the Core Counties, allow communities on our borders to select solid waste disposal sites that best meet the needs of their communities, and provide for years of disposal capacity beyond what the State requires. Also, this concept safeguards citizens of Ingham County from being forced to site a solid waste disposal facility within the county. The SWPC further decided to explicitly authorize solid waste disposal facilities in the Plan. The facility must be from an authorized Core County, meet all conditions set forth in the Plan, including any conditions established in Appendix A or pertaining to Appendix A and is required to provide a formal written statement on the volume of Ingham County waste it will take as part of its facility description. This documentation can be used for demonstrating capacity requirements set by the State, and protects the County from having to amend the Plan if a designated facility was not able to take our waste for any reason. Additionally, the formal authorization of the facilities in the Plan allows them to reflect total acreage sited, or designated for future permitting, and will be noted as consistent with the Ingham County Solid Waste Management Plan by MDEQ.

Ingham County will maintain its current system of waste management consisting of the private and public collection of residential, commercial and industrial wastes. Landfilling was found to work most efficiently and effectively in the County and it will remain the predominant method of waste disposal. The County will strive to work cooperatively with other entities to enhance existing waste reduction and recovery efforts and develop new programs. Increasing the volume of waste diverted from landfills through these programs will be the focus of the selected waste management system for this planning period.

IMPORT AUTHORIZATION

If a Licensed solid waste disposal area is currently operating within the County and meets all conditions set forth in the Plan, including any conditions established in Appendix A or pertaining to Appendix A, disposal of solid waste generated by the EXPORTING COUNTY is authorized by the IMPORTING COUNTY up to the AUTHORIZED QUANTITY according to the CONDITIONS AUTHORIZED in Table 1-A.

**Table 1-A
CURRENT IMPORT VOLUME AUTHORIZATION OF SOLID WASTE**

| IMPORTING COUNTY | EXPORTING COUNTY | FACILITY NAME | AUTHORIZED QUANTITY/ ANNUAL ¹ | AUTHORIZED CONDITIONS ^{2 3} |
|------------------|-------------------|---------------|--|--------------------------------------|
| Ingham County | Barry County | N/A | Unlimited | Primary |
| Ingham County | Calhoun County | N/A | Unlimited | Primary |
| Ingham County | Clinton County | N/A | Unlimited | Primary |
| Ingham County | Eaton County | N/A | Unlimited | Primary |
| Ingham County | Genesee County | N/A | Unlimited | Primary |
| Ingham County | Ionia County | N/A | Unlimited | Primary |
| Ingham County | Livingston County | N/A | Unlimited | Primary |
| Ingham County | Lenawee County | N/A | Unlimited | Primary |
| Ingham County | Oakland County | N/A | Unlimited | Primary |
| Ingham County | St. Joseph County | N/A | Unlimited | Primary |
| Ingham County | Shiawassee County | N/A | Unlimited | Primary |
| Ingham County | Washtenaw County | N/A | Unlimited | Primary |

¹Unlimited - No restriction on volume to be imported.

²Primary - Authorized use on daily basis.

³Contingency - When capacity at primary facilities has been exceeded and can no longer meet the goals of the Plan, the contingent facilities will be utilized.

Page III-3 of DEQ Plan Format

This section and table 1-B are not addressed in our Plan since we have no proposed or new solid waste disposal facilities that are being considered or under construction.

EXPORT AUTHORIZATION

RETURN TO
APPROVAL
LETTER

If a licensed solid waste disposal area is currently operating within another County and meets all conditions set forth in the Plan, including any conditions established in Appendix A or pertaining to Appendix A, 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 and if authorized for import in the approved Solid Waste Management Plan of the receiving County.

**Table 2-A
CURRENT EXPORT VOLUME AUTHORIZATION OF SOLID WASTE**

| EXPORTING COUNTY | IMPORTING COUNTY | FACILITY NAME | AUTHORIZED QUANTITY/DAILY | AUTHORIZED QUANTITY/ANNUAL | AUTHORIZED CONDITIONS ^{1 2} |
|------------------|------------------|------------------------------|---------------------------|----------------------------|--------------------------------------|
| Ingham | Clinton | Granger Wood St. Landfill | 100% | 100% | Primary |
| Ingham | Clinton | Granger Grand River Landfill | 100% | 100% | Primary |
| Ingham | Calhoun | C&C Landfill | 100% | 988,787 Cu. Yd. | Primary |
| Ingham | Barry | Hastings SLF | 100% | 219,000 Cu. Yd. | Primary |
| Ingham | Shiawassee | Venice Park | 100% | 100% | Primary |
| Ingham | Genesee | Citizens Disposal | 100% | 100% | Primary |
| Ingham | Ionia | Pitsch Landfill | 100% | 20,340 Cu. Yd. | Primary |
| Ingham | Lenawee | Adrian Landfill | 100% | 343,200 Cu. Yd. | Primary |
| Ingham | Oakland | Oakland Heights | 100% | 100% | Primary |
| Ingham | Oakland | Eagle Valley | 100% | 100% | Primary |
| Ingham | St. Joseph | Westside | 100% | 550,000 Cu. Yd. | Primary |
| Ingham | Washtenaw | Abor Hills | 100% | 550,000 Cu. Yd. | Primary |
| Ingham | Genesee | Brent Run | 100% | 100% | Primary |

¹Primary - Authorized use on daily basis

²Contingency - When capacity at primary facilities has been exceeded and can no longer meet the goals of the Plan, the contingency facilities will be utilized.

Page III-5 of DEQ Plan Format

This section and Table 2-B are not addressed in our Plan since we have no proposed or new solid waste disposal facilities that are being considered or under construction.

SOLID WASTE DISPOSAL AREAS

The following identifies the names of existing disposal areas which will be utilized to provide the required capacity and management needs for the solid waste generated within the County for the next five years and, if possible, the next ten years. On the following pages will be descriptions of the solid waste disposal facilities which are located within the County and disposal facilities located outside of the County. The listing of these facilities is conditional upon their meeting all conditions set forth in the Plan, including conditions established in Appendix A or pertaining to Appendix A. The facilities listed below will be used by the County to demonstrate capacity for the planning period based on their letters of authorization found in Appendix C. Additional facilities within the County with applicable permits and licenses may be utilized. 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.

| FACILITY TYPE | FACILITY NAME | COUNTY |
|--------------------------------|--|----------------|
| Type II & Type III | Waste Management of Michigan/Venice Park Recycling & Disposal Facility | Shiawassee |
| Municipal Solid Waste Landfill | Brent Run Landfill | Genessee |
| Municipal Solid Waste Landfill | Hastings Sanitary Service | Barry |
| Type II | Citizens Disposal, Inc. | Genessee |
| Type III | Daggett Sand & Gravel | Ingham |
| Type II | Westside Recycling and Disposal Facility | St. Joseph |
| Type II | Pitsch Sanitary Landfill | Ionia |
| Type II | Oakland Heights Development (formerly Wayne Disposal - Oakland) | Oakland |
| Type II | Eagle Valley Recycle and Disposal Facility | Oakland |
| Type II | Granger Grand River Avenue Landfill | Clinton |
| Type II | Granger Wood Street Landfill | Clinton/Ingham |
| Sanitary Landfill, Type II | Arbor Hills Landfill | Washtenaw |
| Sanitary Landfill, Type II | C&C Landfill | Calhoun |
| Type B Transfer Fac | Irish Hills Transfer Station | Lenawee |
| Type B Transfer Fac | Rollin Township Transfer Station | Lenawee |
| Type II Landfill | Adrian Landfill | Lenawee |
| Type B Transfer Fac | Williamston Transfer Station | Ingham |

*See Tables on Import/Export Authorization.

VOLUMES OF WASTE ACCEPTED BY FACILITIES*

The following is a summary of those landfills that will be authorized to serve Ingham County's solid waste disposal needs for the planning period. Detailed facility information follows.

| FACILITY | LOCATION (County) | ANNUAL DISPOSAL VOLUME | CURRENT CAPACITY | ESTIMATED CAPACITY REMAINING | Amount of Ingham County Waste Accepted Annually |
|-----------------------------|-------------------|------------------------|--|--|---|
| Arbor Hills | Washtenaw | 4,500,000 cu. yd. | 30,500,000 cu. yd. | 17.6 years | 500,000 cu. yd. |
| Brent Run | Genesee | 400,000 cu. yd. | 14,000,000 cu. yd. | 30 years | 100% |
| Citizen's Disposal | Genesee | 500,000 cu. yd. | 5,300,000 cu. yd. | 25 years | 100% |
| Eagle Valley | Oakland | 1,650,000 cu. yd. | 4,700,000 cu. yd. | 5.5 years | 100% |
| Granger -Grand River Avenue | Clinton | 600,000 cu. yd. | 7,616,000 cu. yd. | 32 years | 100% |
| Granger - Wood Street | Clinton/Ingham | 600,000 cu. yd. | 10,981,000 cu. yd. | 34 years | 100% |
| Adrian Landfill | Lenawee | 293,193 cu. yd. | 1,540,000 cu. yd. | 7 years | 128,625 cu. yd. |
| Venice Park | Shiawassee | 1,000,000 cu. yd. | 2,000,000 cu. yd. Expansion will yield an additional 15,000,000 cu. yd. | 1.5 years Expansion pending, which will increase capacity remaining to 30 years | 100% |
| C&C | Calhoun | 1,100,000 cu. yd. | 7,570,000 cu. yd. | 7 years | 988,787 cu. yd. |
| Hastings Sanitary Landfill | Barry | 135,000 cu. yd. | 980,000 cu. yd. | 7 years | 27,375 cu. yd. |
| Daggett | Ingham | 7,000 cu. yd. | 60,000 cu. yd. | 7 years | 40,000 cu. yd. |
| Pitsch | Ionia | 37,500 cu. yd. | 56,250 cu. yd. | 30 years | 20,340 cu. yd. |
| Westside | St. Joseph | 1,200,000 cu. yd. | 14,790,000 cu. yd. | 12 years | 55,000 cu. yd. |
| Oakland Heights | Oakland | No restriction | 4,145,895 cu. yd. | 3 years | 100% |

The letters of intent from the above facilities (see Appendix) demonstrate that 66 months of capacity are secure for Ingham County.

*Ingham County generates between 1.2 and 1.4 million cu/yr of solid waste for disposal.

FACILITY DESCRIPTIONS

Facility Type: Type II & Type III

Facility Name: Waste Management of Michigan/Venice Park Recycling & Disposal Facility

County: Shiawassee Location: Town: T7N Range: R4E Section(s): 26/27

Map identifying location included in Attachment Section: Yes X No

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

 Public X Private Owner: Waste Management of Michigan

| Operating Status (check) | | Waste Types Received (check all that apply) | |
|--------------------------|---------------------|---|--|
| <u> X </u> | open | <u> X </u> | residential |
| <u> </u> | closed | <u> X </u> | commercial |
| <u> X </u> | licensed | <u> X </u> | industrial |
| <u> </u> | un-licensed | <u> X </u> | construction & demolition |
| <u> </u> | construction permit | <u> X </u> | contaminated soils |
| <u> </u> | open, but closure | <u> X </u> | special wastes * |
| <u> </u> | pending | <u> X </u> | other: <u>Solidification Operation</u> |

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

Site Size: CURRENT

| | | |
|----------------------------------|------------|-------|
| Total area of facility property: | <u>325</u> | acres |
| Total area sited for use: | <u>80</u> | acres |
| Total area permitted: | <u>80</u> | acres |
| Operating: | <u>42</u> | acres |
| Not excavated: | <u>2.5</u> | acres |

Current capacity: REMAINING 2,200,000 ___ tons or X yds- Gate Cubic Yards

Estimated lifetime: 2 years 25 Years

Estimated days open per year: 281 days

Estimated yearly disposal volume: 1,000,000 ___ tons or X yds- Gate Cubic Yards
(if applicable)

Annual energy production:

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

FACILITY DESCRIPTIONS

Facility Type: Municipal Solid Waste Landfill

Facility Name: Brent Run Landfill

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

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

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

 Public X Private Owner: Republic Waste Services

| Operating Status (check) | | Waste Types Received (check all that apply) | |
|--------------------------|---------------------|---|---------------------------|
| <u>X</u> | open | <u>X</u> | residential |
| <u> </u> | closed | <u>X</u> | commercial |
| <u>X</u> | licensed | <u>X</u> | industrial |
| <u> </u> | un-licensed | <u>X</u> | construction & demolition |
| <u>X</u> | construction permit | <u>X</u> | contaminated soils |
| <u> </u> | open, but closure | <u>X</u> | special wastes * |
| <u> </u> | pending | <u> </u> | other: _____ |

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

Site Size:

| | | |
|-----------------------------------|-------------------|-----------|
| Total area of facility property: | <u>500</u> | acres |
| Total area sited for use: | <u>350</u> | acres |
| Total area permitted: | <u>106.5</u> | acres |
| Operating: | <u>38.91</u> | acres |
| Not excavated: | <u>67.56</u> | acres |
| Current capacity: | <u>14,000,000</u> | In Place |
| Estimated lifetime: | <u>30+</u> | years |
| Estimated days open per year: | <u>276</u> | days |
| Estimated yearly disposal volume: | <u>400,000</u> | In Place |
| (if applicable) | | |
| Annual energy production: | | |
| Landfill gas recovery projects: | <u>2</u> | megawatts |
| Waste-to-energy incinerators: | <u> </u> | megawatts |

FACILITY DESCRIPTIONS

Facility Type: Municipal Solid Waste Landfill

Facility Name: Hastings Sanitary Service

County: Barry Location: Town: 8N Range: 3W Section(s): 6

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

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

 Public X Private Owner: Waste Management Corporation

| Operating Status (check) | | Waste Types Received (check all that apply) | |
|--------------------------|---------------------|---|---------------------------|
| <u>X</u> | open | <u>X</u> | residential |
| <u> </u> | closed | <u>X</u> | commercial |
| <u>X</u> | licensed | <u>X</u> | industrial |
| <u> </u> | un-licensed | <u>X</u> | construction & demolition |
| <u>X</u> | construction permit | <u>X</u> | contaminated soils |
| <u> </u> | open, but closure | <u> </u> | special wastes * |
| <u> </u> | pending | <u> </u> | other: _____ |

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

Site Size:

| | | |
|-----------------------------------|----------------|-----------|
| Total area of facility property: | <u>250</u> | acres |
| Total area sited for use: | <u>48</u> | acres |
| Total area permitted: | <u>30</u> | acres |
| Operating: | <u>19.2</u> | acres |
| Not excavated: | <u>10.8</u> | acres |
| Current capacity: | <u>980,000</u> | In Place |
| Estimated lifetime: | <u>7</u> | years |
| Estimated days open per year: | <u>286</u> | days |
| Estimated yearly disposal volume: | <u>135,000</u> | In Place |
| (if applicable) | | |
| Annual energy production: | | |
| Landfill gas recovery projects: | - | megawatts |
| Waste-to-energy incinerators: | - | megawatts |

FACILITY DESCRIPTIONS

Facility Type: Type II Landfill

Facility Name: Citizens Disposal, Inc.

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

Map identifying location included in Attachment Section: Yes No

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

Public Private Owner: Allied Waste Industries, Inc.

| Operating Status (check) | | Waste Types Received (check all that apply) | |
|-------------------------------------|---------------------|---|---------------------------|
| <input checked="" type="checkbox"/> | open | <input checked="" type="checkbox"/> | residential |
| <input type="checkbox"/> | closed | <input checked="" type="checkbox"/> | commercial |
| <input checked="" type="checkbox"/> | licensed | <input checked="" type="checkbox"/> | industrial |
| <input type="checkbox"/> | un-licensed | <input checked="" type="checkbox"/> | construction & demolition |
| <input type="checkbox"/> | construction permit | <input checked="" type="checkbox"/> | contaminated soils |
| <input type="checkbox"/> | open, but closure | <input checked="" type="checkbox"/> | special wastes * |
| <input type="checkbox"/> | pending | <input checked="" type="checkbox"/> | other: <u>Asbestos</u> |

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

All special waste requires prior review and approval including analytical data and waste profile - Non-Hazardous Only.

Site Size:

| | | |
|-----------------------------------|----------------|--|
| Total area of facility property: | <u>300 +/-</u> | acres |
| Total area sited for use: | <u>300 +/-</u> | acres |
| Total area permitted: | <u>52</u> | acres |
| Operating: | <u>52</u> | acres |
| Not excavated: | <u>80</u> | acres |
| Current capacity: | <u>5.3</u> | <u> </u> tons or <input checked="" type="checkbox"/> <u> </u> yds ³ |
| Estimated lifetime: | <u>25</u> | years |
| Estimated days open per year: | <u>300</u> | days |
| Estimated yearly disposal volume: | <u>.5</u> | <u> </u> tons or <input checked="" type="checkbox"/> <u> </u> yds ³ |
| (if applicable) | | |
| Annual energy production: | | |
| Landfill gas recovery projects: | <u>2.4</u> | megawatts |
| Waste-to-energy incinerators: | <u>N/A</u> | megawatts |

FACILITY DESCRIPTIONS

Facility Type: Type III

Facility Name: Daggett Sand & Gravel

County: Ingham Location: Town: 4N Range: 2W Section: 3

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: Daggett Sand & Gravel, Inc.

| Operating Status (check) | | Waste Types Received (check all that apply) |
|-------------------------------------|---------------------|--|
| <input checked="" type="checkbox"/> | open | <input type="checkbox"/> residential |
| <input type="checkbox"/> | closed | <input type="checkbox"/> commercial |
| <input checked="" type="checkbox"/> | licensed | <input type="checkbox"/> industrial |
| <input type="checkbox"/> | un-licensed | <input checked="" type="checkbox"/> construction |
| <input type="checkbox"/> | construction permit | <input type="checkbox"/> contaminated soils |
| <input type="checkbox"/> | open, but closure | <input type="checkbox"/> special wastes * |
| <input type="checkbox"/> | pending | <input type="checkbox"/> other: _____ |

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

Site Size:

| | | |
|-----------------------------------|---------------------|------------------|
| Total area of facility property: | <u>10</u> | acres |
| Total area sited for use: | <u>6.4</u> | acres |
| Total area permitted: | <u>6.4</u> | acres |
| Operating: | <u>2-3</u> | acres |
| Not excavated: | - | acres |
| Current capacity: | <u>60,000</u> | yds ³ |
| Estimated lifetime: | <u>7</u> | years |
| Estimated days open per year: | <u>250</u> | days |
| Estimated yearly disposal volume: | <u>7-8 Thousand</u> | yds ³ |

(if applicable)

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

FACILITY DESCRIPTIONS

Facility Type: Type II Landfill

Facility Name: Westside Recycling and Disposal Facility

County: St. Joseph Location: Town: 6S Range: 12W Section(s): 26

Map identifying location included in Attachment Section: Yes X No

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

 Public X Private Owner: Waste Management of Michigan, Inc.

| Operating Status (check) | | Waste Types Received (check all that apply) | |
|--------------------------|---------------------|---|---|
| <u> X </u> | open | <u> X </u> | residential |
| <u> </u> | closed | <u> X </u> | commercial |
| <u> X </u> | licensed | <u> X </u> | industrial |
| <u> </u> | un-licensed | <u> X </u> | construction & demolition |
| <u> </u> | construction permit | <u> X </u> | contaminated soils |
| <u> </u> | open, but closure | <u> X </u> | special wastes * |
| <u> </u> | pending | <u> X </u> | other: <u>All non-hazardous solid waste that are acceptable for disposal in a Type II Landfills</u> |

* Explanation of special wastes, including a specific list and/or conditions: Asbestos, Foundry Sand, Wastewater Treatment Sludge, Industrial Process Waste, Etc.

Site Size:

| | | |
|-----------------------------------|-------------------|------------------|
| Total area of facility property: | <u>640</u> | acres |
| Total area sited for use: | <u>490</u> | acres |
| Total area permitted: | <u>85</u> | acres |
| Operating: | <u>85</u> | acres |
| Not excavated: | <u> </u> | acres |
| Current capacity: | <u>14,790,000</u> | Gate Cubic Yards |
| Estimated lifetime: | <u>12</u> | years |
| Estimated days open per year: | <u>300+</u> | days |
| Estimated yearly disposal volume: | <u>1,200,000+</u> | Gate Cubic Yards |

(if applicable)

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

FACILITY DESCRIPTIONS

Facility Type: Type II

Facility Name: Pitsch Sanitary Landfill

County: Ionia Location: Town: 8N Range: 7W Section(s): 1

Map identifying location included in Attachment Section: Yes X No

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

 Public X Private Owner: Pitsch Companies

| Operating Status (check) | | Waste Types Received (check all that apply) | |
|--------------------------|-------------------------------|---|---------------------------|
| <u>X</u> | open | <u>X</u> | residential |
| <u> </u> | closed | <u>X</u> | commercial |
| <u>X</u> | licensed | <u>X</u> | industrial |
| <u> </u> | un-licensed | <u>X</u> | construction & demolition |
| <u>X</u> | construction permit (Pending) | <u>X</u> | contaminated soils |
| <u> </u> | open, but closure | <u>X</u> | special wastes * |
| <u> </u> | pending | <u>X</u> | other: <u>Asbestos</u> |

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

Site Size:

| | | |
|-----------------------------------|----------------|---|
| Total area of facility property: | <u>300</u> | acres |
| Total area sited for use: | <u>80</u> | acres |
| Total area permitted: | <u>40</u> | acres |
| Operating: | <u>20</u> | acres |
| Not excavated: | <u>60</u> | acres (Pending Construction Permit) |
| Current capacity: | <u>150,000</u> | <u>X</u> tons or <u> </u> yds ³ |
| Estimated lifetime: | <u>30</u> | years (Pending Construction Permit) |
| Estimated days open per year: | <u>312</u> | days |
| Estimated yearly disposal volume: | <u>100,000</u> | <u>X</u> tons or <u> </u> yds ³ |

(if applicable)

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

FACILITY DESCRIPTIONS

Facility Type: Type II Landfill

Facility Name: Oakland Heights Development (Formerly Wayne Disposal - Oakland)

County: Oakland Location: Town: 3N Range: 10E Section: 2

Map identifying location included in Attachment Section: ___ Yes No

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

___ Public Private Owner: Oakland Heights Development, Inc.

| Operating Status (check) | | Waste Types Received (check all that apply) | |
|--|---------------------------|---|---------------------------|
| <u><input checked="" type="checkbox"/></u> | open | <u><input checked="" type="checkbox"/></u> | residential |
| <u>___</u> | closed | <u><input checked="" type="checkbox"/></u> | commercial |
| <u><input checked="" type="checkbox"/></u> | licensed | <u><input checked="" type="checkbox"/></u> | industrial |
| <u>___</u> | un-licensed | <u><input checked="" type="checkbox"/></u> | construction & demolition |
| <u>___</u> | construction permit | <u><input checked="" type="checkbox"/></u> | contaminated soils |
| <u>___</u> | open, but closure pending | <u><input checked="" type="checkbox"/></u> | special wastes * |
| <u>___</u> | | <u>___</u> | other: _____ |

Explanation of special wastes, including a specific list and/or conditions: Non-Hazardous material that has passed the approval process which consists of a waste characterization and specified analytical testing based on the material.

Site Size:

| | | |
|----------------------------------|--------------|-------|
| Total area of facility property: | <u>179.7</u> | acres |
| Total area sited for use: | <u>92.1</u> | acres |
| Total area permitted: | <u>92.1</u> | acres |
| Operating: | <u>34.0</u> | acres |
| Not excavated: | <u>14.7</u> | acres |

| | | |
|--|-------------|--|
| Current capacity: | <u>1 mm</u> | <u>___</u> tons or <u><input checked="" type="checkbox"/></u> yds ³ Constructed |
| Estimated lifetime: | <u>3</u> | years |
| Estimated days open per year: | <u>306</u> | days |
| Estimated yearly disposal volume: (if applicable) | <u>2 mm</u> | <u>___</u> tons or <u><input checked="" type="checkbox"/></u> yds ³ |

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

FACILITY DESCRIPTIONS

Facility Type: Type II

Facility Name: Eagle Valley Recycle and Disposal Facility

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

Map identifying location included in Attachment Section: Yes No

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

Public Private Owner: Waste Management of Michigan, Inc.

| Operating Status (check) | | Waste Types Received (check all that apply) | |
|-------------------------------------|---------------------|---|--|
| <input checked="" type="checkbox"/> | open | <input checked="" type="checkbox"/> | residential |
| <input type="checkbox"/> | closed | <input checked="" type="checkbox"/> | commercial |
| <input checked="" type="checkbox"/> | licensed | <input checked="" type="checkbox"/> | industrial |
| <input type="checkbox"/> | un-licensed | <input checked="" type="checkbox"/> | construction & demolition |
| <input checked="" type="checkbox"/> | construction permit | <input checked="" type="checkbox"/> | contaminated soils |
| <input type="checkbox"/> | open, but closure | <input checked="" type="checkbox"/> | special wastes * |
| <input type="checkbox"/> | pending | <input checked="" type="checkbox"/> | other: <u>Recycle Drop off/Yard Waste Transfer</u> |

* Explanation of special wastes, including a specific list and/or conditions: Chemical containing equipment, Coal Ash, Contaminated Residues, Filter Cake, Incinerator Ash, Industrial Process Waste, Non-Friable Asbestos, Treated Medical Waste, Treatment Plant Sludge, Paint Filters

Site Size:

| | | |
|-----------------------------------|------------------|------------------|
| Total area of facility property: | <u>330</u> | acres |
| Total area sited for use: | <u>330</u> | acres |
| Total area permitted: | <u>89</u> | acres |
| Operating: | <u>76</u> | acres |
| Not excavated: | <u>13</u> | acres |
| Current capacity: | <u>4,700,000</u> | Bank Cubic Yards |
| Estimated lifetime: | <u>5.9</u> | years |
| Estimated days open per year: | <u>312</u> | days |
| Estimated yearly disposal volume: | <u>1,650,000</u> | Gate Cubic Yards |
| (if applicable) | | |
| Annual energy production: | | |
| Landfill gas recovery projects: | <u>N/A</u> | megawatts |
| Waste-to-energy incinerators: | <u>N/A</u> | megawatts |

FACILITY DESCRIPTIONS

Facility Type: Type II

Facility Name: Granger Grand River Avenue Landfill

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

Map identifying location included in Attachment Section: Yes 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: Granger Land Development Co.

| Operating Status (check) | | Waste Types Received (check all that apply) | |
|-------------------------------------|---------------------|---|-------------------------------|
| <input checked="" type="checkbox"/> | open | <input checked="" type="checkbox"/> | residential |
| <input type="checkbox"/> | closed** | <input checked="" type="checkbox"/> | commercial |
| <input checked="" type="checkbox"/> | licensed | <input checked="" type="checkbox"/> | industrial |
| <input type="checkbox"/> | unlicensed | <input checked="" type="checkbox"/> | construction & demolition |
| <input checked="" type="checkbox"/> | construction permit | <input checked="" type="checkbox"/> | contaminated soils |
| <input type="checkbox"/> | open, but closure | <input checked="" type="checkbox"/> | special wastes * |
| <input type="checkbox"/> | pending | <input checked="" type="checkbox"/> | other: <u>Type III Wastes</u> |

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

Site Size:

| | | |
|--|------------------|-----------------------------|
| Total area of facility property:** | <u>180.9</u> | acres |
| Total area sited for use:(Plan) | <u>120.9</u> | acres |
| Total area permitted:(For Disposal, i.e. SWB) | | <u>85.7</u> acres |
| Operating:(Licensed & Certified) | <u>54.1</u> | acres |
| Not Developed: | <u>31.6</u> | acres |
| Current capacity: | <u>7,617,000</u> | yds ³ Air Yards |
| Estimated lifetime: | <u>32</u> | years |
| Estimated days open per year: | <u>300</u> | days |
| Estimated yearly disposal volume: (if applicable) | <u>600,000</u> | yds ³ Gate Yards |
| Annual energy production: | | |
| Landfill gas recovery projects: | <u>4.0</u> | megawatts |
| Waste-to-energy incinerators: | <u> </u> | megawatts |

**Includes acres of (separate) closed facility to be consistent with DEQ numbers on Permits and Licenses.

FACILITY DESCRIPTIONS

Facility Type: Type II

Facility Name: Granger Wood Street Landfill

County: Clinton/Ingham Location: Town: 5N/4N Range: 2W Section(s): 34/3

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

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

___ Public X Private Owner: Granger Waste Management Company

| Operating Status (check) | | Waste Types Received (check all that apply) | |
|--------------------------|---------------------|---|------------------------------|
| <u>X</u> | open | <u>X</u> | residential |
| <u>—</u> | closed** | <u>X</u> | commercial |
| <u>X</u> | licensed | <u>X</u> | industrial |
| <u>—</u> | unlicensed | <u>X</u> | construction & demolition |
| <u>X</u> | construction permit | <u>X</u> | contaminated soils |
| <u>—</u> | open, but closure | <u>X</u> | special wastes * |
| <u>—</u> | pending | <u>X</u> | other: <u>Type III Waste</u> |

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

Site Size:

| | | | |
|--|-------------------|------------------|--|
| Total area of facility property:** | <u>302.8</u> | acres | |
| Total area sited for use: (Plan) | <u>194.8</u> | acres | +67 (future permitting in Ingham County) |
| Total area permitted: (For Disposal, ie. SWB) | <u>104.3</u> | acres | |
| Operating: (Licensed & Certified) | | <u>49.5</u> | acres |
| Not Developed | <u>54.8</u> | acres | |
| Current capacity: | <u>10,981,000</u> | yds ³ | Air Yards |
| Estimated lifetime: | <u>34</u> | years | |
| Estimated days open per year: | <u>260</u> | days | |
| Estimated yearly disposal volume: (if applicable) | | <u>600,000</u> | yds ³ Gate Yards |
| Annual energy production: | | | |
| Landfill gas recovery projects: | <u>3.2</u> | megawatts | |
| Waste-to-energy incinerators: | <u>—</u> | megawatts | |

**Includes acres of (separate) Paulson Street Facility to be consistent with DEQ numbers on Permits and Licenses. Also includes spoil/borrow areas to be consistent with DEQ numbers on Permits and Licenses.

FACILITY DESCRIPTIONS

Facility Type: Sanitary Landfill, Type II

Facility Name: Arbor Hills Landfill

County: Washtenaw Twp: Salem Location: Town: 1S Range: 7E Section(s): 13

Map identifying location included in Attachment Section: Yes X No

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

 Public X Private Owner: BFI Waste Systems of North America, Inc.

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

* Explanation of special wastes, including a specific list and/or conditions: Non-Hazardous solid and semi-solid wastes, no hazardous or liquid wastes

Site Size:

| | | |
|----------------------------------|------------|-------|
| Total area of facility property: | <u>936</u> | acres |
| Total area sited for use: | <u>356</u> | acres |
| Total area permitted: | <u>217</u> | acres |
| Operating: | <u>113</u> | acres |
| Not excavated: | <u>104</u> | acres |

Current capacity: 30,500,000 yds³ Airspace or 61.5 million cubic yards of capacity

| | | |
|-----------------------------------|------------------|------------------|
| Estimated lifetime: | <u>176</u> | years |
| Estimated days open per year: | <u>265</u> | days |
| Estimated yearly disposal volume: | <u>3,500,000</u> | yds ³ |

(if applicable)

Annual energy production:

| | | |
|---------------------------------|-----------|-----------|
| Landfill gas recovery projects: | <u>18</u> | megawatts |
| Waste-to-energy incinerators: | <u> </u> | megawatts |

FACILITY DESCRIPTIONS

Facility Type: Sanitary Landfill, Type II

Facility Name: C&C Landfill

County: Calhoun Twp: Convis Location: Town: 1S Range: 6W Section(s): 28

Map identifying location included in Attachment Section: Yes X No

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

 Public X Private Owner: BFI Waste Systems of North America, Inc.

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

Explanation of special wastes, including a specific list and/or conditions: Non-hazardous solid and semi-solid wastes, no hazardous or liquid wastes

Site Size:

| | | |
|--|------------------|---|
| Total area of facility property: | <u>224</u> | acres |
| Total area sited for use: | <u> </u> | acres |
| Total area permitted: | <u>154</u> | acres |
| Operating: | <u>33</u> | acres |
| Not excavated: (not constructed) | <u>21</u> | acres Does not include Type III area |
| Current capacity: | <u>3,360,000</u> | yds ³ Airspace remaining as of 11/1/97 7,570,000 gate cubic yards |
| Estimated lifetime: | <u>7</u> | years |
| Estimated days open per year: | <u>286</u> | days |
| Estimated yearly disposal volume: (if applicable) | <u>1,100,000</u> | yds ³ Gate |
| 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: Williamston Transfer Station

County: Ingham Location: Town: T3N Range: R1E Section(s): 1

Map identifying location included in Attachment Section: Yes X No

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

 Public X Private Owner: BFI

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

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

Site Size:

Total area of facility property: 9 acres
Total area sited for use: - acres
Total area permitted: - acres
 Operating: - acres
 Not excavated: - acres
Current capacity: - tons or yds³
Estimated lifetime: - years
Estimated days open per year: 260 days
Estimated yearly disposal volume: 208,000 yds³

(if applicable)

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

FACILITY DESCRIPTIONS

Facility Type: Class B Transfer Station & Compost Facility

Facility Name: Irish Hills Transfer Station

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

Map identifying location included in Attachment Section: Yes X No

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

 Public X Private Owner: Larry K. Wibbeler

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

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

Site Size:

Total area of facility property: 3 acres
Total area sited for use: 3 acres
Total area permitted: 3 acres
Operating: 1.5 acres
Not excavated: - acres
Current capacity: - tons or - yds³
Estimated lifetime: - years
Estimated days open per year: 120 days
Estimated yearly disposal volume: 2,000 Cubic yards

(if applicable)

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

FACILITY DESCRIPTIONS

Facility Type: Class B Transfer Station

Facility Name: Rollin Township Transfer Station

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

Map identifying location included in Attachment Section: Yes X No

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

 X Public Private Owner: Rollin Township

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

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

Site Size:

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

Current capacity: tons or yds³
 Estimated lifetime: years
 Estimated days open per year: 52 days
 Estimated yearly disposal volume: yds³

(if applicable)

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

FACILITY DESCRIPTIONS

Facility Type: Transfer Station

Facility Name: Ingham County Transfer Station

County: Ingham Location: Town: 3N Range: 1E Section(s): 1

Map identifying location included in Attachment Section: Yes X No

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

 Public X Private Owner: BFI

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

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

Site Size:

Total area of facility property: 9 acres
 Total area sited for use: - acres
 Total area permitted: - acres
 Operating: - acres
 Not excavated: - acres

Current capacity: - tons or - yds³
 Estimated lifetime: - years
 Estimated days open per year: 260 days
 Estimated yearly disposal volume: 208,000 yds³

(if applicable)

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

FACILITY DESCRIPTIONS

Facility Type: Type II Landfill

Facility Name: Adrian Landfill

County: Lenawee

Location: Town: 7,8S Range: 4E Section(s): 6,7

Map identifying location included in Attachment Section: Yes X No

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

 Public X Private Owner: Great lakes Waste Services

Operating Status (check)

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

Waste Types Received (check all that apply)

 X residential
 X commercial
 X industrial
 X construction & demolition
 X contaminated soils
 X special wastes *
 X other: _____

Explanation of special wastes, including a specific list and/or conditions: Asbestos and sludge per operating policy.

Site Size:

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

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

(if applicable)

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

SOLID WASTE COLLECTION SERVICES AND TRANSPORTATION

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

Solid waste management services in Ingham County are a combination of private and municipal collections and privately owned landfills. The cities of Lansing and East Lansing provide weekly garbage pick-up and curbside recycling. They also offer periodic speciality collections for difficult to dispose of items such as appliances, furniture, Christmas trees, yard waste, etc.

The smaller municipalities of Williamston, Webberville, Leslie and Mason contract with private haulers to provide weekly garbage pick-up for their citizens. The remainder of the county is covered by subscription based waste collection services. Most of the private haulers also offer curbside recycling to residents for an additional fee.

The business sector relies on subscription based collections offered by the many large and small haulers located in and around Ingham County. The small haulers provide the "you call, we haul" service for the large volume, infrequent, or bulky item collections.

Current disposal options are limited to 4 facilities, two Granger Landfills (both in Clinton County), C&C Landfill (BFI, Calhoun County), and Daggett Sand and Gravel (Ingham County). With the adoption of this Solid Waste Plan update, the options for solid waste disposal will expand to include the facilities identified in the Solid Waste Disposal Areas Section of this Plan.

CURRENT SOLID WASTE COLLECTION SERVICE PROVIDERS

| SERVICE PROVIDER | PUBLIC/ PRIVATE | SERVICE AREA | PAYMENT | DISPOSAL FACILITY |
|---------------------------|-----------------|----------------------|--------------|--|
| City of Lansing | Public | City of Lansing | General Fund | Granger Landfill |
| City of East Lansing | Public | City of East Lansing | General Fund | Granger Landfill |
| Allied Disposal Company. | Private | Ingham County | Customer | Granger Landfill |
| BFI | Private | Ingham County | Customer | C&C Landfill |
| Daggett Rolloff | Private | Ingham County | Customer | Daggett Landfill |
| Granger Container Service | Private | Ingham County | Customer | Granger Landfill |
| Waste Management | Private | Ingham County | Customer | Williamston Transfer Station to Granger Landfill |

The companies listed in the chart provide commercial and residential collection services for the majority of the county. Another dozen or more small companies provide pick-ups for construction clean-up, tree and brush removal, appliance and other bulky items, and one time clean-ups.

RESOURCE CONSERVATION EFFORTS

The following describes the selected system's proposed conservation efforts to reduce the amount of solid waste generated throughout the County. However, the annual amount of solid waste currently or proposed to be diverted from landfills is estimated for each effort to be used, where 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.

Ingham County strongly supports the state solid waste hierarchy which places waste reduction, reuse and recycling highest, followed by landfilling and incineration. Although considerable progress has been made in implementing the hierarchy during the life of the last county plan, the County can further improve its waste management practices. Waste reduction, reuse and recycling contribute to economic efficiency as well as environmental protection.

The Plan should guarantee the resources to fund and staff an infrastructure that will provide information and opportunity for Ingham County business and citizens to meet the goals described below.

The County does not currently have reliable data to measure land filling, reuse, recycling and composting rates and with the unstable market and government subsidies of natural resources we cannot provide current or 5/10 year projections for diversion rates. Therefore, the County must strive to collect this data during the life of the Plan. To drive solid waste management in Ingham County towards the state hierarchy, Ingham County will work towards the following goals:

-Residential Solid Waste*

| | |
|--------------|-----|
| Landfill | 45% |
| Recycle | 30% |
| Compost | 20% |
| Reduce/Reuse | 5% |

-Commercial Solid Waste*

| | |
|----------|-----|
| Landfill | 60% |
| Recycle | 40% |

-Industrial Solid Waste*

| | |
|--------------|-----|
| Landfill | 50% |
| Recycle | 35% |
| Reduce/Reuse | 15% |

-Establishing a method of collecting accurate data and methods of managing the information.

-Conduct a waste stream assessment.

- Establishing goals based on current levels.
- Developing a strategy for implementation of goals.
- Education of residents and businesses to the importance and methods of resource conservation.
- Promote/support/expand existing resource conservation efforts:
 - Use of wood chips as mulch
 - Use of biosolids as soil conditioner
 - Reconditioning of pallets and barrels
 - Use of business waste exchanges
 - Pollution prevention (P2) programs
- Promote the use of electronic data dissemination.
- Promote/support/educate the purchase of durable goods.
- Promote/support/educate the reuse, donation and resale of used products.
- The effectiveness of recycling is dependent on markets for recycled materials. Although markets are both global and national in scope and therefore largely beyond the influence of the county, the County can contribute to the solution with a buy recycled program. Furthermore, a buy recycled program can serve as a model for both individuals and businesses, demonstrating the cost-effectiveness and quality of recycled products. County government should adopt and implement a buy recycled program which:
 - Implements the existing County Resolution No. 89-148 and Recycling Policy of 1989 which requires the purchase of products with recycled content and 25% of purchases be of products with recycled content.
 - Expands the Resolution to mandate the purchase of paper with a minimum of 20% post consumer content with a price preference of up to 110% of non-recycled paper. Include the ability to waive the requirement if the paper is not available, but must demonstrate that appropriate material is not available.
 - Provides joint recycled product purchasing programs with local units of government or technical assistance to local units of government in Ingham County to identify suitable recycled products.
 - Provides annual reporting on the County's compliance with this ordinance.
- Work with other local units of government, agencies and organizations to:
 - Develop regional resource conservation programs.
 - Coordinate efforts on items listed in the first bullet.
 - Coordinate efforts to develop alternative uses for C&D waste.
- Investigate alternatives for motivating citizens and businesses to reduce waste generation

-Promote/support economic development activities which attract or expand industries which produce products with recycled content.

The efforts undertaken at the county level will support and augment the resource conservation efforts already existing in Lansing/East Lansing and elsewhere in the county.

WASTE REDUCTION, RECYCLING, & COMPOSTING PROGRAMS:

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

The entities listed conserved air space by diverting yard waste for other uses. Many municipalities transport yard waste to the Granger Landscape facility for composting, while others simply stockpile leaves to compost with minimal input. Michigan State University and Granger Landscape are the two largest compost facilities in Ingham County.

| Technique Description | Est. Air Space Conserved Yds ³ /Yr. | | |
|---------------------------|--|----------------|----------------|
| | Current | 5th Yr.* | 10 Yr.* |
| COMPOSTING | | | |
| City of East Lansing | 5,316 | 10,632 | 15,943 |
| City of Lansing | 42,000 | 84,000 | 126,000 |
| City of Leslie | 100 | 200 | 300 |
| City of Mason | 5,060 | 10,120 | 15,180 |
| Meridian Township | 828 | 1,656 | 2,484 |
| Stockbridge Township | 260 | 520 | 780 |
| Village of Stockbridge | 4,344 | 8,688 | 13,032 |
| City of Williamston | 2,900 | 5,800 | 8,700 |
| Granger Landscaping | 31,500 | 63,000 | 94,500 |
| Holt/Delhi Township | 300 | 600 | 900 |
| Michigan State University | 260 | 520 | 780 |
| Village of Webberville | 1,500 | 3,000 | 4,500 |
| TOTAL | 94,368 | 188,736 | 283,104 |

*Cumulative

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.

The composition of the solid waste stream in Ingham County is assumed to be similar to an EPA* breakdown, with the exception of yard waste, which should be lower due to the state yard waste ban. The material and approximate percentage is:

| MATERIAL | PERCENTAGE | CUBIC YARDS |
|--------------------|------------|-------------|
| Glass | 6.2% | 77,602 |
| Metal | 7.6% | 92,845 |
| Food Waste | 8.9% | 111,396 |
| Wood | 7.1% | 88,867 |
| Plastic | 11.8% | 147,695 |
| Yard Waste | 6.6% | 82,608 |
| Other** | 12.6% | 157,707 |
| Paper & Paperboard | 39.2% | 490,647 |

It is estimated that 25% of the solid waste stream in Ingham County is recycled. Assuming that the "other" material is not recyclable/compostable, and some portion of the remaining materials are not recyclable/compostable due to contamination, there remains perhaps 40 percent (or half a million cubic yards) of the waste stream which could be recycled or composted.

Sixty percent of the population of Ingham County is located in the cities of Lansing and East Lansing. This population has recycling readily available to them in the form of curbside pick-ups. Lansing has a participation rate of 50% and East Lansing has a participation rate of 70% (with additional material collected at the 3 drop-off sites). Portions of the remaining County have access to subscription based curbside collection. Increasing the participation rate of the curbside recycling in these two communities will work toward increasing the overall recycling rate, however, emphasis must also be placed on providing user friendly recycling/composting services for the surrounding communities and the out county areas. To reiterate one of the goals of the Plan: Every resident should have access to recycling services to provide a minimum level of service.

*EPA, 1997, Measuring Recycling, A Guide for State & Local Governments.

**Other material examples include C&D tires, textiles, household hazardous waste, household batteries, diapers, cat litter, etc

The conditions in the County and the impediments which affect the recycling/composting programs are virtually the same as those listed in the Problems & Deficiencies Section. Brief suggestions for overcoming these conditions and impediments are:

| IMPEDIMENT | POTENTIAL SOLUTION |
|--|--|
| Inadequate funding for educational programs. | <ul style="list-style-type: none"> *Pursue additional/alternative funding mechanisms. *Collaborate to share limited resources and establish regional programs. |
| Inadequate funding for service programs (HHW, composting, rural recycling, marketing, etc.). | <ul style="list-style-type: none"> *Pursue additional/alternative funding mechanisms. *Collaborate to share limited resources and establish regional programs. |
| Lack of cooperative efforts to establish regional programs. | <ul style="list-style-type: none"> *Work with the Regional Recycling Coordinator Committee and other interested parties to establish regional programs (educational, marketing materials, etc.) Particularly to break down historical political animosity. *Build relationships with major local employers (State of Michigan, MSU, GM) to coordinate efforts. |
| Few economic incentives for citizens to minimize waste. | <ul style="list-style-type: none"> *Encourage expansion of volume based pricing for solid waste disposal through the education of municipalities and citizens. |
| Few outlets for speciality wastes. | <ul style="list-style-type: none"> *Expand county household hazardous waste program to collect additional items. *Work with interested parties to establish new programs and market existing sites. |
| Poor coverage for recycling in multi-unit housing. | <ul style="list-style-type: none"> *Educate apartment dwellers to drop off locations. *Promote/educate about recycling to create the demand for apartment recycling. *Work with apartment owners to establish programs. |
| Inability to obtain accurate recycling/composting data. | <ul style="list-style-type: none"> *Work with industry to obtain data voluntarily, conduct surveys, track legislation requiring reporting. *Develop protocol for establishing standardized data collection. |

| | |
|--|--|
| Insufficient outlets for yard waste disposal | <ul style="list-style-type: none"> *Promote backyard composting education and programs such as Master Composter. *Investigate opportunities to establish composting sites. |
| Limited recycling efforts directed at local businesses | <ul style="list-style-type: none"> *Build relationship with State P2 program, promote/assist locally. |
| Poor promotion of existing programs. | <ul style="list-style-type: none"> *Establish regional promotion plan for existing programs and potential new programs. |
| Inadequate outreach to out county residents | <ul style="list-style-type: none"> *Work with townships, schools, municipalities to enhance existing programs, establish new programs and educate citizens and businesses. |
| Market volatility | <ul style="list-style-type: none"> *Pursue opportunities to market materials cooperatively/regionally. |
| Lack of outlets for recycling of construction and demolition | <ul style="list-style-type: none"> *Work with construction trade to raise awareness of recycling opportunities. *Pursue opportunities to establish C&D recycling programs. |

RECYCLING PROGRAMS

- Recycling programs within the County are feasible. Details of existing and planned programs follow.
- 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:

RECYCLING OVERVIEW

Existing recycling programs are detailed on Tables III-1a & III-1b. Future efforts will focus on:

Although a majority of the population of Ingham County has access to recycling programs, either through curbside collections or drop-off sites, a base level of services must be developed and sustained. The role of the County will be to support and augment existing programs, ensure program coverage in out county areas and develop programs to address gaps in countywide services. Such efforts may include, but are not limited to:

- *Support countywide recycling programs and pursue a cost share arrangement with municipalities.
- *Evaluate the countywide recycling programs to determine the need/feasibility of additional items. Evaluate core material currently collected and seek opportunities to add items as markets develop.
- *Work cooperatively to establish a drop-off site for Meridian Township.
- *Provide better service for multi-unit housing.
- *Evaluate extent of business recycling.
- *Work cooperatively on regional recycling projects such as tire and appliance collections.
- *Promote countywide recycling.
- *Strive to increase participation rates and increase volumes.
- *Establish construction and demolition (C&D) recycling.
- *Enhance the Ingham County government recycling program.
- *Work cooperatively with the State P2 program to assist small businesses.
- *Explore potential for electronics recycling program.
- *Investigate feasibility of establishing a Master Recycler Program.

COMPOSTING PROGRAMS

- ☒ Composting programs within the County are feasible. Details of existing and planned programs follow.
- ☐ 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:

COMPOSTING OVERVIEW

See Tables III-2a & III-2b.

Currently, the Granger composting site is the only site open to the general public in the Ingham County area. Michigan State University also composts the organic matter collected from the campus grounds. A few municipalities have leaf piles developed during fall leaf collections, but are not actively composting the material. To bring these un-managed leaf piles into compliance with State regulations, the Ingham County Health Department will contact the municipality, in writing, to request a management plan within 90 days. Failure to comply will result in a referral to the Michigan Department of Environmental Quality for enforcement action.

No new composting programs are planned at this time. Future efforts will be toward enhancing existing municipal leaf collections and expanding to include other organic materials such as grass clippings. Additional efforts will be made to explore the composting of food scraps regionally. The education of residential homeowners will continue through the Master Composter Program and other outreach programs. Facility manager training offered by the Michigan Recycling Coalition, Composting Council and other programs will be locally promoted.

SOURCE SEPARATION OF POTENTIALLY HAZARDOUS MATERIAL PROGRAMS

- Programs for source separation of potentially hazardous materials are feasible and details follow.
- 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:

OVERVIEW OF SOURCE SEPARATION OF POTENTIALLY HAZARDOUS MATERIALS

See Tables III-3a & III-3b.

Ingham County has operated an appointment-only household hazardous waste collection program since the 1980's. While successful, this program has been limited in its ability to cater to the needs of the community. The program takes material from less than 1% of the Ingham County population. The average home contains approximately 50 pounds of hazardous waste at any time. Ninety to 95% of what the County collects is paints/solvents and pesticides. Other urban counties in Michigan have established household hazardous waste collection centers and instituted programs that collect a wider range of wastes at more convenient hours for customers.

Ingham County should expand its household hazardous waste program with the following elements:

1. Regular, expanded, and well-advertised collection hours that provide collection of the broad variety of items submitted by Ingham County residents.
2. Distribution of educational materials on alternatives to materials that generate household hazardous wastes.
3. Thorough investigation of the costs and benefits of establishing a permanent household hazardous waste collection center.

A collection of potentially hazardous materials from conditionally exempt small quantity generators is also offered by the Ingham County Health Department. This program could be readily expanded along with the household hazardous waste collection to provide greater service to the business sector.

RECYCLING AND COMPOSTING

The following is a brief analysis of the recycling and composting programs selected for the County in the Plan. Additional information on operation of recycling and composting programs is included in the Appendix A. The analysis covers various factors within the County and the impacts of these factors on recycling and composting. Following the written analysis, Tables III-1a through 3a list the existing recycling, composting, and source separation of hazardous materials programs that are currently active in the County and which will be continued as part of this Plan. Tables III-4, -5, & -6 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.

The composting and recycling programs selected for the County include working cooperatively with public and private entities to expand and enhance existing programs, develop new regional collection and educational programs and work to overcome various obstacles to increasing diversion.

The major factors negatively influencing material diversion include inadequate funding for operational expenses, market volatility for recycled material, difficulty in changing behavior, and lack of economic incentive for businesses and citizens. Recycling is a popular activity that empowers individuals to improve the quality of the environment and their communities. It also can provide businesses with decreased disposal costs and revenues when markets are high. Unfortunately, the economic feasibility of recycling has not been consistent. Market volatility has attracted nay-sayers who look myopically at the bottom line and forget to see the long term effect of using resources and quickly disposing of them. Any responsible solid waste management system must include options for reducing the generation of waste, recycling what cannot be reduced, and promoting recycled contract product procurement policies. This plan would not meet its goal if it did not include a system to address the total management of waste beyond guaranteeing landfill capacity.

TABLE III-1

RECYCLING:

| Program Name | Service Area ¹ | Public or Private | Collection Point ³ | Collection Frequency ⁴ | Materials Collected ⁵ | Program Management Responsibilities ² | | |
|-----------------------|---------------------------|-------------------|-------------------------------|-----------------------------------|----------------------------------|--|-----------|------------|
| | | | | | | Development | Operation | Evaluation |
| GRANGER RECYCLING | COUNTYWIDE | Priv | D | D | ABCEFPJ | 5 | 5 | 5 |
| APPLEGATE INSULATION | COUNTYWIDE | Priv | D | D | D | 5 | 5 | 5 |
| DINO'S SALVAGE | COUNTYWIDE | Priv | D,O | D | ABCEF | 5 | 5 | 5 |
| FRIEDLAND | COUNTYWIDE | Priv | D | D | BCDF | 5 | 5 | 5 |
| DART CONTAINER | COUNTYWIDE | Priv | D,O | D | Poly- Styrene | 5 | 5 | 5 |
| MICH. POLYMER RECLAIM | COUNTYWIDE | Priv | D,O | D | A | 5 | 5 | 5 |
| PADNOS | COUNTYWIDE | Priv | D | D | F | 5 | 5 | 5 |
| SAFETY KLEEN | COUNTYWIDE | Priv | D,O | D | Drums | 5 | 5 | 5 |
| CLEANLIGHTS | COUNTYWIDE | Priv | D,O | D | Fluores. Lamps | 5 | 5 | 5 |
| MAC'S ALL CAR | COUNTYWIDE | Priv | D | D | F | 5 | 5 | 5 |
| CAPITAL DATE | COUNTYWIDE | Priv | D,O | D | Computer Hardware | 5 | 5 | 5 |
| INTERSTATE BATTERIES | COUNTYWIDE | Priv | D | D | Batteries | 5 | 5 | 5 |
| WONCH BATTERIES | COUNTYWIDE | Priv | D | D | Batteries | 5 | 5 | 5 |

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

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

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

³Identified by C=Curbside; D=Drop-Off; O=Onsite; and if other, explained.

⁴Identified by D=Daily; W=Weekly; B=Biweekly; M=Monthly; and if seasonal service also indicated by Sp=Spring; Su=Summer; Fa=Fall; Wi=Winter.

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

TABLE III-1 (continued)

RECYCLING:

| <u>Program Name</u> | <u>Service Area</u> ¹ | <u>Public or Private</u> | <u>Collection Point</u> ³ | <u>Collection Frequency</u> ⁴ | <u>Materials Collected</u> ⁵ | <u>Program Development</u> | <u>Management Operation</u> | <u>Responsibilities Evaluation</u> ² |
|-------------------------------|----------------------------------|--------------------------|--------------------------------------|--|---|----------------------------|-----------------------------|---|
| BATTERY EXCHANGE | COUNTYWIDE | <u>Priv</u> | <u>D</u> | <u>D</u> | <u>Batteries</u> | <u>5</u> | <u>5</u> | <u>5</u> |
| SUPPLYLINE | COUNTYWIDE | <u>Priv</u> | <u>D,O</u> | <u>D</u> | <u>Toner</u> | <u>5</u> | <u>5</u> | <u>5</u> |
| | | | | | <u>Cartridges</u> | | | |
| CITY OF LANSING | CITY OF LANSING | <u>Pub</u> | <u>C,D</u> | <u>W</u> | <u>ABEF</u> | <u>3</u> | <u>3</u> | <u>3</u> |
| CITY OF EAST LANSING | CITY OF EAST LANSING | <u>Pub</u> | <u>C,D</u> | <u>W,D</u> | <u>ABCDEF</u> | <u>3</u> | <u>3</u> | <u>3</u> |
| COUNTYWIDE RECYCLING | COUNTYWIDE | <u>Pub</u> | <u>D</u> | <u>W/M</u> | <u>ABCEF</u> | <u>2/3</u> | <u>2/3</u> | <u>2/3</u> |
| ALLIED DISPOSAL, INC. | COUNTYWIDE | <u>Priv</u> | <u>C</u> | <u>W</u> | <u>ABEF</u> | <u>5</u> | <u>5</u> | <u>5</u> |
| WASTE MANAGEMENT | COUNTYWIDE | <u>Priv</u> | <u>C</u> | <u>W</u> | <u>ABEF</u> | <u>5</u> | <u>5</u> | <u>5</u> |
| INGHAM COUNTY TIRE COLLECTION | COUNTYWIDE | <u>Pub</u> | <u>D</u> | <u>2X/YR</u> | <u>K</u> | <u>2</u> | <u>2</u> | <u>2</u> |
| MSU RECYCLING | MSU CAMPUS | <u>Priv</u> | <u>D</u> | <u>W</u> | <u>ABCD</u> <u>EFPJK</u> <u>& OTHER</u> | <u>6</u> | <u>6</u> | <u>6</u> |

¹Identified 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.

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

³Identified by C=Curbside; D=Drop-Off; O=Onsite; and if other, explained.

⁴Identified by D=Daily; W=Weekly; B=Biweekly; M=Monthly; and if seasonal service also indicated by Sp=Spring; Su=Summer; Fa=Fall; Wi=Winter.

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

TABLE III-2

COMPOSTING:

| <u>Program Name</u> | <u>Service Area</u> ¹ | <u>Public or Private</u> | <u>Collection Point</u> ³ | <u>Collection Frequency</u> ⁴ | <u>Materials Collected</u> ⁵ | <u>Program Management Responsibilities</u> ² | | |
|----------------------|----------------------------------|--------------------------|--------------------------------------|--|---|---|------------------|-------------------|
| | | | | | | <u>Development</u> | <u>Operation</u> | <u>Evaluation</u> |
| City of East Lansing | East Lansing | Public | c | * | G,L,W | 3 | 3 | 3 |
| City of East Lansing | East Lansing | Public | c | 2xFa | L | 3 | 3 | 3 |
| City of Lansing | Lansing | Public | c | W | G,L,W | 3 | 3 | 5 |
| City of Leslie | Leslie | Public | c | Sp/Fa | L | 3 | 3 | 3 |
| City of Leslie | Leslie | Public | c | W | W | 3 | 3 | 3 |
| City of Mason | Mason | Public | c/d | Fa | L | 3 | 3 | 3 |
| City of Mason | Mason | Private | c | W | G,L,W | 3 | 5 | 5 |
| Meridian Township | Meridian Township | Public | d | Sp/Su/Fa/Wi | G,L,W | 3 | 3 | 5 |
| Meridian Township | Meridian Township | Private | c | W | G,L,W | 5 | 5 | 5 |
| MSU | MSU | Private | o | N/A | G,L,W,A | 5 | 5 | 5 |

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

*3 Free Days - Other pick-up by appointment.

¹Identified 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.

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

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

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

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

TABLE III-2 (continued)

COMPOSTING:

| <u>Program Name</u> | <u>Service Area</u> ¹ | <u>Public or Private</u> | <u>Collection Point</u> ³ | <u>Collection Frequency</u> ⁴ | <u>Materials Collected</u> ⁵ | <u>Program Management Responsibilities</u> ² | | |
|----------------------------------|----------------------------------|--------------------------|--------------------------------------|--|---|---|------------------|-------------------|
| | | | | | | <u>Development</u> | <u>Operation</u> | <u>Evaluation</u> |
| Village of Stockbridge | Stockbridge | Public | c/d | Wi | G,L,W | 3 | 3 | 3 |
| Village of Stockbridge | Surrounding Stockbridge | Private | c | Wi | G,L,W | 5 | 5 | 5 |
| Village of Webberville | Webberville | Public | c | 2xSp/Fa | L | 3 | 3 | 3 |
| City of Williamston | City of Williamston | Public | c | Wi | W | 3 | 3 | 3 |
| City of Williamston | City of Williamston | Public | c | Fa | L | 3 | 3 | 3 |
| Allied Disposal, Inc. | Countywide | Private | c | N/A | N/A | 5 | 5 | 5 |
| Granger Waste Management | Countywide | Private | c | N/A | N/A | 5 | 5 | 5 |
| Waste Management of Mid-Michigan | Countywide | Private | c | N/A | N/A | 5 | 5 | 5 |
| Granger Landscape | Countywide | Private | d | Sp/Su/Fa/Wi | G,L,W | 5 | 5 | 5 |

¹Identified 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.

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

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

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

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

TABLE III-3

SOURCE SEPARATION OF POTENTIALLY HAZARDOUS MATERIALS:

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

| <u>Program Name</u> | <u>Service Area</u> ¹ | <u>Public or Private</u> | <u>Collection Point</u> ³ | <u>Collection Frequency</u> ⁴ | <u>Materials Collected</u> ⁵ | <u>Program Management Responsibilities</u> ² | | |
|---|----------------------------------|--------------------------|--------------------------------------|--|---|---|------------------|-------------------|
| | | | | | | <u>Development</u> | <u>Operation</u> | <u>Evaluation</u> |
| Ingham County Household Hazardous Waste | Ingham County | Public | D | M/SP, SU,FA PS,PH | AR,A,B2, C,H,P, | 6 | 6 | 6 |
| Quick Oil Change Facilities & Service Stations | Ingham County & Surrounding Area | Private | D | D | U | 5 | 5 | 5 |
| Radiator Shops, Service Stations | " | Private | D | D | AN | 5 | 5 | 5 |
| Ingham County Conditionally Exempt Small Quantity Generator | Ingham County & Surrounding Area | Public | D | M/SP,SU, FA | AR,A,B2, C,H,P, PS,PH | 6 | 6 | 6 |

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

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

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

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

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

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

TABLE III-3 (continued)

SOURCE SEPARATION OF POTENTIALLY HAZARDOUS MATERIALS:

| <u>Program Name</u> | <u>Service Area</u> ¹ | <u>Public or Private</u> | <u>Collection Point</u> ³ | <u>Collection Frequency</u> ⁴ | <u>Materials Collected</u> ⁵ | <u>Program Management Responsibilities</u> ² | | |
|--|---|--------------------------|--------------------------------------|--|---|---|-------------------|-------------------|
| | | | | | | <u>Development</u> | <u>Operation</u> | <u>Evaluation</u> |
| Clean Lights | Ingham County State of Michigan | Private | D | D | OT Fluorescent Lights & Ballasts | 5 | 5 | 5 |
| Ingham County Mercury Collection | Ingham County | Public | D | D | OT Mercury | 6 | 6 | 6 |
| Pollution Prevention Programs Greenlights | Ingham County & Statewide National Program | Public | | | All | 6 | 6 | 6 |
| Battery Companies | Ingham County & Statewide | Private | D | D | B1 | 5 | 5 | 5 |
| Waste Exchange Program | Statewide | Public | | | | | | |
| Clean Sweep/Dept. of Ag | Counties Surrounding Ionia County | Public | D | D | PS | 6 MDA | 2 Ionia County | 6 MDA |

This list is not inclusive. For more information contact the Ingham County Health Department or Michigan Department of Environmental Quality, Environmental Assistance Division.

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

² Identified by 1 = Designated Planning Agency; 2 = County Board of Commissioners; 3 = Department of Public Works; 4 = Environmental Group (Identified on page 24); 5 = Private Owner/Operator; 6 = Other (Identified on page 24).

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

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

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

TABLE III-4

PROPOSED RECYCLING:

| <u>Program Name</u> | <u>Service Area</u> ¹ | <u>Public or Private</u> | <u>Collection Point</u> ³ | <u>Collection Frequency</u> ⁴ | <u>Materials Collected</u> ⁵ | <u>Program Management</u> | <u>Responsibilities</u> ² |
|---------------------|----------------------------------|--------------------------|--------------------------------------|--|---|---------------------------|---------------------------------------|
| | | | | | | <u>Development</u> | <u>Operation</u> <u>Evaluation</u> |

N/A Goals of Selected Solid Waste Management Plan are to increase the levels of recycling and composting through education. However, no programs have been planned at this time.

¹Identified 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.

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

³Identified by C=Curbside; D=Drop-Off; O=Onsite; and if other, explained.

⁴Identified by D=Daily; W=Weekly; B=Biweekly; M=Monthly; and if seasonal service also indicated by Sp=Spring; Su=Summer; Fa=Fall; Wi=Winter.

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

TABLE III-5

PROPOSED COMPOSTING:

| <u>Program Name</u> | <u>Service Area</u> ¹ | Public or <u>Private</u> | <u>Collection Point</u> ³ | <u>Collection Frequency</u> ⁴ | <u>Materials Collected</u> ⁵ | <u>Program Management Responsibilities</u> ² | | |
|---------------------|----------------------------------|-----------------------------|--------------------------------------|--|---|---|------------------|-------------------|
| | | | | | | <u>Development</u> | <u>Operation</u> | <u>Evaluation</u> |

N/A See overview of composting

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¹Identified 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.

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

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

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

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

TABLE III-6

PROPOSED SOURCE SEPARATION OF POTENTIALLY HAZARDOUS MATERIALS:

| <u>Program Name</u> | <u>Service Area</u> ¹ | <u>Public or Private</u> | <u>Collection Point</u> ³ | <u>Collection Frequency</u> ⁴ | <u>Materials Collected</u> ⁵ | <u>Program Management Responsibilities</u> ² | | |
|---------------------|----------------------------------|--------------------------|--------------------------------------|--|---|---|------------------|-------------------|
| | | | | | | <u>Development</u> | <u>Operation</u> | <u>Evaluation</u> |

N/A See overview of potentially hazardous materials.

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

² Identified by 1 = Designated Planning Agency; 2 = County Board of Commissioners; 3 = Department of Public Works; 4 = Environmental Group (Identified on page 24); 5 = Private Owner/Operator; 6 = Other (Identified on page 24).

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

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

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

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: N/A

OTHER:

Resource Conservation: Any entity which conducts educational programs

Source or Waste Reduction
Product Reuse
Reduced Material Volume
Increased Product Lifetime
Decreased Consumption

Resource Recovery Programs:

Composting: Granger Landscape
MSU

Recycling:

| | | |
|------------------|-------------------------|-----------------------|
| Allied | Dino's Salvage | MSU |
| Applegate | East Lansing City | MI Polymer Reclaim |
| Ashland Chemical | Friedland Iron & Metal | Padnos |
| Auto Pallets | General Motors | Safety Clean |
| Battery Exchange | Goodwill | Salvation Army |
| BFI | Granger | State of Michigan |
| Bill Barr | Ingham Co. Health Dept. | Supplyline |
| Capital Data | Interstate Battery | Volunteers of America |
| Cleanlites | Lansing City | Waste Management |
| Daggett | L&L Construction | Wonch Battery |
| Dart Container | | |

Educational & Informational Programs: City of Lansing
City of East Lansing
Ingham County Health Department
Michigan State University
MSU Extension
Granger
MUCC
Mid-MEAC
Urban Option

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. Due to the market, Ingham County is unable to project the diversion rates for 5 and 10 years.

| COLLECTED MATERIAL | | PROJECTED ANNUAL TONS DIVERTED | | |
|--------------------|-----------------------------|--------------------------------|----------------|-----------------|
| | | <u>Current</u> | <u>5th Yr.</u> | <u>10th Yr.</u> |
| A. | Total Plastics | 320 | | |
| B. | Newspaper | 3,700 | | |
| C. | Corrugated Containers | 5,791 | | |
| D. | Total Other Paper | 2,092 | | |
| E. | Total Glass | 1,279 | | |
| F. | Other Materials | | | |
| | F1. Flyash | 22,764 | | |
| | F2. Concrete | 50,000 | | |
| | F3. Fiber | 135 | | |
| | F4. Polystyrene | 10 | | |
| | F5. Biosolids | | | |
| G. | Grass and Leaves | 34,180 | | |
| H. | Total Wood Waste* | 2,615 | | |
| I. | Construction and Demolition | 5,000 | | |
| J. | Food and Food Processing | N/A | | |
| K. | Tires | 11,435 | | |
| L. | Total Metals** | 1,058 | | |

MARKET AVAILABILITY FOR COLLECTED MATERIALS

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

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

*Does not include pallets.

**Figures from salvage yards not available.

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. The program also provides assistance to the various entities who participate in such programs as waste reduction and waste recovery.

The municipalities that make up the County have varied educational opportunities available to the public. The table on the following page sets forth those opportunities and the methods to be used to make the information available.

The breakthrough in recycling rates since the mid 1980's has been accomplished largely because the public responded to publicity and concerted governmental educational efforts. It should not be assumed that recycling will continue indefinitely without continued reinforcing education as well as convenient recycling methods and opportunities, particularly in the face of fluctuating markets, recycling services, and occasional adverse publicity for recycling. Although municipalities must play the lead role in delivering recycling services with county support, county government is uniquely positioned to provide educational programs that address needs transcending municipal boundaries.

The County should develop and implement, by the year 2001, a comprehensive waste reduction, reuse and recycling education program with the following components:

1. A stable funding source to support a full-time recycling education coordinator position and appropriate educational materials;
2. A countywide recycling message and theme;
3. Targeted education efforts aimed at audiences including, but not limited to, school children, offices, homeowners, and industry;
4. Funding and other support for municipalities which wish to implement local education programs.

| <u>Program Topic</u> ¹ | <u>Delivery Medium</u> ² | <u>Targeted Audience</u> ³ | <u>Program Provider</u> ⁴ |
|-----------------------------------|-------------------------------------|---------------------------------------|--------------------------------------|
| CURRENT PROGRAMS | | | |
| 1,2,4,5 | O,F,E,W,R,T,N | P,B,I,S | 0 (LansingCity/Municipality) |
| 1,2,4,5 | T,O,E,F | P,B,S | 0 (East Lansing/Municipality) |
| 2,4 | W,O,E | P,B,S | EG (Urgan Options) |
| 2 | W,F | P | EX |
| 3 | R,T,N,F,E | S | HD |
| 1,4 | N,O,F,E | S | CU (MSU) |
| 1,3,4,5 | W | S | EG (MUCC) |
| 1 | OT (Tours) | S | 00 (Granger) |
| 1,2,5 | OT (Website) | P,B,I | EG (MRC) |
| 4,5 | F | B,I | EG (MID-MEAC) |
| 1 | O | OT (Employees) | 0/0 (GM) |
| 1 | F | OT (Employees) | 0 (State of Michigan) |

PROPOSED PROGRAMS

| | | | |
|-----------|---------------------------|---------|---------------------------------------|
| 1,2,3,4,5 | N,F,OT(Website & Hotline) | P,B,I,S | HD (Resource Recovery Clearing House) |
| 1,2,3,4,5 | OT (Curriculum) | S | LS |
| 1,2,3,4,5 | N,R,T | P,B,I,S | HD/0 (Develop Media Program) |
| 1,2,3,4,5 | W,R,T,N,O,F,E | P,B,I,S | HD/0 (Envir Docent) |

*This list is not inclusive, but identifies the major educational programs in the County.

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

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

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

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

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

| Management Components | Timeline |
|---|----------|
| Waste reduction, pollution prevention | On-going |
| Resource conservation | On-going |
| Resource recovery | On-going |
| Volume reduction | On-going |
| Recycling & composting programs | On-going |
| Collection processes and transportation | On-going |
| Institutional arrangements | On-going |
| Education | On-going |
| Enforcement | On-going |
| Funding | On-going |

SITING REVIEW PROCEDURES

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 intent of the siting mechanism is to ensure the County has an infrastructure in place that can address solid waste disposal needs during the life of the Ingham County Solid Waste Management Plan. This process will focus on the environmental, community, solid waste and public health issues of the disposal area and establish specific criteria that is reasonable and not subject to interpretation or discretionary acts. If a proposal is found consistent with the criteria set forth in this section of the Plan, meets the needs of the community and is environmentally friendly, the Board of Commissioners (BOC) shall refer it to the Director of the Michigan Department of Environmental Quality (MDEQ). MDEQ will review the proposal for consistency with the Plan and the criteria set forth in Public Act 451 of 1994, Part 115. If MDEQ finds consistency in the proposal with the County Solid Waste Plan, the proposal shall be included in the Plan upon issuance of a construction permit by the MDEQ.

Specifically, the BOC is the approving agency for all aspects of the Plan and shall determine consistency of proposals requesting siting of Solid Waste Disposal Facilities and recognition in the Plan. The Designated Planning Agency (DPA) shall be responsible for reviewing all proposals that could trigger the siting mechanism and make a recommendation to the BOC that the proposal is consistent with the administrative and general submittal procedures of the siting mechanism. If the BOC determines the proposal is administratively complete, it shall appoint a Solid Waste Facility Siting Committee (SWFSC) that will evaluate the proposal for its compliance and consistency with the criteria established within the Plan.

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The siting mechanism infrastructure will be divided into six parts. Part I defines the appointment process for authorities and committees in the siting review process and their structure and responsibilities. Part II addresses the general procedures for submittal and determination of consistency with the Plan. Part III addresses the general procedures for submittal and determination for consistency. Part IV deals with administrative completeness. Part V sets the criteria for siting a sanitary landfill and Part VI defines the siting criteria for other solid waste disposal facilities

Part I - DPA / SWFSC Appointment Process

The Designated Planning Agency (DPA) is appointed by the BOC in the Plan as the lead authority for implementation, enforcement, coordination and administration of the Plan. It therefore shall be responsible to the BOC to ensure there is no conflict with the proposed siting proposal and make recommendations for action. If the BOC deems it necessary to activate the Solid Waste Facility Siting Committee, the DPA shall be responsible to coordinate and provide administrative assistance to the committee.

When the BOC determines the siting proposal is consistent with the Plan, the BOC will appoint the SWFSC to implement the siting mechanism container herein. Appointments to the Committee will be for the duration of the siting review process or until the BOC deems it is necessary. Membership of the Committee will be appointed as prescribed below. A minimum of three members will represent the Host Community where the proposed solid waste disposal facility will be located. Categories and numbers of appointee's to the SWFSC are:



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2-Solid Waste Industry Interest

1-Tri-County Regional Planning

2-Municipal Representatives (from different municipalities
and host communities)

1-Environmental Interest Group

3-General Public & Host
Community

If, at the time the proposal is submitted to Ingham County, it can be demonstrated that 66 months of disposal capacity for all waste generated as identified in current Plan, the county may, at its discretion, refuse to allow this mechanism to be used.

Part II - Committee Procedures

- The DPA shall serve as the technical, research and staff support to the BOC and to the SWFSC and make the proper notification to the MDEQ of the proposed actions.
- The SWFSC will adopt its own by-laws and establish its own Chair. Proposals submitted to the SWFSC may not be altered or amended once the Committee has begun deliberations. The SWFSC and BOC shall not amend or alter these criteria and procedures outlined in the Solid Waste Review Process.
- If, at the time a proposal is submitted to the County and the BOC determines it is administratively complete, the SWFSC has not been appointed, the BOC will have a 30-day period to appoint members of the SWFSC. If the SWFSC has not been appointed at the end of this 30-day period, the BOC will proceed with the review of the proposal.

Part III - General Procedures for Submittal and Determination of Consistency

- A proposal requesting siting of a solid waste disposal facility in Ingham County shall be submitted to the DPA, who shall review and make recommendations to the BOC. The BOC shall determine consistency and ask the DPA to initiate the review process for the SWFSC. Time lines set forth in this section shall be followed with the exception the siting review process by the SWFSC, which will be triggered by the first meeting of the SWFSC.



To be considered administratively complete, the proposal must include all of the information required in Part IV, all necessary documentation demonstrating compliance with the criteria in Part V or Part VI (which ever is applicable), and a written description of the proposed facility and its intended use. Additional information may be submitted by the developer to elaborate on any significant points of the proposal.



- **The DPA staff shall determine if the proposal is administratively complete, within 15 calendar days after receipt of the proposal.** The developer shall not be penalized for missing information that is subsequently identified by the County, unless the developer fails to submit the additional information in accordance with the following procedures:

The DPA must inform the developer, in writing, of all items identified as missing or inadequate from the proposal. While the review process shall continue, all missing information identified to the developer shall be submitted to the DPA within 10 calendar days after formal notification. The 15-day review period by the DPA shall start again after the information is submitted by the developer. The DPA shall then incorporate this information in the review process and make recommendation to the BOC. If the siting mechanism is kicked in and information is determined to be missing at the end of the 60 days SWFSC review period, the developer will have 10 days to submit the information and the SWFSC shall have no more than 20 working days to evaluate the material for consistency. If the developer fails to submit the additional information within the prescribed time limits, the proposal shall be determined administratively incomplete in accordance with the procedures which are detailed above.

- The DPA staff shall, upon receipt of a proposal for Consistency Determination, inform the BOC of the receipt of a proposal. A public notice will be posted of the receipt of the application in an area accessible to the public during normal business hours. In addition, the BOC shall, at the next scheduled meeting, publicly announce the receipt of a proposal.
- Within 5 calendar days of receipt of the proposal by the DPA staff, notice will be given to the proposed host community. A host community is defined as any Ingham County township, city or village within which property is owned by or is under option to the project proponent and which is incorporated in the total site of the proposed project. Townships, cities and villages adjacent to the site of the proposed project may also be notified.
- Fifteen (15) copies of the proposal and an application fee must be submitted by the developer to the DPA staff with the proposal.
- Application fees shall be established by resolution. The fee schedule shall be available at the Health Department and County Controller's Office. The application fee will be used for the project review. Any portion of the fee not used in the review will be returned to the applicant.
- **The review period for the proposal begins on the day the proposal is determined to be administratively complete by BOC, or at the first full committee meeting of the SWFSC if the siting mechanism is triggered. At the end of 15 calendar days after receipt of proposal by the BOC, and they fail to act as specified above, the review period will officially begin. The DPA shall inform the host community, and the BOC, within the first five working days of receipt of the proposal, of the**



starting date of the review period. The BOC can determine at this time if they want the DPA to review the proposal for administrative and PLAN process consistency, or appoint the SWFSC to initiate the site review process.



- The SWFSC review period shall not exceed 60 calendar days unless an extension is agreed to by the developer. No more than one extension, of 15 calendar days duration, is allowed.
- Within the first 15 calendar days of the review period, an informational meeting shall be scheduled by the DPA. The meeting shall take place within the first 30 days of the review period. To the extent possible, the meeting shall be set in a location convenient for the community where the project is proposed. The purpose of the informational meeting is to present the proposal, as submitted, and to orient citizens and participants to the process. No formal testimony, in support or opposing of the proposal, will be received. An opportunity for public comment may be provided by the DPA at the beginning or the end of the meeting.
- Notice of the meeting shall be published no less than seven calendar days before the meeting. Every municipality in the County shall receive a notice of the meeting, no less than seven calendar days before the meeting. At least seven calendar days prior to the meeting, DPA staff will attempt to notify all property owners and building occupants within 300 feet of all properties owned by or under option to the proponent that are part of the proposal.
- Within seven calendar days after the end of the review period, the SWFSC shall forward their recommendation for consistency or inconsistency, based solely on the siting criteria contained in the Plan, to the BOC. The BOC shall begin review of the proposal at the first scheduled full Board meeting after notification.
- Notice of the SWFSC decision shall be transmitted to every community in the County and the developer within five working days of the action.
- If the SWFSC fails to make a recommendation to the BOC on consistency of the proposal within the seven day time period, then the BOC shall review the proposal in accordance with the provisions of the siting criteria in the Plan, and within 45 calendar days, find the proposal consistent or inconsistent with the Plan.
- If the SWFSC fails to execute any of the assigned responsibilities or misses any of the established deadlines, the process immediately proceeds to the BOC for completion. If, because of the failure by the SWFSC to act in accordance with their deadlines, the BOC assumes responsibility for reviewing a proposal, then the remaining deadlines and procedures imposed on the SWFSC are transferred to the BOC. The BOC will have 15 calendar days to set schedules necessary to complete the remaining responsibilities for proposal review.

- Within 45 calendar days after the BOC receives a recommendation from the SWFSC on a proposal's consistency with the Ingham County Solid Waste Management Plan, the BOC shall find the proposal consistent or inconsistent with the Plan in accordance with the procedures approved as part of this Plan. If the BOC fails to act within that time, the proposal shall be considered by the County to be consistent with the Plan. Final determination of consistency shall be made by the Director of the MDEQ.

Part IV - Requirements for Administrative Completeness - All Part 115 Facilities

At the time a developer submits a proposal for review, all documentation needed to demonstrate compliance with the informational requirements and the primary siting criteria detailed in Part IV and Va or VIa must be submitted.

All proposals submitted to the DPA shall contain, at a minimum, the information on the following pages. This data is for informational purposes only. The submittal of the information is sufficient for the purposes of administrative completeness. **The DPA and/or SWFSC shall evaluate the adequacy of the information required by this Part.** The DPA and/or the SWFSC may not require additional information or alter this list of items in any way.



Developers must submit this information for the proposal to be considered administratively complete. Evaluation of a proposal's consistency with the Ingham County Solid Waste Management Plan will be based on the Criteria in Part Va or VIa.

Submitted proposals must be:

1. Typewritten on standard (8 1/2" x 11") paper.
2. Bound and/or stapled.
3. Contain a table of contents, identifying all sections, appendices and attachments.

The proposal submitted must include:

1. Name, Address and Telephone for:
 - a. Applicant
 - b. Property owner of the proposed site
 - c. Consulting engineers
 - d. Designated project contact

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Does the proposal contain the information specified above? Yes No

2. Proposed Site Location & Orientation
 - a. Legal Description of the Project Area

Does the proposal contain the information specified above? Yes No

- b. **Site Location Map (showing all roadways and principal land features within two miles of the site)**

Does the proposal contain the informational specified above? Yes No

- c. **Topographic Map - A contour map at 1 inch = 200 feet scale for the operation area and a contour map at 1 inch = 400 feet scale for the entire site.**

Does the proposal contain the information specified above? Yes No

- d. **Proposed Site Size**

Does the proposal contain the information specified above? Yes No

- e. **Access Roads**

- 1) Location
- 2) Surface condition and material
- 3) Proposed access point to facility

Does the proposal contain the information specified above? Yes No

- f. **Location of the well-heads of private water wells within one (1) mile and public water systems within three (3) miles of the site.**

Does the proposal contain the information specified above? Yes No

3. **Land Use and Cover**

- a. **Site Land Use and Ground Cover**

Does the proposal contain the information specified above? Yes No

- b. **Locations of the following within a one (1) mile radius of the proposed site (must provide individual locations)**

- 1) Residences
- 2) Commercial establishments
- 3) Industries
- 4) Institutions including schools, churches, hospitals, etc.
- 5) Surrounding zoning

Does the proposal contain the information specified above? Yes No

c. Location of Existing Utilities and utilities to be Moved

Does the proposal contain the information specified above? Yes No

d. Location of any public use airport licensed by the Bureau of Aeronautics, Michigan Department of Transportation that is within 10,000 feet of the active fill area.

Does the proposal contain the information specified above? Yes No

e. Location of 100 year flood plains on the site and within 1,000 feet of the active fill area or work area as identified on MDEQ prepared flood plain maps and as defined in the Act 451 Administrative Rules. If MDEQ flood plain maps are not available, the developer may submit information from an alternate source selected by the developer.

Does the proposal contain the information specified above? Yes No

f. Regulated wetlands determination from the MDEQ or by an independent consulting firm hired by the developer.

Does the proposal contain the information specified above? Yes No

g. General soil characteristics

Does the proposal contain the information specified above? Yes No

4. Proposed Site and Facility Design

a. Overview of Proposal

Does the proposal contain the information specified above? Yes No

b. Location and Size - Use the applicable subsection for the proposed facility

Landfills Only

c. A narrative description detailing the following

- 1) Useful life and capacity of the proposed facility, including plans for composting and recovery of reusable and recyclable items
- 2) Proposed fill area
- 3) Proposed borrow area
- 4) Proposed service area: communities, major commercial or industrial establishments, institutions and waste haulers
- 5) Cells
- 6) On-site roads

- 7) Structures
- 8) Proposed leak detection systems

Does the proposal contain the information specified above? Yes No

d. Proposed design elements including liner systems

Does the proposal contain the information specified above? Yes No

e. Proposed Leachate Collection, Disposal and Monitoring Systems

Does the proposal contain the information specified above? Yes No

f. Proposed Methane Gas Collection and Treatment System

Does the proposal contain the information specified above? Yes No

g. Expected Roadway Traffic

- 1) Expected number of vehicles per day using the site
- 2) Expected size of vehicles using the site

Does the proposal contain the information specified above? Yes No

h. Time frames for development, use and closure

Does the proposal contain the information specified above? Yes No

i. Odor Control Program - the program must outline

- 1) Control Measures
- 2) Monitoring process and response thresholds
- 3) Fugitive Trash Control

Does the proposal contain the information specified above? Yes No

j. Fugitive Dust Control Program (daily use) - the program must outline

- 1) Control Measures
- 2) Monitoring process and response thresholds

Does the proposal contain the information specified above? Yes No

k. Intercounty transfer of waste

- 1) Indicate the geographic areas, by county, from which waste will be drawn and the intended disposal site/method in Ingham County. Intercounty transportation of waste must be in compliance with the

provisions authorized by the Ingham County Solid Waste Management Plan.

Does the proposal contain the information specified above? Yes No

I. Other information

- 1) The developer may submit additional information highlighting significant or unique features of the proposal.

Does the proposal contain the information specified above? Yes No

Transfer Stations Only

c. A narrative description detailing the following

- 1) Proposed service area: communities, major commercial and industrial establishments, institutions and waste haulers
- 2) Capacity
- 3) Proposed work area
- 4) On-site roads
- 5) Structures
- 6) Proposed leachate collection system

Does the proposal contain the information specified above? Yes No

d. Proposed design elements

Does the proposal contain the information specified above? Yes No

e. Proposed Leachate Collection, Disposal and Monitoring Systems

Does the proposal contain the information specified above? Yes No

f. Expected roadway traffic

- 1) Expected number of vehicles per day using the site
- 2) Expected size of vehicles using the site

Does the proposal contain the information specified above? Yes No

g. Time frames for Development, Use and Closure

Does the proposal contain the information specified above? Yes No

h. Odor Control Program - the program must outline

- 1) Control Measures

2) Monitoring process and response thresholds

Does the proposal contain the information specified above? Yes No

i. Fugitive Dust Control Program (daily use) - the program must outline

- 1) Control Measures
- 2) Monitoring process and response thresholds

Does the proposal contain the information specified above? Yes No

j. Intercounty transfer of waste

- 1) Indicate the geographic areas, by county, from which waste will be drawn and the intended disposal site/methods in Ingham County. Intercounty transportation of waste must be in compliance with the provisions authorized by the Ingham County Solid Waste Management Plan.

Does the proposal contain the information specified above? Yes No

k. Other Information

- 1) The developer may submit additional information highlighting significant or unique features of the proposal.

Does the proposal contain the information specified above? Yes No

Administrative Completeness Determination

The DPA and the BOC shall review the proposal, to determine if each of the items listed above have been addressed by the developer. If the developer has referenced or included specific information addressing each of the items above, the proposal shall be considered administratively complete. This process does not permit arbitrary, discriminatory or subjective decisions which would prevent the establishment of needed facilities by the DPA or BOC.



Part V - Siting Criteria - Sanitary Landfills Only

In order for a landfill to be found consistent with the Ingham County Solid Waste Management Plan, the following Primary Criteria must be met.

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Primary Criteria

1. All proposed new sites and expansions of existing sites must meet Act 451, Part 115 requirements for vertical isolation to groundwater. The developer shall submit a signed statement which states that the design of the facility will meet Act 451, Part 115 requirements for vertical isolation to groundwater.

Is a signed statement included? Yes No

2. All proposed new sites and expansion of existing sites must control drainage of storm water from the disposal area of the site. Systems must be designed to control, at a minimum, run-off volume from a 25-year, 24-hour rainfall event. The developer shall submit a signed statement which stated that the design of this facility will control, at a minimum, run-off volume from a 25-year, 24-hour rainfall event.

Is a signed statement included? Yes No

3. Active fill areas and leachate collection, storage and pre-treatment facilities (exclusive of hook-ups to sanitary sewer systems) must comply with the following isolation distances from public and private water supplies.

a. A minimum of 2,000 feet isolation distance measured from the solid waste boundary down gradient, in the direction of groundwater flow of the first potable aquifer, to any existing Type I or Type IIa well-head as defined by PA 399 of 1976. Test wells existing at the time of the reviews are not subject to this isolation requirement.

b. All other isolation distances from the solid waste boundary to any public and private water supplies must be in compliance with the provisions of Act 451, Part 115.

Does the proposal maintain the isolation distances specified above? Yes No

4. A facility shall not be located in an area of groundwater recharge as defined by the United States Geological Survey or in a well-head protection area as defined by the Michigan Department of Environmental Quality. The developer shall submit a signed statement stating the facility is not in a groundwater recharge area or a well-head protection area.

Is a signed statement included? Yes No

5. The exterior boundaries of the active work area for a landfill may not be located:

- a. Within 1,000 feet of a historic site, district or structure included on the national or state register of historic places or the state historical preservation officer.
- b. Within 1,000 feet of domiciles, schools (public or private), or an established outdoor recreation area.
- c. Within 1,000 feet of inland lakes and perennial streams.
- d. Within 4,000 feet of an existing platted subdivision.
- e. Within 500 feet of adjacent property lines and road right-of-way.

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Does the proposal maintain the isolation distances specified above? Yes No

6. If a radius of 1,500 feet is drawn from any point on the perimeter of the active waste management area of the proposed disposal facility, and if that encompassed area has more than 25 dwelling units, the proposal is inconsistent with the Plan.

Does the proposal encompass more than 25 dwelling units? Yes No

7. A facility shall not be located in an environmental area as defined in Part 323, Shorelands Protection and Management, of Act 451, or in areas of unique habitat as defined by the MDNR, Natural Features Inventory

Is specific documentation included? Yes No

8. The landfill shall not be constructed within 10,000 feet of a licensed airport runway.

Is specific documentation included? Yes No

9. A facility shall not be constructed on lands enrolled under Part 361, Farmland and Open Space Preservation, of Act 451.

Is specific documentation included? Yes No

10. A facility shall not be located in a 100 year flood plain as defined by Rule 323.311 of the Administrative rules of Part 31, Water Resources Protection, of Act 451.

Is specific documentation included? Yes No

11. A facility must be located on a parcel of at least 50 acres.

Is specific documentation included? Yes No

12. A facility shall be located on a paved, all weather "class a" road. If the proposed facility is not on such a road, the developer must include a signed statement to provide for upgrading and/or maintenance of the road serving the facility.

Is the site accessible via a county, all-weather roadway? Yes No

If the site is not directly accessible via a county, all-weather roadway, is the signed statement included? Yes No


13. The developer must provide a traffic safety study for all access roads to the facility. Issues of concern or hazardous conditions identified as part of the study must be discussed by the developer in the proposal.

Is the traffic safety study included? Yes No

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14. Access to the site by truck traffic shall not be directly through a residential subdivision in which the roads were constructed primarily for local traffic within the boundaries of the subdivision.


Does the proposal identify access to the site that avoids direct routing through residential subdivisions as specified above? Yes No

15. The site must provide staging and parking areas for trucks, employees and visitors such that access roads remain free of waiting vehicles. 

Does the sited design provide staging and parking areas as indicated above? Yes No

Documentation identifying the number of trucks entering the site in correlation with the procedures and areas defined to process the materials coming into the facility must be provided by the developer.

Does the proposal contain the information specified above? Yes No

16. Landscaping, including shrubbery, trees and berming, shall be provided and maintained to beautify the view of the landfill. The landscaping must serve as an effective sight barrier around the active fill area. 

Does the proposal contain the landscaping plans as specified above? Yes No

17. A landfill may only be located on property zoned as agricultural or industrial at the time the facility developer applies to the County for a determination of consistency under the Plan. Facilities may be located on unzoned property, but may not be located on property zoned residential.

Is the property properly zoned? Yes No

18. The owner and operator of a facility shall agree to cooperate with the County and host community on all current and future recycling, composting and household hazardous waste reduction activities. The developer must include a signed statement agreeing to this stipulation.

Is the signed statement included? Yes No

19. The owner and operator of a facility shall submit a detailed plan describing the proposed final end use of the site.

Does the proposal include written plans as stipulated above? Yes No

20. The developer must provide a written statement agreeing to provide the County and the host community copies of all quarterly monitoring reports required by the MDEQ.

Is a signed statement included? Yes No

21. All operators of solid waste facilities permitted and licensed under Act 451 (formerly Act 641) in Ingham County must provide a written statement agreeing to submit to the SWFSC and the clerk of the host community in which the facility is located on or before the 20th day of March, the 20th day of June, the 20th day of September and the 20th day of December, a quarterly report which covers the preceding three-month period ending on the 20th day of the preceding month which includes the following information:

- a. Name, location and permit number of the facility;
- b. Name, address and telephone number of the facility owner;
- c. Name, address and telephone number of the facility operator;
- d. Total quantity of waste received at the facility during the past three months in cubic gate yards;
- e. Total quantity of waste received at the facility during the past three months originating from out-county sources in cubic gate yards by county of origin;
- f. An estimate of remaining permitted capacity for continued waste disposal. The method of calculating this capacity must be included in the quarterly report.

Is a signed statement included? Yes No

Part VI - Siting Criteria - Other Part 115 Facilities Only

In order for all other Part 115 Facilities to be found consistent with the Ingham County Solid Waste Management Plan, the following Primary Criteria must be met. If Ingham County can demonstrate that it has 66 months of capacity available for all waste generated in the County, no proposed solid waste landfill must be sited (found consistent) with this Plan.

Primary Criteria

1. Collection, storage and processes for the removal of liquid waste resulting from the operation of the facility shall be contained in a building. Floors must be sealed and sloped away from the entrance to prevent the unauthorized discharge of liquids to groundwater.

Does the proposal include the above specifications? Yes No

2. The facility building(s) shall not be located within 500 feet of adjacent property lines, road right-of-way, or lakes and perennial streams. Facilities may be located closer than 500 feet to adjacent property lines if the affected property owner has provided a written waiver consenting to activities closer than 500 feet.

Does the proposal maintain the isolation distances specified above? Yes No
If no, are the appropriate waivers attached? Yes No

3. The facility building(s) shall not be located within 500 feet of any existing public park, recreation area of school grounds.

Does the proposal maintain the isolation distances specified above? Yes No

4. If the radius of 1,500 feet is drawn from any point on the perimeter of the active waste management area of the proposed disposal facility, and if that encompassed area has more than 25 dwelling units, the proposal is inconsistent with the Plan.

Does the proposal encompass more than 25 dwelling units? Yes No

5. A facility must be located on a parcel of at least 50 acres.

Is specific documentation included? Yes No

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6. A facility shall be located on a paved, all weather "class a" road. If a facility is not on such a road, the developer must include a signed statement to provide for upgrading and/or maintenance of the road serving the facility.


Is the site accessible via a county, all-weather roadway? Yes No
If not, is the signed statement included? Yes No

7. The developer must provide written abatement plans for the control of noise, vibration, odor and litter.


Are the plans stipulated above included? Yes No

8. The developer must provide a traffic safety study for all access roads to the facility. Issues of concern or hazardous conditions identified as part of the study must be discussed by the developer in the proposal.

Is the traffic safety study included? Yes No

9. Access to the site by truck traffic shall not be directly through a residential subdivision in which the roads were constructed primarily for local traffic within the boundaries of the subdivision. 

Does the proposal identify the access requirements specified above? Yes No

10. The site must provide staging and parking areas for trucks, employees and visitors such that access roads remain free of waiting vehicles. 

Does the site design provide staging/parking as indicated above? Yes No

Documentation identifying the number of trucks entering the site in correlation with the procedures and areas defined to process the materials coming into the facility must be provided by the developer.

Does the proposal contain the information specified above? Yes No

11. The proposed site must be located in an area zoned for any of the following general uses: industrial, commercial, or agricultural zoned areas. Facilities may not be located in areas zoned residential.

Is the site in one of the acceptable zoning classifications above? Yes No

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12. A facility shall not be located in a 100 year flood plain as defined by Rule 323.311 of the Administrative Rules of Part 31, Water Resources Protection, of Act 451.

Is the site proposed in a 100 year flood plain? Yes No

Is the required documentation included?  Yes No

13. A facility shall not be constructed on lands enrolled under Part 361, Farmland and Open Space Preservation, of Act 451.

Is specific documentation included?  Yes No

14. Landscaping, including shrubbery, trees and berming, shall be provided and maintained to beautify the view of the facility. The developer must include a signed statement agreeing to this stipulation.

Is a signed statement included? Yes No

15. The owner and operator of a facility shall agree to cooperate with the County and host community on all current and future recycling, composting and household hazardous waste reduction activities. The developer must include a signed statement agreeing to this stipulation.

Is the signed statement included? Yes No

16. All operators of solid waste facilities permitted and licensed under Act 451 (formerly Act 641) in Ingham County must provide a written statement agreeing to submit to the SWFSC and the clerk of the host community in which the facility is located on or before the 20th day of March, the 20th day of June, the 20th day of September and the 20th day of December, a quarterly report which covers the preceding three-month period ending on the 20th day of the preceding month which includes the following information:

- a. Name, location and permit number of the facility;
- b. Name, address and telephone number of the facility owner;
- c. Name, address and telephone number of the facility operator;
- d. Total quantity of waste received at the facility during the past three months in cubic gate yards;
- e. Total quantity of waste received at the facility during the past three months originating from out-county sources in cubic gate yards by county of origin.

Is a signed statement included? Yes No

SOLID WASTE MANAGEMENT COMPONENTS¹

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

The entities listed in the table below have varying degrees of technical, financial and legal capabilities which allow them to fulfill their responsibilities as outlined in the Plan. There is also overlap and shared responsibilities by entities that reflect the multimedia concept this Plan is structured under. This will require continual coordination and various agreements between public and private sectors to implement the components of this solid waste management system.

| Agency | Legal | Planning | implementation | Enforcement | Coordination | Funding |
|------------------------|-------|----------|----------------|-------------|--------------|---------|
| Ingham County HD (DPA) | X | X | X | X | X | |
| MDEQ | X | X | | X | | |
| Public/Private Sector | | | X | | X | |
| Board of Commissioners | X | X | X | X | X | X |
| | | X | X | | X | |
| | | X | | | | |

The Act requires that a County Solid Waste Management Plan shall contain a Management Component for implementation of the Plan and the Management System chosen shall consist of the following elements: identification of persons, municipalities, counties, and state and federal agencies assigned responsibilities under the Plan, with a precise delineation of planning, implementation, and enforcement responsibilities, including legal, technical and financial capabilities for all entities assigned responsibilities.

It further requires that a financial program be written identifying funding sources for the implementation of the Plan. The Act does not spell out the exact mechanisms the County can use to generate revenues to meet this requirement in the Plan, but implies under the authority vested in the County by the Act, that the County can implement funding mechanisms for enforcement and implementation of the Plan based on the County's structure and needs.

¹Components or subcomponents may be added to this table.

This requirement establishes funding as a key element in the infrastructure of the Plan and will determine if the Plan is a working document or mandated paper document. Therefore, the Solid Waste Management Planning Committee considered nine different funding mechanisms they believe can be used to implement the Solid Waste Management System in support of the Plan (see Appendix A Cost & Funding section). The Solid Waste Management Component identifies management responsibilities (i.e. positions, implementation, enforcement), county sponsored Resource Recovery Programs (Rural Recycling & Household Hazardous Waste) and Solid Waste Education & Information Programs. The SWPC reviewed the existing programs and responsibilities from the existing Plan and felt the existing programs were meeting the needs of the county except in the area of solid waste education and information programs.

IDENTIFICATION OF RESPONSIBLE PARTIES

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

Resource Conservation: Any entity which conducts educational programs

Source or Waste Reduction
Product Reuse
Reduced Material Volume
Increased Product Lifetime
Decreased Consumption

Resource Recovery Programs:

Composting Granger Landscape
MSU

| | | | |
|-----------|------------------|-------------------------|----------------------|
| Recycling | Allied | Dino's Salvage | MSU |
| | Applegate | East Lansing City | MI Polymer Reclaim |
| | Ashland Chemical | Friedland Iron & Metal | Padnos |
| | Auto Pallets | General Motors | Safety Clean |
| | Battery Exchange | Goodwill | Salvation Army |
| | BFI | Granger | State of Michigan |
| | Bill Barr | Ingham Co. Health Dept. | Supplyline |
| | Capital Data | Interstate Battery | Volunteer of America |
| | Cleanlites | Lansing City | Waste Management |
| | Daggett | L&L Construction | Wonch Battery |
| | Dart Container | | |

Energy Production N/A

Volume Reduction Techniques: Any entity which does educational programs.

Collection Processes: City of Lansing
City of East Lansing
Waste Management
Granger
Daggett
Allied
Various private haulers

Transportation: The Ingham County Health Department and the MDEQ are responsible for assuring that solid waste goes to facilities approved in this Plan.

Disposal Areas:

| | |
|--------------------|---|
| Processing Plants | N/A |
| incineration | N/A |
| Transfer Stations | Waste Management, Inc. |
| Sanitary Landfills | Granger Waste Management Daggett All others authorized in Selected Solid Waste Management System |

Ultimate Disposal Area Uses Not known at this time . Since most of the disposal areas are located outside of the County, we have little or no influence on what will happen to the land after final closure.

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

Ingham County Health Department
DPA
Ingham County Board of
Commissioners

Educational and Informational Programs:

City of Lansing
City of East Lansing
Ingham County Health Department
Michigan State University
MSU Extension
Granger
MUCC
Mid-MEAC
Urban Option

List may not be complete at this time and is due to change at any time.

LOCAL ORDINANCES AND REGULATIONS AFFECTING SOLID WASTE DISPOSAL (See Attachments For Full Text of Ordinances)

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

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

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

A. Geographic area/Unit of government: City of East Lansing

Type of disposal area affected: Businesses

Ordinance or other legal basis: Chapter 21 & 22, of Codified Ordinance


Requirement/restriction: Mandatory separation of automotive waste and specifications for rubbish/garbage collection

B. Geographic area/Unit of government: City of Lansing

Type of disposal area affected: Businesses and Residential 

Ordinance or other legal basis: Part 10, Chapter 1063 of the Codified Ordinances

Requirement/restriction: Mandatory recycling for residents, businesses, and multifamily units. Mandatory composting of yard waste

- C. Geographic area/Unit of government: City of Williamston
 Type of disposal area affected: Residential
 Ordinance or other legal basis: Refuse Ordinance
 Requirement/restriction: Refuse company has to do all pick-up for residents by contract.
- D. Geographic area/Unit of government: Vevay Township
 Type of disposal area affected: **Businesses and Residential**
 Ordinance or other legal basis: Ordinance
 Requirement/restriction: Mandatory trash collection at one-site. Nuisance ordinance restricting junk at residence
- E. Geographic area/Unit of government: Delhi Charter Township
 Type of disposal area affected: **Businesses and Residential**
 Ordinance or other legal basis: Ordinance
 Requirement/restriction: **Call Tom Reich at 517/694-8281 for details** 

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.

RETURN TO
 APPROVAL
 LETTER

CAPACITY CERTIFICATION

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 MDEQ by June 30 of each year on the form provided by DEQ. The County's process for determination of annual capacity and submission of the County's capacity certification is as follows: